

FINAL

BAYOU LIBERTY AND BAYOU BONFOUCA WATERSHED TMDL FOR BIOCHEMICAL OXYGEN-DEMANDING SUBSTANCES – PHASE I

SUBSEGMENTS 040905, 040906, 040907, AND 040908

Bayou Liberty and Bayou Bonfouca Survey June 15 – 19, 2009

TMDL REPORT

By:
Water Quality Modeling Section / TMDL Section
Water Permits Division
Office of Environmental Services
Louisiana Department of Environmental Quality

SEPTEMBER 21, 2011

TECHNICAL SUMMARY

Bayou Liberty, Subsegments 040905 and 040906, was on the 2006, Draft 2008, and Draft 2010 Integrated Report (combined 305(b) and 303(d) reports) and EPA's Consent Decree (E. D. La. 2002). Subsegments 040905 and 040906 was found to be "not supporting" its designated use of Fish and Wildlife Propagation. It was found to be supporting its designated uses of Primary Contact Recreation and Secondary Contact Recreation on the 2006 303(d) list. Bayou Liberty was subsequently scheduled for Total Maximum Daily Load (TMDL) development with other listed waters in the Lake Pontchartrain Basin. The Tables 1 - 3 below list the 2006, Draft 2008, and Draft 2010 Integrated Reports for Subsegments 040905 and 040906.

Table 1. 2006 303(d) Listing for Subsegments 040905 and 040906

Subsegment Number	Subsegment Description	Type	Size (Miles)	PCR	SCR	FWP	DWS	ONR	OYS	AGR	LAL	Impaired Use for Suspected Cause	Suspected Causes of Impairment	for Suspected Causes	TMDL Due Date	TMDL Priority	Suspected Sources of Impairment
LA040905	Bayou Liberty-Headwaters to La. Hwy. 433	River	13	Fully Supporting	Fully Supporting	Not Supporting						FWP	Mercury	2006 303(d) Listing	2011	Medium	Atmospheric Deposition - Toxics and Source Unknown
LA040905	Bayou Liberty-Headwaters to La. Hwy. 433	River	13	Fully Supporting	Fully Supporting	Not Supporting						FWP	Oxygen, Dissolved	2006 303(d) Listing	2011	Medium	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) and Package Plant or Other Permitted Small Flows Discharges
LA040906	Bayou Liberty-La. Hwy. 433 to confluence with Bayou Bonfouca (Estuarine)	River	2	Fully Supporting	Fully Supporting	Not Supporting						FWP	Mercury	2006 303(d) Listing	2011	Medium	Atmospheric Deposition - Toxics and Source Unknown
LA040906	Bayou Liberty-La. Hwy. 433 to confluence with Bayou Bonfouca (Estuarine)	River	2	Fully Supporting	Fully Supporting	Not Supporting						FWP	Oxygen, Dissolved	2006 303(d) Listing	2011	Medium	Source Unknown

Table 2. Draft 2008 303(d) Listing for Subsegments 040905 and 040906

<u>Subsegment Number</u>	Subsegment Description	Type	Size (Miles)	PCR	SCR	FWP	DWS	ONR	OYS	AGR	LAL	DO CM Full?	Impaired Use for Suspected Cause	Suspected Causes of Impairment	IR Category for Suspected Causes	TMDL Due Date	TMDL Priority	Suspected Sources of Impairment
LA040905	Bayou Liberty-From headwaters to LA-433	River	13	Fully Supporting	Fully Supporting	Not Supporting							FWP	Mercury in Fish Tissue	2008 303(d) List	2011	High	Atmospheric Deposition - Toxics and Source Unknown
LA040905	Bayou Liberty-From headwaters to LA-433	River	13	Fully Supporting	Fully Supporting	Not Supporting							FWP	Oxygen, Dissolved	2008 303(d) List	2011	High	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) and Package Plant or Other Permitted Small Flows Discharges
LA040906	Bayou Liberty-From LA-433 to Bayou Bonfouca (Estuarine)	River	2	Fully Supporting	Fully Supporting	Not Supporting							FWP	Mercury in Fish Tissue	2008 303(d) List	2011	High	Atmospheric Deposition - Toxics and Source Unknown
LA040906	Bayou Liberty-From LA-433 to Bayou Bonfouca (Estuarine)	River	2	Fully Supporting	Fully Supporting	Not Supporting							FWP	Oxygen, Dissolved	2008 303(d) List	2011	High	Source Unknown

Table 3. Draft 2010 303(d) Listing for Subsegments 040905 and 040906

Subsegment Number	Subsegment Description	Type	Size (Miles)	PCR	SCR	FWP	DWS	ONR	OYS	AGR	LAL	Impaired Use for Suspected Cause	Suspected Causes of Impairment	IR Category for Suspected Causes	TMDL Due Date	TMDL Priority	Suspected Sources of Impairment
LA040905	Bayou Liberty-From headwaters to LA-433	River	13	Fully Supporting	Fully Supporting	Not Supporting						FWP	Mercury in Fish Tissue	2010 303(d) Listing	2012	High	Atmospheric Deposition - Toxics and Source Unknown
LA040905	Bayou Liberty-From headwaters to LA-433	River	13	Fully Supporting	Fully Supporting	Not Supporting						FWP	Oxygen, Dissolved	2010 303(d) Listing	TBD	Low	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) and Package Plant or Other Permitted Small Flows Discharges
LA040906	Bayou Liberty-From LA-433 to Bayou Bonfouca (Estuarine)	River	2	Fully Supporting	Fully Supporting	Not Supporting						FWP	Mercury in Fish Tissue	2010 303(d) Listing	2012	High	Atmospheric Deposition - Toxics and Source Unknown
LA040906	Bayou Liberty-From LA-433 to Bayou Bonfouca (Estuarine)	River	2	Fully Supporting	Fully Supporting	Not Supporting						FWP	Oxygen, Dissolved	2010 303(d) Listing	TBD	Low	Source Unknown

Abbreviations:

PCR - Primary Contact Recreation
 SCR - Secondary Contact Recreation
 FWP - Fish and Wildlife Propagation
 DWS - Drinking Water Supply
 ONR - Outstanding Natural Resource
 SFP - Shellfish Propagation
 AGR - Agriculture
 LAL - Limited Aquatic Life

Bayou Bonfouca, Subsegments 040907 and 040908, was on the 2006, Draft 2008, and Draft 2010 Integrated Report (combined 305(b) and 303(d) reports) and EPA's Consent Decree (E. D. La. 2002). Subsegment 040907 and 040908 was found to be "not supporting" its designated uses of Primary Contact Recreation and Fish and Wildlife Propagation on the 2006 303(d) list. It was found to be supporting its designated use of Secondary Contact Recreation. Bayou Bonfouca was subsequently scheduled for Total Maximum Daily Load (TMDL) development with other listed waters in the Lake Pontchartrain Basin. The Tables 4 - 6 below list the 2006, Draft 2008, and Draft 2010 Integrated Reports for Subsegments 040907 and 040908.

Table 4. 2006 303(d) Listing for Subsegments 040907 and 040908

Subsegment Number	Subsegment Description	Type	Size (Miles)	PCR	SCR	FWP	DWS	ONR	OYS	AGR	LAL	Impaired Use for Suspected Cause	Suspected Causes of Impairment	IR Category for Suspected	TMDL Due Date	TMDL Priority	Suspected Sources of Impairment
LA040907	Bayou Bonfouca-Headwaters to La. Hwy. 433	River	6	Fully Supporting	Fully Supporting	Not Supporting						FWP	Chloride and Sulfates	2006 303(d) Listing	2011	Medium	Drought-related Impacts
LA040907	Bayou Bonfouca-Headwaters to La. Hwy. 433	River	6	Fully Supporting	Fully Supporting	Not Supporting						FWP	Oxygen, Dissolved	2006 303(d) Listing	2011	Medium	Municipal (Urbanized High Density Area) and On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) and Sanitary Sewer Overflows (Collection System Failures)
LA040908	Bayou Bonfouca-La. Hwy. 433 to Lake Pontchartrain (Estuarine)	River	7	Fully Supporting	Fully Supporting	Not Supporting						PCR	Fecal Coliform	2006 303(d) Listing	2011	Medium	Source Unknown

Table 5. Draft 2008 303(d) Listing for Subsegments 040907 and 040908

Subsegment Number	Subsegment Description	Type	Size (Miles)	PCR	SCR	FWP	DWS	ONR	OYS	AGR	LAL	DO CM Full?	Impaired Use for Suspected Cause	Suspected Causes of Impairment	IR Category for Suspected Causes	TMDL Due Date	TMDL Priority	Suspected Sources of Impairment
LA040907	Bayou Bonfouca-From headwaters to LA-433	River	6	Not Supporting	Fully Supporting	Not Supporting							FWP	Oxygen, Dissolved	2008 303(d) Listing	2011	High	Municipal (Urbanized High Density Area), On-site Treatment Systems (Septic Systems and Similar Decentralized Systems), and Sanitary Sewer Overflows (Collection System Failures)

Table 6. Draft 2010 303(d) Listing for Subsegments 040907 and 040908

Subsegment Number	Subsegment Description	Type	Size (Miles)	PCR	SCR	FWP	DWS	ONR	OYS	AGR	LAL	Impaired Use for Suspected Cause	Suspected Causes of Impairment	IR Category for Suspected Causes	TMDL Due Date	TMDL Priority	Suspected Sources of Impairment
LA040907	Bayou Bonfouca-From headwaters to LA-433	River	6	Not Supporting	Fully Supporting	Not Supporting						FWP	Oxygen, Dissolved	2010 303(d) Listing	2012	High	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems), Municipal (Urbanized High Density Area), and Sanitary Sewer Overflows (Collection System Failures)

Oxygen-demanding parameters modeled included CBOD, NBOD, and DO. Conservative parameters modeled include conductivity and chlorides.

Subsegments 040905 and 040906 lie entirely within St. Tammany Parish and drains into Bayou Bonfouca. Subsegments 040907 and 040908 lie entirely within St. Tammany Parish and drain into Lake Pontchartrain.

LDEQ is utilizing a phased TMDL approach for Bayou Liberty and Bayou Bonfouca as shown in Table 7. This approach provides LDEQ with the opportunity to revise the DO criteria and at the same time, allows LDEQ to develop a meaningful and implementable DO TMDL based upon the appropriate DO criteria and in accordance with EPA’s Consent Decree (E. D. La. 2002) deadlines. At the same time, it will lead to improved water quality while providing local governments and businesses the opportunity to prepare and adjust to the new permit requirements that will be implemented as a result of the TMDL developed in Phases I and II.

Phase I will include the development of loading values for the existing DO criteria for Bayou Liberty and Bayou Bonfouca based on existing criteria, the resulting permit limits for facilities in subsegments 040905, 040906, 040907, and 040908 are presented in Tables 8 - 11. However, full implementation of permit limits will occur in a phased manner. Phase I will serve as the first step towards meeting the DO criteria. The implementation of permit limits will occur according to the following strategy.

Table 7. Bayou Liberty and Bayou Bonfouca Phased TMDL Approach

Stage / Phase	DO Criteria (mg/L)	Implementation Date
Phase I	5.0 mg/L – 040905, 040907; 4.0 mg/L – 040906, 040908	Phase I implementation required upon EPA approval of the TMDL and subsequent update of Louisiana’s Water Quality Management Plan
Primary Activities - Ecoregion-based UAA developed and DO criteria revised and promulgated;		
Phase II	Appropriate DO criteria based on UAA	Phase II implementation required upon EPA approval of Phase II of the TMDL and subsequent update of Louisiana’s Water Quality Management Plan

Phase I Permit Implementation

All TMDL, permitting, and enforcement activities will be conducted in accordance with the Clean Water Act, the Louisiana Environmental Regulatory Code, and applicable state laws.

1. New discharges of oxygen-demanding loads:

In general, LDEQ may not be able to permit additional discharges of oxygen-demanding loads. However, in the event that one the following requirements can be attained, LDEQ may permit a new discharge. The typical permit limits will be 5 mg/L BOD₅ / 2 mg/L NH₃ / 5 mg/L DO. Such new facilities may be required to submit an environmental impact assessment to LDEQ's permitting staff, which will conduct a thorough evaluation of the proposed facility based on environmental impacts, economic benefits, an analysis of alternatives, and other pertinent factors.

- a. The facility demonstrates that it will provide a significant load reduction of man-made oxygen-demanding constituents to the impaired watershed(s) serviced by the facility. The facility must also contribute to a reduction in the number of facilities discharging to the watershed(s). Facilities that may be considered for permits under this provision include, but are not limited to:
 - i. A facility that will provide improved sewage treatment to multiple subdivisions previously serviced by wastewater treatment plants that are incapable of treating to tertiary limits.
 - ii. A facility that will provide sewage collection and treatment to previously unsewered areas in which many of the sanitary discharges from permitted facilities and individual home treatment units were entering an impaired watershed. As a result, the facility would be expected to provide more efficient treatment to the wastewater and reduce the net loading of oxygen-demanding substances in the watershed.
- b. The facility demonstrates that its wastewater will not leave the facility or its property. Significant stormwater events do not apply to this provision. For the purpose of this provision, a significant stormwater event is defined as the 25 year, 24 hour rainfall event or its numerical equivalent, as defined by the Southern Regional Climate Center.
 - i. Facilities that may be considered under this provision include, but are not limited to:
 - a. Effluent reduction systems that have been approved by the Louisiana Department of Health and Hospitals.

- b. Wastewater treatment plants equipped with overland flow systems in which the effluent will not leave the facility.
 - c. Wastewater treatment plants equipped with holding ponds that will retain the effluent such that the effluent will not leave the facility.
- ii. LDEQ recognizes that some local governments are in the process of building or expanding regional sewage collection and treatment systems. In such areas, LDEQ may, on a limited basis, grant permits of limited durations to facilities that agree to tie into a regional collection and treatment system when it becomes available. LDEQ must have absolute assurance that the regional collection system will be available to the facility and the facility will connect to the regional collection system on or before the expiration date of the permit. Such assurance may include a formal agreement between the facility, the owner and operator of the regional wastewater treatment system, and LDEQ. The regional system must have the capacity to treat the additional wastewater. Such a permit may have a duration of less than five years or it may have a five year duration with interim permit limits. The permit will be written based on projected completion dates for the construction of the collection and treatment system. The facility will be required to cease all wastewater discharges to the Bayou Liberty watershed and transfer the discharge to the regional collection system once the permit or interim limits expire or the collection system is available to the facility, whichever comes first. If the permit or interim limits expire, but, due to unforeseen circumstances, the availability of the collection system has been temporarily delayed, the duration of the permit or interim limits may be extended. If the availability of the collection system has been indefinitely delayed, the facility may be required to cease all discharges to the Bayou Liberty watershed. Such facilities may resort to options covered in item 1.b.i. above.
- c. LDEQ reassesses Subsegments 040905, 040906, 040907, and 040908 (Bayou Liberty and Bayou Bonfouca). LDEQ determines that Subsegments 040905, 040906, 040907, and 040908 is meeting the appropriate DO criteria and designated uses.

2. Existing discharges of oxygen demanding loads:

The Phase I reductions for existing dischargers in the Bayou Liberty and Bayou Bonfouca Watersheds are presented in Tables 8 - 11. Existing facilities discovered to

be discharging oxygen-demanding loads without LPDES permits as of the TMDL approval date are to be permitted in accordance with the limits established for existing facilities with permits. Unpermitted facilities that are newly activated or reactivated and discharging after the TMDL approval date may be subjected to enforcement actions and will be required to tie into regional collection and treatment systems, once those systems are available. Once the TMDL is approved, existing facilities may have up to 3 years from their next permit renewal date to meet the interim limits.

3. Nutrient monitoring (i.e., reporting for Total Nitrogen and Total Phosphorus) will be required for individual permits. Nutrient monitoring will be added to the general permit series (LAG530000, LAG540000, LAG560000, and LAG570000) upon the next scheduled renewal of each series.

Table 8. Interim Limits for 040905 Point Sources

FACILITY	AI NO./ PERMIT NO.	PERMIT EXP DATE (MM/DD/YY)	FACILITY TYPE	OUT-FALL NO.	OUTFALL DESCRIPTION	RECEIVING WATER	CURRENT EXPECTED FLOW	CURRENT MONTHLY AVERAGE CONCENTRATION LIMITS		INTERIM PHASE I MONTHLY AVERAGE CONCENTRATION LIMITS			MODELING COMMENTS
							GPD	BOD5/ CBOD5, mg/L	NH ₃ -N, mg/L	BOD5/ CBOD5, mg/L	NH ₃ -N, mg/L	DO, mg/L	
St. Tammany Parish Stormwater	108405/ LAR041024	12/4/2012	Stormwater	N/A	Ditches to Bayou Liberty	Bayou Liberty	N/A	N/A		N/A	N/A	N/A	MS4 addressed in model and TMDL. This TMDL will not impose permit limits.
City of Slidell Stormwater	108410/ LAR041015	12/4/2012	Stormwater	N/A	Ditches to Bayou Liberty	Bayou Liberty	N/A	N/A		N/A	N/A	N/A	MS4 addressed in model and TMDL. This TMDL will not impose permit limits.
Fernandez-Zimmerle LLC	1609/ LAG533438	12/1/2012	STP	002	Into an unnamed tributary then to Bayou Liberty	Bayou Liberty	200	30		10	10	2	Not Modeled
Fernandez-Zimmerle LLC	1609/ LAG533438	12/1/2012	STP	003	Into an unnamed tributary then to Bayou Liberty	Bayou Liberty	400	30		10	10	2	Not Modeled
Bayou Liberty Water Association	12830/ LAG530716	12/1/2012	STP	001	Hwy 433 ditch to Bayou Liberty	Bayou Liberty	180	30		20	10	2	Modeled
Herron Wire Products Inc.	14221/ LAG532809	12/1/2012	STP	001	Hwy 190 ditch to Bayou Liberty	Bayou Liberty	150	30		20	10	2	Modeled
Coast Waterworks Inc-The Meadows Subdivision	19119/ LA0073148	7/1/2011	STP	001	Pipe to ditch to Bayou Liberty	Bayou Liberty	276000	10		10	2	2	Modeled
LA Water Service Inc-Oakmont Subdivision	19471/ LAG570031	5/1/2014	STP	001	Ditch to Parish Canal to Bayou Liberty	Bayou Liberty	70600	10		10	2	2	Modeled
Louisiana Water Service Inc-Huntwyck Village	19476/ LA0065714	9/1/2013	STP	001	Pipe to ditch to Bayou Liberty	Bayou Liberty	278000	10		10	5	2	Modeled

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

FACILITY	AI NO./ PERMIT NO.	PERMIT EXP DATE (MM/DD/YY)	FACILITY TYPE	OUT-FALL NO.	OUTFALL DESCRIPTION	RECEIVING WATER	CURRENT EXPECTED FLOW	CURRENT MONTHLY AVERAGE CONCENTRATION LIMITS		INTERIM PHASE I MONTHLY AVERAGE CONCENTRATION LIMITS			MODELING COMMENTS
							GPD	BOD5/ CBOD5, mg/L	NH ₃ -N, mg/L	BOD5/ CBOD5, mg/L	NH ₃ -N, mg/L	DO, mg/L	
Royale Gardens Homeowners Association-Royal Gardens Subdivision	19797/ LAG570046	5/1/2014	STP	001	Bayou Liberty	Bayou Liberty	35000	10		10	10	2	Not Modeled
2315 Hwy 190 Building	27080/ LAG532824	12/1/2012	STP	001	Hwy 190 ditch to Bayou Liberty	Bayou Liberty	320	30		20	10	2	Modeled
Curtis Environmental Utilities Inc-Timber Ridge Subdivision	33837/ LAG570109	5/1/2014	STP	001	Ditch to Bayou Paquet	Bayou Paquet	44400	10		10	5	2	Modeled
The Southern District of Lutheran Church-Missouri Synod	42602/ LAG531992	12/1/2012	STP	001	Unnamed ditch to Bayou Liberty	Bayou Liberty	1600	30		10	10	2	Modeled
Royal Golf Club Inc	43097/ LAG530890	12/1/2012	STP	001	Local drainage to Bayou Liberty	Bayou Liberty	4340	30		10	10	2	Modeled
St Tammany Parish Police Jury-Thompson Road WWTP	43394/ LAG530650	12/1/2012	STP	001	Hwy 190 ditch to Bayou Liberty	Bayou Liberty	20	30		20	10	2	Modeled
Pit Stop #3	70933/ LAG531535	12/1/2012	STP	001	Hwy 190 ditch to Bayou Liberty	Bayou Liberty	1060	30		20	10	2	Modeled
Liberty Food Store	71168/ LAG531327	12/1/2012	STP	001	Bayou Liberty	Bayou Liberty	570	30		20	10	2	Modeled
Thompson Road Grocery Store #615	74116/ LAG532825	12/1/2012	STP	001	Hwy 190 ditch to Bayou Liberty	Bayou Liberty	80	30		20	10	2	Modeled
Cleco Power LLC-Slidell Service Center	83359/ LAG532103	12/1/2012	STP	001	Local drainage to Bayou Vincent	Bayou Vincent	200	30		20	10	2	Modeled

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

FACILITY	AI NO./ PERMIT NO.	PERMIT EXP DATE (MM/DD/YY)	FACILITY TYPE	OUT-FALL NO.	OUTFALL DESCRIPTION	RECEIVING WATER	CURRENT EXPECTED FLOW	CURRENT MONTHLY AVERAGE CONCENTRATION LIMITS		INTERIM PHASE I MONTHLY AVERAGE CONCENTRATION LIMITS			MODELING COMMENTS
							GPD	BOD5/ CBOD5, mg/L	NH ₃ -N, mg/L	BOD5/ CBOD5, mg/L	NH ₃ -N, mg/L	DO, mg/L	
Butera Investments Inc-Lake Castle Private School	99225/ LAG541304	7/1/2013	STP	001	Unnamed ditch then to Bayou Liberty	Bayou Liberty	8700	30		10	10	2	Modeled
Louisiana Lumber Inc-Construction Project	107578/ LAG531777	12/1/2012	STP	001	Bayou Liberty	Bayou Liberty	400	30		20	10	2	Modeled
ABC Supply Co Inc	113210/ LAG531454	12/1/2012	STP	001	Hwy 190 ditch to Bayou Liberty	Bayou Liberty	140	30		20	10	2	Modeled
G&S Bear Enterprises LLC	117778/ LAG531527	12/1/2012	STP	001	Hwy ditch to Bayou Liberty	Bayou Liberty	160	30		20	10	2	Modeled
Indian Hills RV Park	119158/ LAG541174	7/1/2013	STP	001	Hwy 190 ditch to Bayou Liberty	Bayou Liberty	7875	30		10	10	2	Modeled
Dollar General Store #6578	125413/ LAG531717	12/1/2012	STP	001	Hwy 190 ditch to Bayou Liberty	Bayou Liberty	120	30		20	10	2	Modeled
Hanna Brothers Extreme Motion Picture Catering	129058/ LAG531861	12/1/2012	STP	001	Local drainage to Bayou Liberty	Bayou Liberty	160	30		20	10	2	Modeled
Gause West Properties-Shopping Center for Faye Wagner	129831/ LAG531980	12/1/2012	STP	001	Ditch to Bayou Liberty	Bayou Liberty	1932	30		20	10	2	Modeled
Omni Storage VI LLC	140231/ LAG532056	8/15/2011	STP	001	Hwy 190 ditch to Bayou Liberty	Bayou Liberty	300	30		20	10	2	Modeled
Airgas Gulf States-WWTP	155400/ LAG532559	12/1/2012	STP	001	Local drainage to Bayou Liberty	Bayou Liberty	140	30		20	10	2	Modeled
CRS Properties LLC-Albers AC & Heating	157679/ LAG532786	12/1/2012	STP	001	Parish drainage to Bayou Liberty	Bayou Liberty	120	30		20	10	2	Modeled

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

FACILITY	AI NO./ PERMIT NO.	PERMIT EXP DATE (MM/DD/YY)	FACILITY TYPE	OUT-FALL NO.	OUTFALL DESCRIPTION	RECEIVING WATER	CURRENT EXPECTED FLOW	CURRENT MONTHLY AVERAGE CONCENTRATION LIMITS		INTERIM PHASE I MONTHLY AVERAGE CONCENTRATION LIMITS			MODELING COMMENTS
							GPD	BOD5/ CBOD5, mg/L	NH ₃ -N, mg/L	BOD5/ CBOD5, mg/L	NH ₃ -N, mg/L	DO, mg/L	
Seventh-Day Adventist Church-WWTP	157724/ LAG532799	12/1/2012	STP	001	Hwy 190 ditch to Bayou Liberty	Bayou Liberty	1250	30		20	10	2	Modeled
Guardian Angels Learning Center II	157922/ LAG532862	12/1/2012	STP	001	Unnamed ditch to Bayou Liberty	Bayou Liberty	930	30		10	10	2	Modeled
Equity Creek Real Estate LLC	157924/ LAG533803	12/1/2012	STP	001	Unnamed ditch to unnamed canal to Bayou Liberty	Bayou Liberty	100	30		20	10	2	Not Modeled
All American Lodge Greatest in Elkdome	157925/ LAG532887	12/1/2012	STP	001	Unnamed ditch to Bayou Liberty	Bayou Liberty	1600	30		20	10	2	Modeled
RJD Contractors	157926/ LAG533686	12/1/2012	STP	001	Parish drainage to Bayou Bonfouca	Bayou Bonfouca	20	30		20	10	2	Modeled
2319 Hwy 190 Building	157927/ LAG532861	12/1/2012	STP	001	Hwy 190 ditch to Bayou Liberty	Bayou Liberty	40	30		20	10	2	Modeled
2317 Hwy 190 Building	157928/ LAG532860	12/1/2012	STP	001	Hwy 190 ditch to Bayou Liberty	Bayou Liberty	60	30		20	10	2	Modeled
Assunta's Italian Restaurant of Slidell	157931/ LAG532904	12/1/2012	STP	001	Hwy 190 ditch to Bayou Liberty	Bayou Liberty	2900	30		20	10	2	Modeled
Lion Consulting Inc-Lion Multimedia & Consulting	157933/ LAG532890	12/1/2012	STP	001	Hwy 190 ditch to Bayou Liberty	Bayou Liberty	40	30		20	10	2	Modeled
Chill Rite	157934/ LAG532842	12/1/2012	STP	001	Hwy 190 ditch to Bayou Liberty	Bayou Liberty	220	30		20	10	2	Modeled
M & R File Service LLC-Russell & Michelle Bolotte	163444/ LAG533101	12/1/2012	STP	001	Parish ditch to unnamed tributary to Bayou Liberty	Bayou Liberty	60	30		20	10	2	Modeled

FACILITY	AI NO./ PERMIT NO.	PERMIT EXP DATE (MM/DD/YY)	FACILITY TYPE	OUT-FALL NO.	OUTFALL DESCRIPTION	RECEIVING WATER	CURRENT EXPECTED FLOW	CURRENT MONTHLY AVERAGE CONCENTRATION LIMITS		INTERIM PHASE I MONTHLY AVERAGE CONCENTRATION LIMITS			MODELING COMMENTS
							GPD	BOD5/ CBOD5, mg/L	NH ₃ -N, mg/L	BOD5/ CBOD5, mg/L	NH ₃ -N, mg/L	DO, mg/L	
Southern Pipe	168384/ LAG533350	12/1/2012	STP	001	By effluent pipe then into an unnamed ditch then into an unnamed canal then into Bayou Liberty	Bayou Liberty	80	30		10	10	2	Not Modeled
Carl Hodge Rental	169771/ LAG533393	12/1/2012	STP	001	Into an unnamed drainage ditch then into Bayou Bonfouca	Bayou Bonfouca	160	30		10	10	2	Not Modeled
Diversified Oil Field Services Inc	169801/ LA0125334	1/1/2016	STP	001	Into a roadside ditch then into Bayou Vincent then into Bayou Bonfouca	Bayou Vincent	400	30		10	10	2	Not Modeled

^a This TMDL was developed for critical low-flow conditions (7Q10). Therefore the WLAs for all stormwater discharges will be 0.0 lb/d under critical low flow conditions.

Table 9. Interim Limits for 040906 Point Sources

FACILITY	AI NO./ PERMIT NO.	PERMIT EXP DATE (MM/DD/YY)	FACILITY TYPE	OUT-FALL NO.	OUTFALL DESCRIPTION	RECEIVING WATER	CURRENT EXPECTED FLOW	CURRENT MONTHLY AVERAGE CONCENTRATION LIMITS		TMDL FLOW	INTERIM PHASE I MONTHLY AVERAGE CONCENTRATION LIMITS			MODELING COMMENTS
							GPD	BOD5/ CBOD5, mg/L	NH ₃ -N, mg/L	GPD	BOD5/ CBOD5, mg/L	NH ₃ -N, mg/L	DO, mg/L	
St. Tammany Parish Stormwater	108405/LAR041024	12/4/2012	Stormwater	N/A	Ditches to Bayou Liberty	Bayou Liberty	N/A	N/A		N/A	N/A	N/A	N/A	MS4 addressed in model and TMDL. This TMDL will not impose permit limits.
City of Slidell Stormwater	108410/LAR041015	12/4/2012	Stormwater	N/A	Ditches to Bayou Liberty	Bayou Liberty	N/A	N/A		N/A	N/A	N/A	N/A	MS4 addressed in model and TMDL. This TMDL will not impose permit limits.
R&D Automotive	24329/LAG470270	9/1/2014	STP	001	Into an unnamed drainage ditch then into unnamed parish drainage then into Bayou Liberty	Bayou Liberty	500	30		N/A	10	10	2	Not Modeled
Acts 1 Tax Service Inc	40483/LAG530841	12/1/2012	STP	001	Local drainage to Bayou Paquet	Bayou Paquet	60	30		75	20	10	5	Modeled
NC Investments LLC-Mom & Dad's Consignment Store	43141/LAG532804	12/1/2012	STP	001	Ditch to Bayou Paquet	Bayou Paquet	40	30		50	20	10	2	Modeled
Waste Management of LA LLC-St. Tam Hauling Ctr	76287/LA0078778	6/1/2010	STP	001	Hwy 190 ditch to Bayou Paquet	Bayou Paquet	500	30		625	20	10	2	Modeled
A-1 Remodeling & Building Inc	93349/LAG531273	12/1/2012	STP	001	Hwy 190 ditch to Bayou Liberty	Bayou Liberty	200	30		250	20	10	2	Modeled
Bayou Liberty Marina	94269/LAG531330	12/1/2012	STP	001	Ditch to Bayou Liberty	Bayou Liberty	20	30		25	20	10	2	Modeled

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

FACILITY	AI NO./ PERMIT NO.	PERMIT EXP DATE (MM/DD/YY)	FACILITY TYPE	OUT-FALL NO.	OUTFALL DESCRIPTION	RECEIVING WATER	CURRENT EXPECTED FLOW	CURRENT MONTHLY AVERAGE CONCENTRATION LIMITS		TMDL FLOW	INTERIM PHASE I MONTHLY AVERAGE CONCENTRATION LIMITS			MODELING COMMENTS
							GPD	BOD5/CBOD5, mg/L	NH ₃ -N, mg/L	GPD	BOD5/CBOD5, mg/L	NH ₃ -N, mg/L	DO, mg/L	
Timberland Trailer Park LLC	98284/LAG531573	12/1/2012	STP	001	To local drainage then to W15 Canal then to Doubloon Bayou then to Fritchie Marsh	W15 Canal	4500	30		N/A	10	10	2	Not Modeled
A Bonfouca Marina	114175/LAG531465	12/1/2012	STP	001	Directly to Bayou Liberty then into Bayou Bonfouca then into Lake Pontchartrain	Bayou Liberty	860	30		1,075	20	10	2	Modeled
Thompson Road Baptist Church-WWTP	138188/LAG532165	12/1/2012	STP	001	Hwy 433 ditch to Bayou Liberty	Bayou Liberty	800	30		1,000	20	10	2	Modeled
Accurate Alignment	151364/LAG470244	9/1/2014	STP	001	Ditch to Bayou Paquet	Bayou Paquet	20	30		25	20	10	2	Modeled
All American Cargo Elevators LLC WWTP	157614/LAG532770	12/1/2012	STP	001	Highway 190 ditch to Bayou Liberty	Bayou Liberty	60	30		75	20	10	2	Modeled
St. Genevieve Catholic Church-WWTP	157725/LAG532800	12/1/2012	STP	001	Pipe to Bayou Liberty	Bayou Liberty	3000	30		3,750	20	10	2	Modeled
Mayfield Elementary School	161289/LAG541758	7/1/2013	STP	001	Pipe then to ditch then to Bayou Bonfouca	Bayou Bonfouca	14250	10		N/A	10	10	2	Not Modeled

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

FACILITY	AI NO./ PERMIT NO.	PERMIT EXP DATE (MM/DD/YY)	FACILITY TYPE	OUT-FALL NO.	OUTFALL DESCRIPTION	RECEIVING WATER	CURRENT EXPECTED FLOW	CURRENT MONTHLY AVERAGE CONCENTRATION LIMITS		TMDL FLOW	INTERIM PHASE I MONTHLY AVERAGE CONCENTRATION LIMITS			MODELING COMMENTS
							GPD	BOD5/ CBOD5, mg/L	NH ₃ -N, mg/L	GPD	BOD5/ CBOD5, mg/L	NH ₃ -N, mg/L	DO, mg/L	
Broadway Inc: K-Bar-B Youth Ranch-Cabins & Admin Complex	164343/ LAG533161	12/1/2012	STP	001	Hwy 190 ditch to Bayou Paquet	Bayou Paquet	2300	30		2,875	20	10	2	Modeled

Table 10. Interim Limits for 040907 Point Sources

FACILITY	AI NO./ PERMIT NO.	PERMIT EXP DATE (MM/DD/YY)	FACILITY TYPE	OUT-FALL NO.	OUTFALL DESCRIPTION	RECEIVING WATER	CURRENT EXPECTED FLOW	CURRENT MONTHLY AVERAGE CONCENTRATION LIMITS		TMDL FLOW	INTERIM PHASE I MONTHLY AVERAGE CONCENTRATION LIMITS			MODELING COMMENTS
							GPD	BOD5/CBOD5, mg/L	NH ₃ -N, mg/L	GPD	BOD5/CBOD5, mg/L	NH ₃ -N, mg/L	DO, mg/L	
St. Tammany Parish Stormwater	108405/LAR041024	12/4/2012	Stormwater	N/A	Ditches to Bayou Bonfouca	Bayou Bonfouca	N/A	N/A		N/A	N/A	N/A	N/A	MS4 addressed in model and TMDL. This TMDL will not impose permit limits.
City of Slidell Stormwater	108410/LAR041015	12/4/2012	Stormwater	N/A	Ditches to Bayou Bonfouca	Bayou Bonfouca	N/A	N/A		N/A	N/A	N/A	N/A	MS4 addressed in model and TMDL. This TMDL will not impose permit limits.
Cut-Rite, Inc. Cut Rite/Northshore Driveline	13288/LAG533518	12/1/2012	STP	001	Local drainage then to Bayou Liberty	Bayou Liberty	500	30		N/A	10	10	2	Not Modeled
ExxonMobil Oil Corp #51367	13400/LAG530198	12/1/2012	STP	001	Ditch to Bayou Vincent	Bayou Vincent	2500	30		3,125	10	10	2	Modeled
Advantage Tire & Wheel	14744/LAG470293	9/1/2014	STP	001	Unnamed ditch then to Bayou Liberty	Bayou Liberty	1500	30		N/A	10	10	2	Not Modeled
Sunbelt Innovative Plastics Inc STP	17609/LA0090409	2/1/2016	STP	001	Local drainage to Bayou Liberty	Bayou Liberty	2500	30		3,125	10	10	2	Modeled
Stones Throw Apartments	17938/LAG570066	5/1/2014	STP	001	Pipe to Bayou Vincent	Bayou Vincent	19200	10		24,000	10	10	2	Modeled
Eagle Lake Mobile Home Park	19785/LAG570120	5/1/2014	STP	001	Unnamed ditch to Bayou Vincent to Bayou Bonfouca	Bayou Vincent	63000	10		78,750	10	10	2	Modeled
Western International Gas & Cylinder Inc-Slidell Facility	20072/LA0096334	2/1/2016	STP	001	Pipe to an unnamed ditch then into an unnamed canal then into Bayou Liberty	Bayou Liberty	4480	30		N/A	10	10	2	Not Modeled

FACILITY	AI NO./ PERMIT NO.	PERMIT EXP DATE (MM/DD/YY)	FACILITY TYPE	OUT-FALL NO.	OUTFALL DESCRIPTION	RECEIVING WATER	CURRENT EXPECTED FLOW	CURRENT MONTHLY AVERAGE CONCENTRATION LIMITS		TMDL FLOW	INTERIM PHASE I MONTHLY AVERAGE CONCENTRATION LIMITS			MODELING COMMENTS
							GPD	BOD5/CBOD5, mg/L	NH ₃ -N, mg/L	GPD	BOD5/CBOD5, mg/L	NH ₃ -N, mg/L	DO, mg/L	
John's Automotive Machine Shop Inc	24697/ LAG530274	12/1/2012	STP	001	Roadside ditch to Hwy 11 ditch to Bayou Vincent	Bayou Vincent	40	30		50	10	10	2	Modeled
Jung's Automotive, Inc	25610/ LAG470303	9/1/2014	STP	001	To local drainage then to Bayou Liberty	Bayou Liberty	300	30		N/A	10	10	2	Not Modeled
CM Auto Repair Inc	27558/ LAG470149	9/1/2014	STP	001	Open ditch to US Highway 190W then to ditch above Hwy 190 then to Bayou Paquet	Bayou Paquet	500	30		N/A	10	10	2	Not Modeled
Randall A Evans DDS LLC	34988/ LAG533431	12/1/2012	STP	001	Local drainage then to Bayou Bonfouca	Bayou Bonfouca	500	30		N/A	10	10	2	Not Modeled
Rowland Duffour Clinic	36461/ LAG533501	12/1/2012	STP	001	By effluent pipe then into an unnamed ditch then into Bayou Paquet	Bayou Paquet	500	30		N/A	10	10	2	Not Modeled, No State Permit
Brown's Village Road Sand Pit	40412/ LAG490031	2/1/2015	STP	001	Local drainage then to Bayou Bonfouca	Bayou Bonfouca	100	30		N/A	10	10	2	Not Modeled
Northshore Chemical LLC	41239/ LA0122459	4/1/2012	STP	001	Local drainage to Bayou Vincent	Bayou Vincent	55	30		69	10	10	2	Modeled
Factory Direct Furniture	41484/ LAG530200	12/1/2012	STP	001	Ditch to Bayou Vincent	Bayou Vincent	40	30		50	10	10	2	Modeled
Ernest Walder Sr	41768/ LAG530736	12/1/2012	STP	001	Local drainage to Bayou Vincent	Bayou Vincent	360	30		450	10	10	2	Modeled
LCR-M-Plumbing Supply	41993/ LAG530703	12/1/2012	STP	001	Local drainage to Bayou Vincent	Bayou Vincent	120	30		150	10	10	2	Modeled

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

FACILITY	AI NO./ PERMIT NO.	PERMIT EXP DATE (MM/DD/YY)	FACILITY TYPE	OUT-FALL NO.	OUTFALL DESCRIPTION	RECEIVING WATER	CURRENT EXPECTED FLOW	CURRENT MONTHLY AVERAGE CONCENTRATION LIMITS		TMDL FLOW	INTERIM PHASE I MONTHLY AVERAGE CONCENTRATION LIMITS			MODELING COMMENTS
							GPD	BOD5/CBOD5, mg/L	NH ₃ -N, mg/L	GPD	BOD5/CBOD5, mg/L	NH ₃ -N, mg/L	DO, mg/L	
J&K Management LLC	41995/ LAG532382	12/1/2012	STP	001	Directly to Bayou Vincent	Bayou Vincent	180	30		225	10	10	2	Modeled
Capitol Steel Inc-Slidell	42161/ LAG530763	12/1/2012	STP	001	By effluent pipe then into parish drainage ditch then to Bayou Bonfouca	Bayou Bonfouca	1400	30		N/A	10	10	2	Not Modeled
New Life Ministries	42622/ LAG530943	12/1/2012	STP	001	Local drainage to Bayou Liberty	Bayou Liberty	490	30		613	10	10	2	Modeled
Nu-Lite Electrical Wholesalers	42686/ LAG530397	12/1/2012	STP	001	I-12 Service Road Ditch to unnamed ditch to Bayou Bonfouca	Bayou Bonfouca	80	30		100	10	10	2	Modeled
Piney Ridge Mobile Home Park LLC	42841/ LAG540932	7/1/2013	STP	001	Ditch to Bayou Vincent	Bayou Vincent	9300	30		11,625	10	10	2	Modeled
S&H Good Eats Café	42865/ LAG533440	12/1/2012	STP	001	Hwy 190 Ditch to Bayou Vincent	Bayou Vincent	490	30		613	10	10	2	Modeled
Coastal Property Holdings LLC-Shady Pines Mobile Home Park	43212/ LAG540642	7/1/2013	STP	001	Roadside ditch to Bayou Bonfouca	Bayou Bonfouca	10500	30		13,125	10	10	2	Modeled
Skater's Paradise II, Inc.	43242/ LAG530811	12/1/2012	STP	001	Hwy 190 ditch to Bayou Bonfouca	Bayou Bonfouca	540	30		675	10	10	2	Modeled

FACILITY	AI NO./ PERMIT NO.	PERMIT EXP DATE (MM/DD/YY)	FACILITY TYPE	OUT-FALL NO.	OUTFALL DESCRIPTION	RECEIVING WATER	CURRENT EXPECTED FLOW	CURRENT MONTHLY AVERAGE CONCENTRATION LIMITS		TMDL FLOW	INTERIM PHASE I MONTHLY AVERAGE CONCENTRATION LIMITS			MODELING COMMENTS
							GPD	BOD5/CBOD5, mg/L	NH ₃ -N, mg/L	GPD	BOD5/CBOD5, mg/L	NH ₃ -N, mg/L	DO, mg/L	
Slidell Welding Service Inc	43249/ LAG530660	12/1/2012	STP	001	Effluent pipe then to State Hwy 190 (Gause West Ditch) then into St. Tammany Ditch then to Bayou Bonfouca	Bayou Bonfouca	300	30		N/A	10	10	2	Not Modeled
Slidell Welding Service Inc	43249/ LAG530660	12/1/2012	STP	001	Effluent pipe then to State Hwy 190 (Gause West Ditch) then into St. Tammany Ditch then to Bayou Bonfouca	Bayou Bonfouca	100	30		N/A	10	10	2	Not Modeled
South Seas Chinese Restaurant	43274/ LAG530987	12/1/2012	STP	001	Ditch to Bayou Vincent	Bayou Vincent	1950	30		2,438	10	10	2	Modeled
Ellis Recycling	43316/ LAG480553	8/1/2011	STP	001	Industrial Dr ditch to Bayou Vincent	Bayou Vincent	120	30		150	10	10	2	Modeled
St Tammany Parish School Board-Slidell Support Facility	43403/ LAG530531	12/1/2012	STP	001	Ditch to Bayou Vincent	Bayou Vincent	100	30		125	10	10	2	Modeled
Wadleigh Industries Inc-Offshore Equipment Solutions	52386/ LA0109495	5/1/2015	STP	001	Ditches to Bayou Vincent	Bayou Vincent	800	30		1,000	10	10	2	Modeled

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

FACILITY	AI NO./ PERMIT NO.	PERMIT EXP DATE (MM/DD/YY)	FACILITY TYPE	OUT-FALL NO.	OUTFALL DESCRIPTION	RECEIVING WATER	CURRENT EXPECTED FLOW	CURRENT MONTHLY AVERAGE CONCENTRATION LIMITS		TMDL FLOW	INTERIM PHASE I MONTHLY AVERAGE CONCENTRATION LIMITS			MODELING COMMENTS
							GPD	BOD5/CBOD5, mg/L	NH ₃ -N, mg/L	GPD	BOD5/CBOD5, mg/L	NH ₃ -N, mg/L	DO, mg/L	
Blue Bell Creameries Inc	68576/ LAG532783	12/1/2012	STP	001	Ditch to Bayou Bonfouca	Bayou Bonfouca	780	30		975	20	10	2	Modeled
I-12 Shell	71531/ LAG531734	12/1/2012	STP	001	Local drainage to Bayou Bonfouca	Bayou Bonfouca	160	30		200	10	10	2	Modeled
Jubilee #4815	74005/ LAG480587	8/1/2011	STP	001	Local drainage to Bayou Vincent	Bayou Vincent	1700	30		2,125	10	10	2	Modeled
Circle K #1689	75145/ LAG533633	12/1/2012	STP	001	Into local drainage then into Bayou Bonfouca	Bayou Bonfouca	1000	30		N/A	10	10	2	Not Modeled
Eagle LLC-Eagle Carwash	82445/ LAG750317	3/15/2014	STP	001	Local drainage then to Bayou Vincent	Bayou Vincent	500	30		N/A	10	10	2	Not Modeled
Terminix-Home Estates Drive Office Project	90273/ LAG750602	3/15/2014	STP	001	Unnamed ditch then to Gum Bayou	Gum Bayou	320	30		N/A	10	10	2	Not Modeled
Charter Communications	96374/ LAG531494	12/1/2012	STP	001	Roadside ditch to Bayou Vincent	Bayou Vincent	120	30		150	10	10	2	Modeled
Adams Mobile Home Park	98300/ LAG541621	12/1/2012	STP	001	Local drainage to Bayou Vincent	Bayou Vincent	2100	30		2,625	10	10	2	Modeled
Tymeless Flooring Inc	99281/ LAG531318	12/1/2012	STP	001	Hwy 190 ditch to Bayou Bonfouca	Bayou Bonfouca	100	30		125	10	10	2	Modeled
Baker Sales Inc-Baker Sales Warehouse	103353/ LAG531763	12/1/2012	STP	001	Ditch to Bayou Liberty	Bayou Liberty	40	30		50	10	10	2	Modeled
Johnson Apartments	117172/ LAG531511	12/1/2012	STP	001	Local drainage to Bayou Vincent	Bayou Vincent	800	30		1,000	10	10	2	Modeled

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

FACILITY	AI NO./ PERMIT NO.	PERMIT EXP DATE (MM/DD/YY)	FACILITY TYPE	OUT-FALL NO.	OUTFALL DESCRIPTION	RECEIVING WATER	CURRENT EXPECTED FLOW	CURRENT MONTHLY AVERAGE CONCENTRATION LIMITS		TMDL FLOW	INTERIM PHASE I MONTHLY AVERAGE CONCENTRATION LIMITS			MODELING COMMENTS
							GPD	BOD5/CBOD5, mg/L	NH ₃ -N, mg/L	GPD	BOD5/CBOD5, mg/L	NH ₃ -N, mg/L	DO, mg/L	
Beau's Air Conditioning & Heating LLC	117735/ LAG531519	12/1/2012	STP	001	Local drainage to Hwy 190 ditch to unnamed canal to Bayou Liberty	Bayou Liberty	140	30		175	10	10	2	Modeled
Venson Harold Seal Apartments	117751/ LAG531526	12/1/2012	STP	001	To a pond to Bayou Vincent	Bayou Vincent	750	30		938	10	10	2	Modeled
Acadiana Stor-N-Lock	120264/ LAG531938	12/1/2012	STP	001	Ditch to Bayou Vincent	Bayou Vincent	40	30		50	10	10	2	Modeled
CalWes Properties LLC-CalWes Center	126385/ LAG532174	12/1/2012	STP	001	Hwy 190 ditch to Bayou Bonfouca	Bayou Bonfouca	4145	30		5181	20	10	2	Modeled
Peace Lutheran Church-RV Units	133232/ LAG532329	12/1/2012	STP	001	Hwy ditch to Bayou Bonfouca	Bayou Bonfouca	2370	30		2693	10	10	2	Modeled
Jolly Investments LLC-Jolly Investments Apartments	133963/ LAG541455	7/1/2013	STP	001	Ditch to Bayou Bonfouca	Bayou Bonfouca	5700	30		7125	10	10	2	Modeled
United Medical Care Walk In Clinic	134229/ LAG532037	12/1/2012	STP	001	Ditch to Bayou Vincent	Bayou Vincent	200	30		250	20	10	2	Modeled
Good Shepherd Lutheran Church	148472/ LAG532580	12/1/2012	STP	001	Ditch to Bayou Bonfouca	Bayou Bonfouca	1100	30		1375	10	10	2	Modeled
RDG Properties-Platform Crane-Bldg 2	149820/ LAG532253	12/1/2012	STP	001	Local drainage to Bayou Vincent	Bayou Vincent	600	30		750	10	10	2	Modeled

FACILITY	AI NO./ PERMIT NO.	PERMIT EXP DATE (MM/DD/YY)	FACILITY TYPE	OUT-FALL NO.	OUTFALL DESCRIPTION	RECEIVING WATER	CURRENT EXPECTED FLOW	CURRENT MONTHLY AVERAGE CONCENTRATION LIMITS		TMDL FLOW	INTERIM PHASE I MONTHLY AVERAGE CONCENTRATION LIMITS			MODELING COMMENTS
							GPD	BOD5/CBOD5, mg/L	NH ₃ -N, mg/L	GPD	BOD5/CBOD5, mg/L	NH ₃ -N, mg/L	DO, mg/L	
GBR Properties Inc-Advance Auto	151898/ LAG532293	12/1/2012	STP	001	Hwy 190 ditch to canal to Bayou Liberty	Bayou Liberty	100	30		125	20	10	2	Modeled
RDG Properties- SE LA Veterans Healthcare & Omni Eng	161936/ LAG530000	12/1/2012	STP	001	Pipe to local drainage to Bayou Vincent	Bayou Vincent	600	30		750	10	10	2	Modeled
St. Tammany Brake Tag Center-St Tammany Wholesale	165431/ LAG470290	9/1/2014	STP	001	Pipe to Hwy 190 ditch to Bayou Bonfouca	Bayou Bonfouca	40	30		50	10	10	2	Modeled
Coastal Marine Contractors LLC (CMC) - Main Yard - Ship & Barge Repair Facility	167032/ LA0124877	9/1/2015	STP	001	Bayou Bonfouca	Bayou Bonfouca	300	30		N/A	10	10	2	Not Modeled
Manuel Darby Property	167139/ LAG533313	12/1/2012	STP	001	By effluent pipe, then into Hwy 190 ditch then into Bayou Bonfouca	Bayou Bonfouca	490	30		N/A	10	10	2	Not Modeled
Guardian Angel Learning Center	167920/ LAG533301	12/1/2012	STP	001	Parish drainage, then into Bayou Bonfouca	Bayou Bonfouca	510	30		N/A	10	10	2	Not Modeled

FACILITY	AI NO./ PERMIT NO.	PERMIT EXP DATE (MM/DD/YY)	FACILITY TYPE	OUT-FALL NO.	OUTFALL DESCRIPTION	RECEIVING WATER	CURRENT EXPECTED FLOW	CURRENT MONTHLY AVERAGE CONCENTRATION LIMITS		TMDL FLOW	INTERIM PHASE I MONTHLY AVERAGE CONCENTRATION LIMITS			MODELING COMMENTS
							GPD	BOD5/CBOD5, mg/L	NH ₃ -N, mg/L	GPD	BOD5/CBOD5, mg/L	NH ₃ -N, mg/L	DO, mg/L	
Slidell Masjid of Al-Islam	167945/ LAG533308	12/1/2012	STP	001	Parish drainage ditch, then into Bayou Vincent, then into Bayou Bonfouca	Bayou Vincent	15	30		N/A	10	10	2	Not Modeled
Ozone Aggregates	168041/ LAG533333	12/1/2012	STP	001	Effluent pipe to a drainage ditch then to Bonfouca Bayou, then to Lake Pontchartrain	Bayou Bonfouca	80	30		N/A	10	10	2	Not Modeled
Arian Nursery & Preschool	168045/ LAG533353	12/1/2012	STP	001	By effluent pipe then to unnamed ditch then to Bayou Bonfouca	Bayou Bonfouca	950	30		N/A	10	10	2	Not Modeled
Romar Services Inc-Warehouse	168139/ LAG533302	12/1/2012	STP	001	Unnamed ditch then into Bayou Bonfouca	Bayou Bonfouca	80	30		N/A	10	10	2	Not Modeled
Carolyn Draperies	168371/ LAG533343	12/1/2012	STP	001	Local drainage then to Bayou Bonfouca	Bayou Bonfouca	20	30		N/A	10	10	2	Not Modeled
Pentecost Missionary Baptist Church of Slidell	169553/ LAG533559	12/1/2012	STP	001	By effluent pipe then into a parish drainage ditch then into Bayou Bonfouca then into Lake Pontchartrain	Bayou Bonfouca	1290	30		N/A	10	10	2	Not Modeled

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

FACILITY	AI NO./ PERMIT NO.	PERMIT EXP DATE (MM/DD/YY)	FACILITY TYPE	OUT-FALL NO.	OUTFALL DESCRIPTION	RECEIVING WATER	CURRENT EXPECTED FLOW	CURRENT MONTHLY AVERAGE CONCENTRATION LIMITS		TMDL FLOW	INTERIM PHASE I MONTHLY AVERAGE CONCENTRATION LIMITS			MODELING COMMENTS
							GPD	BOD5/CBOD5, mg/L	NH ₃ -N, mg/L	GPD	BOD5/CBOD5, mg/L	NH ₃ -N, mg/L	DO, mg/L	
Honaker Funeral Home & Cemeteries Inc-Honaker Funeral Home Forest Lawn Cemetery	169689/ LAG533399	12/1/2012	STP	001	Treatment plant effluent pipe then into State Hwy 190 (W Gause Ditch) then to St. Tammany ditch then into Bayou Bonfouca	Bayou Bonfouca	1800	30		N/A	10	10	2	Not Modeled
Coco's Auto/Truck Repair	169692/ LAG470301	9/1/2014	STP	005	To local drainage then to Bayou Liberty	Bayou Liberty	300	30		N/A	10	10	2	Not Modeled
Sparrows Offshore LLC	169789/ LA0125351	1/1/2016	STP	001	By effluent pipe then into Hwy 190 ditch then into Bayou Bonfouca	Bayou Bonfouca	500	30		N/A	10	10	2	Not Modeled
James & Leonard Brown Commercial Property	169799/ LAG533457	12/1/2012	STP	001	Into an unnamed drainage ditch then into Bayou Vincent then into Bayou Bonfouca	Bayou Vincent	500	30		N/A	10	10	2	Not Modeled
RPM Pizza LLC	170122/ LAG533147	12/1/2012	STP	001	Into parish drainage then into Bayou Bonfouca	Bayou Bonfouca	1500	30		N/A	10	10	2	Not Modeled

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

FACILITY	AI NO./ PERMIT NO.	PERMIT EXP DATE (MM/DD/YY)	FACILITY TYPE	OUT-FALL NO.	OUTFALL DESCRIPTION	RECEIVING WATER	CURRENT EXPECTED FLOW	CURRENT MONTHLY AVERAGE CONCENTRATION LIMITS		TMDL FLOW	INTERIM PHASE I MONTHLY AVERAGE CONCENTRATION LIMITS			MODELING COMMENTS
							GPD	BOD5/ CBOD5, mg/L	NH ₃ -N, mg/L	GPD	BOD5/ CBOD5, mg/L	NH ₃ -N, mg/L	DO, mg/L	
Lee's Hamburgers	170398/ LAG533422	12/1/2012	STP	001	Unnamed ditches then into Lee St. Pumping Station then into Bayou Bonfouca	Bayou Bonfouca	1500	30		N/A	10	10	2	Not Modeled
Flowers Baking Co of New Orleans LLC	170858/ LAG533465	12/1/2012	STP	001	To Hwy 433 ditch then to Bayou Bonfouca	Bayou Bonfouca	500	30		N/A	10	10	2	Not Modeled
John L's Plumbing	171511/ LAG533505	12/1/2012	STP	001	Pipe then into Bayou Bonfouca	Bayou Bonfouca	900	30		N/A	10	10	2	Not Modeled

Table 11. Interim Limits for 040908 Point Sources

FACILITY	AI NO./ PERMIT NO.	PERMIT EXP DATE (MM/DD/YY)	FACILITY TYPE	OUT-FALL NO.	OUTFALL DESCRIPTION	RECEIVING WATER	CURRENT EXPECTED FLOW	CURRENT MONTHLY AVERAGE CONCENTRATION LIMITS		TMDL FLOW	INTERIM PHASE I MONTHLY AVERAGE CONCENTRATION LIMITS			MODELING COMMENTS
							GPD	BOD5/CBOD5, mg/L	NH ₃ -N, mg/L	GPD	BOD5/CBOD5, mg/L	NH ₃ -N, mg/L	DO, mg/L	
St. Tammany Parish Stormwater	108405/LAR041024	12/4/2012	Stormwater	N/A	Ditches to Bayou Bonfouca	Bayou Bonfouca	N/A	N/A		N/A	N/A	N/A	N/A	MS4 addressed in model and TMDL. This TMDL will not impose permit limits.
City of Slidell Stormwater	108410/LAR041015	12/4/2012	Stormwater	N/A	Ditches to Bayou Bonfouca	Bayou Bonfouca	N/A	N/A		N/A	N/A	N/A	N/A	MS4 addressed in model and TMDL. This TMDL will not impose permit limits.
Slidell Easy Pay Tire Store	5931/LAG470233	9/1/2014	STP	001	Unnamed ditch then to Bayou Liberty	Bayou Liberty	100	30		N/A	30			Not Modeled
Coin du Lestin Subdivision	19211/LAG570065	5/1/2014	STP	001	Pipe to Bayou Bonfouca	Bayou Bonfouca	80000	10		100,000	10			Modeled
Pearl River Navigation Inc	24247/LA0109461	3/1/2011	STP	001	Direct discharge to Bayou Bonfouca	Bayou Bonfouca	3500	30		4375	30			Modeled
Acadian Gardens Condominium Association	40443/LAG540085	7/1/2013	STP	001	To an unnamed ditch then to Bayou Bonfouca	Bayou Bonfouca	7500	30		9375	30			Modeled
St. Tammany Parish-Oakwood Estates STP	43203/LAG570166	5/1/2014	STP	001	Ditch to Bayou Bonfouca	Bayou Bonfouca	12400	10		15,500	10			Modeled
J&J Auto Brokers	104963/LAG470178	9/1/2014	STP	001	Unnamed ditch to Bayou Liberty	Bayou Liberty	40	30		50	30			Modeled

FACILITY	AI NO./ PERMIT NO.	PERMIT EXP DATE (MM/DD/YY)	FACILITY TYPE	OUT-FALL NO.	OUTFALL DESCRIPTION	RECEIVING WATER	CURRENT EXPECTED FLOW	CURRENT MONTHLY AVERAGE CONCENTRATION LIMITS		TMDL FLOW	INTERIM PHASE I MONTHLY AVERAGE CONCENTRATION LIMITS			MODELING COMMENTS
							GPD	BOD5/CBOD5, mg/L	NH ₃ -N, mg/L	GPD	BOD5/CBOD5, mg/L	NH ₃ -N, mg/L	DO, mg/L	
Brian Harris Autoplex	118103/LAG470186	9/1/2014	STP	001	Pipe to the Sunset Drive roadside ditch then to the US Hwy 190 West roadside ditch then to Bayou Bonfouca	Bayou Bonfouca	120	30		N/A	30			Not Modeled
Slidell Marine Inc	124476/LAG532176	12/1/2012	STP	001	Direct to Bayou Bonfouca	Bayou Bonfouca	3700	30		4625	30			Modeled
Carroll Road Building-STP Construction	124764/LAG531773	12/1/2012	STP	001	Ditch to Bayou Bonfouca	Bayou Bonfouca	800	30		1,000	30			Modeled
JGILS-J&D Investments	125337/LAG531786	12/1/2012	STP	001	Ditches to Bayou Bonfouca	Bayou Bonfouca	160	30		200	30			Modeled
ARC Mechanical Contractors Inc	138813/LAG532075	12/1/2012	STP	001	Ditch to Bayou Bonfouca	Bayou Bonfouca	100	30		125	30			Modeled
Casadaban Marine Services	143036/LAG533292	12/1/2012	STP	001	Local drainage then to Bayou Vincent	Bayou Vincent	500	30		N/A	30			Not Modeled

Phase II will be developed based on the outcome of planned ecoregion-based use attainability analysis (UAA). Based on existing data, this UAA is expected to propose new DO criteria for many of the Pontchartrain Basin TMDLs that are currently being developed. These TMDLs have an EPA backstop due date of March 31, 2012. This new DO criteria is expected to be developed and promulgated within the next two to three years.

In the event the new criteria is not developed and promulgated within five years from the TMDL approval date, LDEQ intends to proceed in the following manner:

Case 1: The UAA study indicates that the current DO criterion is appropriate - the TMDL will be fully implemented based on the existing DO criteria.

Case 2: The UAA is not likely to be completed and/or approved - the TMDL will be fully implemented based on the existing DO criteria.

Case 3: The UAA is in process and is expected to be approved – Phase II of the TMDL will be postponed for a maximum period of 2 years. If the UAA has not been completed at the end of this period, the UAA status will be reviewed again according to Cases 1 - 3.

LDEQ recognizes there may be many unpermitted sources of oxygen-demanding loading within the Lake Pontchartrain Basin. These sources may include unpermitted facilities (privately owned treatment units for subdivisions or businesses). LDEQ has been locating unpermitted facilities and updating location information on permitted facilities in the Lake Pontchartrain Basin. The unpermitted facilities are required to apply for the appropriate LPDES (Louisiana Pollutant Discharge Elimination System) permits. LDEQ may conduct field surveys to gather information on facilities within the Bayou Liberty and Bayou Bonfouca watershed in the future. These unpermitted sources of oxygen-demanding loading may also include individual treatment units for residential homes and small businesses. The ability to accurately quantify the loads provided from these systems is extremely difficult due to lack of reliable information regarding the number of units and the loading provided by each individual unit. These unpermitted sources of loading add to the uncertainty of this TMDL and provide additional justification for the use of the phased TMDL approach.

LDEQ recommends that the primary solutions to the water quality problems for Subsegments 040905, 040906, 040907, and 040908 include the large-scale regionalization of sewage treatment and the rehabilitation and upgrade of existing problematic (leaks, overflows, improperly sized pipes, etc.) sewage collection and/or treatment systems. In addition, nonpoint loading may contribute to the water quality impairments in Subsegments 040905, 040906, 040907, and 040908. This includes loading contributed by the MS4 permits for St. Tammany Parish and the City of Slidell. LDEQ recognizes that portions of Bayou Bonfouca and Bayou Liberty may be affected by neighboring wetlands.

The final TMDL loading for Phase I is presented in Tables 12, 14, 16, and 18. The MS4 loading was partitioned from the nonpoint loading, based on drainage areas.

Loading attributed to any MS4 will be included in the WLA. This loading is not intended to be converted into permit limits. The WLA represents the nonpoint loading present within the stream under critical, low-flow conditions, therefore, the WLA does not include stormwater. The MS4 permittee must apply the appropriate BMPs to reduce the nonpoint source loading into the watershed as well as eliminate illicit dischargers. It is recognized that many permitted and unpermitted facilities discharge into the areas regulated by MS4 permits. Dischargers affected by this TMDL are presented in Tables 13, 15, 17, and 19.

Table 12. Subsegment 040905 Total Maximum Daily Load (Sum of UCBOD¹, UNBOD, and SOD) for a 5.0 mg/L dissolved oxygen standard

ALLOCATIONS	SUMMER		WINTER	
	% Reduction Required	(MAY-OCT) (lbs/day)	% Reduction Required	(NOV-APR) (lbs/day)
Point Source Wasteload Allocation (WLA)	80% above Hwy 190 and 38% below Hwy 190 and 35% for Bayou Paquet	172	80% above Hwy 190 and 38% below Hwy 190 and 35% for Bayou Paquet	172
Point Source Reserve (20%)		43		43
St. Tammany Parish MS4 WLA (Nonpoint Loads)	80% above Hwy 190 and 38% below Hwy 190 and 35% for Bayou Paquet	216	80% above Hwy 190 and 38% below Hwy 190 and 35% for Bayou Paquet	210
St. Tammany Parish MS4 MOS (Nonpoint Source Reserve MOS) (20%)		54		52
City of Slidell MS4 WLA (Nonpoint Loads)	80% above Hwy 190 and 38% below Hwy 190 and 35% for Bayou Paquet	102	80% above Hwy 190 and 38% below Hwy 190 and 35% for Bayou Paquet	99
City of Slidell MS4 MOS (Nonpoint Source Reserve MOS) (20%)		26		25
Nonpoint Loads	80% above Hwy 190 and 38% below Hwy 190 and 35% for Bayou Paquet	1351	80% above Hwy 190 and 38% below Hwy 190 and 35% for Bayou Paquet	1312
Nonpoint Source Reserve (20%)		337		329
TMDL		2301		2242

***Note1: UCBOD as stated in this allocation is Ultimate CBOD.
 UCBOD to CBOD₅ ratio = 2.3 for all treatment levels
 Permit allocations are generally based on CBOD₅***

Table 13. Summary of MS4 loading for Bayou Liberty Subsegment 040905

Urban Area	Permit Number	MS4 area (acres)	Summer MS4 (lbs/day)	Winter MS4 (lbs/day)
St. Tammany Parish	LAR041024/AI#108405	2,471.91	270	262
City of Slidell	LAR04105/AI#108410	1,171.44	128	124

Table 14. Subsegment 040906 Total Maximum Daily Load (Sum of UCBOD¹, UNBOD, and SOD) for a 4.0 mg/L dissolved oxygen standard

ALLOCATIONS	SUMMER		WINTER	
	% Reduction Required	(MAY-OCT) (lbs/day)	% Reduction Required	(NOV-APR) (lbs/day)
Point Source Wasteload Allocation (WLA)	80% above Hwy 190 and 38% below Hwy 190 and 35% for Bayou Paquet	11	80% above Hwy 190 and 38% below Hwy 190 and 35% for Bayou Paquet	11
Point Source Reserve MOS (20%)		3		3
St. Tammany Parish MS4 WLA (Nonpoint Loads)	80% above Hwy 190 and 38% below Hwy 190 and 35% for Bayou Paquet	314	80% above Hwy 190 and 38% below Hwy 190 and 35% for Bayou Paquet	299
St. Tammany Parish MS4 MOS (Nonpoint Source Reserve MOS) (20%)		78		75
City of Slidell MS4 WLA (Nonpoint Loads)	80% above Hwy 190 and 38% below Hwy 190 and 35% for Bayou Paquet	0	80% above Hwy 190 and 38% below Hwy 190 and 35% for Bayou Paquet	0
City of Slidell MS4 MOS (Nonpoint Source Reserve MOS) (20%)		0		0
Nonpoint Loads	80% above Hwy 190 and 38% below Hwy 190 and 35% for Bayou Paquet	1384	80% above Hwy 190 and 38% below Hwy 190 and 35% for Bayou Paquet	1322
Nonpoint Source Reserve MOS (20%)		345		330
TMDL		2135		2040

Table 15. Summary of MS4 loading for Bayou Liberty Subsegment 040906

Urban Area	Permit Number	MS4 area (acres)	Summer MS4 (lbs/day)	Winter MS4 (lbs/day)
St. Tammany Parish	LAR041024/AI#108405	1,354.26	392	374
City of Slidell	LAR04105/AI#108410	0.00	0	0

Table 16. Subsegment 040907 Total Maximum Daily Load (Sum of UCBOD¹, UNBOD, and SOD) for a 5.0 mg/L dissolved oxygen standard

ALLOCATIONS	SUMMER		WINTER	
	% Reduction Required	(MAY-OCT) (lbs/day)	% Reduction Required	(NOV-APR) (lbs/day)
Point Source Wasteload Allocation (WLA)	77% above Hwy433 for Bayou Vincent and Bayou Bonfouca and 0% below Hwy 433.	46	77% above Hwy433 for Bayou Vincent and Bayou Bonfouca and 0% below Hwy 433	46
Point Source Reserve MOS (20%)		11		11
St. Tammany Parish MS4 WLA (Nonpoint Loads)	77% above Hwy433 for Bayou Vincent and Bayou Bonfouca and 0% below Hwy 433.	105	77% above Hwy433 for Bayou Vincent and Bayou Bonfouca and 0% below Hwy 433	72
St. Tammany Parish MS4 MOS (Nonpoint Source Reserve MOS) (20%)		26		18
City of Slidell MS4 WLA (Nonpoint Loads)	77% above Hwy433 for Bayou Vincent and Bayou Bonfouca and 0% below Hwy 433.	75	77% above Hwy433 for Bayou Vincent and Bayou Bonfouca and 0% below Hwy 433	51
City of Slidell MS4 MOS (Nonpoint Source Reserve MOS) (20%)		19		13
Nonpoint Loads	77% above Hwy433 for Bayou Vincent and Bayou Bonfouca and 0% below Hwy 433.	331	77% above Hwy433 for Bayou Vincent and Bayou Bonfouca and 0% below Hwy 433	226
Nonpoint Source Reserve MOS (20%)		83		57
TMDL		696		494

Table 17. Summary of MS4 loading for Bayou Bonfouca Subsegment 040907

Urban Area	Permit Number	MS4 area (acres)	Summer MS4 (lbs/day)	Winter MS4 (lbs/day)
St. Tammany Parish	LAR041024/AI#108405	2,473.69	134	241
City of Slidell	LAR04105/AI#108410	1,771.84	96	172

Table 18. Subsegment 040908 Total Maximum Daily Load (Sum of UCBOD¹, UNBOD, and SOD) for a 4.0 mg/L dissolved oxygen standard

ALLOCATIONS	SUMMER		WINTER	
	% Reduction Required	(MAY-OCT) (lbs/day)	% Reduction Required	(NOV-APR) (lbs/day)
Point Source Wasteload Allocation (WLA)	77% above Hwy433 for Bayou Vincent and Bayou Bonfouca and 0% below Hwy 433.	68	77% above Hwy433 for Bayou Vincent and Bayou Bonfouca and 0% below Hwy 433.	68
Point Source Reserve MOS (20%)		18		18
St. Tammany Parish MS4 WLA (Nonpoint Loads)	77% above Hwy433 for Bayou Vincent and Bayou Bonfouca and 0% below Hwy 433.	1,100	77% above Hwy433 for Bayou Vincent and Bayou Bonfouca and 0% below Hwy 433.	1,004
St. Tammany Parish MS4 MOS (Nonpoint Source Reserve MOS) (20%)		275		251
City of Slidell MS4 WLA (Nonpoint Loads)	77% above Hwy433 for Bayou Vincent and Bayou Bonfouca and 0% below Hwy 433.	638	77% above Hwy433 for Bayou Vincent and Bayou Bonfouca and 0% below Hwy 433.	582
City of Slidell MS4 MOS (Nonpoint Source Reserve MOS) (20%)		159		146
Nonpoint Loads	77% above Hwy433 for Bayou Vincent and Bayou Bonfouca and 0% below Hwy 433.	3,448	77% above Hwy433 for Bayou Vincent and Bayou Bonfouca and 0% below Hwy 433.	3,148
Nonpoint Source Reserve MOS (20%)		862		787
TMDL		6,568		6,004

Table 19. Summary of MS4 loading for Bayou Bonfouca Subsegment 040908

Urban Area	Permit Number	MS4 area (acres)	Summer MS4 (lbs/day)	Winter MS4 (lbs/day)
St. Tammany Parish	LAR041024/AI#108405	1,607.93	1,375	1,256
City of Slidell	LAR04105/AI#108410	7,578.64	797	728

Table 20. TMDL Summary 040905 Point Sources vs. a DO Criterion of 5.0 mg/L

FACILITY	AI NO./ PERMIT NO.	PERMIT EXP DATE (MM/DD/YY)	FACILITY TYPE	OUT-FALL NO.	OUTFALL DESCRIPTION	RECEIVING WATER	CURRENT EXPECTED FLOW	CURRENT MONTHLY AVERAGE CONCENTRATION LIMITS		INTERIM PHASE I MONTHLY AVERAGE CONCENTRATION LIMITS			MODELING COMMENTS
							GPD	BOD5/CBOD5, mg/L	NH ₃ -N, mg/L	BOD5/CBOD5, mg/L	NH ₃ -N, mg/L	DO, mg/L	
St. Tammany Parish Stormwater	108405/LAR041024	12/4/2012	Stormwater	N/A	Ditches to Bayou Liberty	Bayou Liberty	N/A	N/A		N/A	N/A	N/A	MS4 addressed in model and TMDL. This TMDL will not impose permit limits.
City of Slidell Stormwater	108410/LAR041015	12/4/2012	Stormwater	N/A	Ditches to Bayou Liberty	Bayou Liberty	N/A	N/A		N/A	N/A	N/A	MS4 addressed in model and TMDL. This TMDL will not impose permit limits.
Fernandez-Zimmerle LLC	1609/LAG533438	12/1/2012	STP	002	Into an unnamed tributary then to Bayou Liberty	Bayou Liberty	200	30		10	10	2	Not Modeled
Fernandez-Zimmerle LLC	1609/LAG533438	12/1/2012	STP	003	Into an unnamed tributary then to Bayou Liberty	Bayou Liberty	400	30		10	10	2	Not Modeled
Bayou Liberty Water Association	12830/LAG530716	12/1/2012	STP	001	Hwy 433 ditch to Bayou Liberty	Bayou Liberty	180	30		20	10	2	Modeled
Herron Wire Products Inc.	14221/LAG532809	12/1/2012	STP	001	Hwy 190 ditch to Bayou Liberty	Bayou Liberty	150	30		20	10	2	Modeled
Coast Waterworks Inc-The Meadows Subdivision	19119/LA0073148	7/1/2011	STP	001	Pipe to ditch to Bayou Liberty	Bayou Liberty	276000	10		10	2	2	Modeled
LA Water Service Inc-Oakmont Subdivision	19471/LAG570031	5/1/2014	STP	001	Ditch to Parish Canal to Bayou Liberty	Bayou Liberty	70600	10		10	2	2	Modeled
Louisiana Water Service Inc-Huntwyck Village	19476/LA0065714	9/1/2013	STP	001	Pipe to ditch to Bayou Liberty	Bayou Liberty	278000	10		10	5	2	Modeled

FACILITY	AI NO./ PERMIT NO.	PERMIT EXP DATE (MM/DD/YY)	FACILITY TYPE	OUT-FALL NO.	OUTFALL DESCRIPTION	RECEIVING WATER	CURRENT EXPECTED FLOW	CURRENT MONTHLY AVERAGE CONCENTRATION LIMITS		INTERIM PHASE I MONTHLY AVERAGE CONCENTRATION LIMITS			MODELING COMMENTS
							GPD	BOD5/ CBOD5, mg/L	NH ₃ -N, mg/L	BOD5/ CBOD5, mg/L	NH ₃ -N, mg/L	DO, mg/L	
Royale Gardens Homeowners Association-Royal Gardens Subdivision	19797/ LAG570046	5/1/2014	STP	001	Bayou Liberty	Bayou Liberty	35000	10		10	10	2	Not Modeled
2315 Hwy 190 Building	27080/ LAG532824	12/1/2012	STP	001	Hwy 190 ditch to Bayou Liberty	Bayou Liberty	320	30		20	10	2	Modeled
Curtis Environmental Utilities Inc-Timber Ridge Subdivision	33837/ LAG570109	5/1/2014	STP	001	Ditch to Bayou Paquet	Bayou Paquet	44400	10		10	5	2	Modeled
The Southern District of Lutheran Church-Missouri Synod	42602/ LAG531992	12/1/2012	STP	001	Unnamed ditch to Bayou Liberty	Bayou Liberty	1600	30		10	10	2	Modeled
Royal Golf Club Inc	43097/ LAG530890	12/1/2012	STP	001	Local drainage to Bayou Liberty	Bayou Liberty	4340	30		10	10	2	Modeled
St Tammany Parish Police Jury-Thompson Road WWTP	43394/ LAG530650	12/1/2012	STP	001	Hwy 190 ditch to Bayou Liberty	Bayou Liberty	20	30		20	10	2	Modeled
Pit Stop #3	70933/ LAG531535	12/1/2012	STP	001	Hwy 190 ditch to Bayou Liberty	Bayou Liberty	1060	30		20	10	2	Modeled
Liberty Food Store	71168/ LAG531327	12/1/2012	STP	001	Bayou Liberty	Bayou Liberty	570	30		20	10	2	Modeled

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

FACILITY	AI NO./ PERMIT NO.	PERMIT EXP DATE (MM/DD/YY)	FACILITY TYPE	OUT-FALL NO.	OUTFALL DESCRIPTION	RECEIVING WATER	CURRENT EXPECTED FLOW	CURRENT MONTHLY AVERAGE CONCENTRATION LIMITS		INTERIM PHASE I MONTHLY AVERAGE CONCENTRATION LIMITS			MODELING COMMENTS
							GPD	BOD5/CBOD5, mg/L	NH ₃ -N, mg/L	BOD5/CBOD5, mg/L	NH ₃ -N, mg/L	DO, mg/L	
Thompson Road Grocery Store #615	74116/ LAG532825	12/1/2012	STP	001	Hwy 190 ditch to Bayou Liberty	Bayou Liberty	80	30		20	10	2	Modeled
Cleco Power LLC-Slidell Service Center	83359/ LAG532103	12/1/2012	STP	001	Local drainage to Bayou Vincent	Bayou Vincent	200	30		20	10	2	Modeled
Butera Investments Inc-Lake Castle Private School	99225/ LAG541304	7/1/2013	STP	001	Unnamed ditch then to Bayou Liberty	Bayou Liberty	8700	30		10	10	2	Modeled
Louisiana Lumber Inc-Construction Project	107578/ LAG531777	12/1/2012	STP	001	Bayou Liberty	Bayou Liberty	400	30		20	10	2	Modeled
ABC Supply Co Inc	113210/ LAG531454	12/1/2012	STP	001	Hwy 190 ditch to Bayou Liberty	Bayou Liberty	140	30		20	10	2	Modeled
G&S Bear Enterprises LLC	117778/ LAG531527	12/1/2012	STP	001	Hwy ditch to Bayou Liberty	Bayou Liberty	160	30		20	10	2	Modeled
Indian Hills RV Park	119158/ LAG541174	7/1/2013	STP	001	Hwy 190 ditch to Bayou Liberty	Bayou Liberty	7875	30		10	10	2	Modeled
Dollar General Store #6578	125413/ LAG531717	12/1/2012	STP	001	Hwy 190 ditch to Bayou Liberty	Bayou Liberty	120	30		20	10	2	Modeled
Hanna Brothers Extreme Motion Picture Catering	129058/ LAG531861	12/1/2012	STP	001	Local drainage to Bayou Liberty	Bayou Liberty	160	30		20	10	2	Modeled

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

FACILITY	AI NO./ PERMIT NO.	PERMIT EXP DATE (MM/DD/YY)	FACILITY TYPE	OUT-FALL NO.	OUTFALL DESCRIPTION	RECEIVING WATER	CURRENT EXPECTED FLOW	CURRENT MONTHLY AVERAGE CONCENTRATION LIMITS		INTERIM PHASE I MONTHLY AVERAGE CONCENTRATION LIMITS			MODELING COMMENTS
							GPD	BOD5/ CBOD5, mg/L	NH ₃ -N, mg/L	BOD5/ CBOD5, mg/L	NH ₃ -N, mg/L	DO, mg/L	
Gause West Properties-Shopping Center for Faye Wagner	129831/ LAG531980	12/1/2012	STP	001	Ditch to Bayou Liberty	Bayou Liberty	1932	30		20	10	2	Modeled
Omni Storage VI LLC	140231/ LAG532056	8/15/2011	STP	001	Hwy 190 ditch to Bayou Liberty	Bayou Liberty	300	30		20	10	2	Modeled
Airgas Gulf States-WWTP	155400/ LAG532559	12/1/2012	STP	001	Local drainage to Bayou Liberty	Bayou Liberty	140	30		20	10	2	Modeled
CRS Properties LLC-Albers AC & Heating	157679/ LAG532786	12/1/2012	STP	001	Parish drainage to Bayou Liberty	Bayou Liberty	120	30		20	10	2	Modeled
Seventh-Day Adventist Church-WWTP	157724/ LAG532799	12/1/2012	STP	001	Hwy 190 ditch to Bayou Liberty	Bayou Liberty	1250	30		20	10	2	Modeled
Guardian Angels Learning Center II	157922/ LAG532862	12/1/2012	STP	001	Unnamed ditch to Bayou Liberty	Bayou Liberty	930	30		10	10	2	Modeled
Equity Creek Real Estate LLC	157924/ LAG533803	12/1/2012	STP	001	Unnamed ditch to unnamed canal to Bayou Liberty	Bayou Liberty	100	30		20	10	2	Not Modeled
All American Lodge Greatest in Elkdom	157925/ LAG532887	12/1/2012	STP	001	Unnamed ditch to Bayou Liberty	Bayou Liberty	1600	30		20	10	2	Modeled
RJD Contractors	157926/ LAG533686	12/1/2012	STP	001	Parish drainage to Bayou Bonfouca	Bayou Bonfouca	20	30		20	10	2	Modeled

FACILITY	AI NO./ PERMIT NO.	PERMIT EXP DATE (MM/DD/YY)	FACILITY TYPE	OUT-FALL NO.	OUTFALL DESCRIPTION	RECEIVING WATER	CURRENT EXPECTED FLOW	CURRENT MONTHLY AVERAGE CONCENTRATION LIMITS		INTERIM PHASE I MONTHLY AVERAGE CONCENTRATION LIMITS			MODELING COMMENTS
							GPD	BOD5/ CBOD5, mg/L	NH ₃ -N, mg/L	BOD5/ CBOD5, mg/L	NH ₃ -N, mg/L	DO, mg/L	
2319 Hwy 190 Building	157927/ LAG532861	12/1/2012	STP	001	Hwy 190 ditch to Bayou Liberty	Bayou Liberty	40	30		20	10	2	Modeled
2317 Hwy 190 Building	157928/ LAG532860	12/1/2012	STP	001	Hwy 190 ditch to Bayou Liberty	Bayou Liberty	60	30		20	10	2	Modeled
Assunta's Italian Restaurant of Slidell	157931/ LAG532904	12/1/2012	STP	001	Hwy 190 ditch to Bayou Liberty	Bayou Liberty	2900	30		20	10	2	Modeled
Lion Consulting Inc-Lion Multimedia & Consulting	157933/ LAG532890	12/1/2012	STP	001	Hwy 190 ditch to Bayou Liberty	Bayou Liberty	40	30		20	10	2	Modeled
Chill Rite	157934/ LAG532842	12/1/2012	STP	001	Hwy 190 ditch to Bayou Liberty	Bayou Liberty	220	30		20	10	2	Modeled
M & R File Service LLC-Russell & Michelle Bolotte	163444/ LAG533101	12/1/2012	STP	001	Parish ditch to unnamed tributary to Bayou Liberty	Bayou Liberty	60	30		20	10	2	Modeled
Southern Pipe	168384/ LAG533350	12/1/2012	STP	001	By effluent pipe then into an unnamed ditch then into an unnamed canal then into Bayou Liberty	Bayou Liberty	80	30		10	10	2	Not Modeled
Carl Hodge Rental	169771/ LAG533393	12/1/2012	STP	001	Into an unnamed drainage ditch then into Bayou Bonfouca	Bayou Bonfouca	160	30		10	10	2	Not Modeled

FACILITY	AI NO./ PERMIT NO.	PERMIT EXP DATE (MM/DD/YY)	FACILITY TYPE	OUT-FALL NO.	OUTFALL DESCRIPTION	RECEIVING WATER	CURRENT EXPECTED FLOW	CURRENT MONTHLY AVERAGE CONCENTRATION LIMITS		INTERIM PHASE I MONTHLY AVERAGE CONCENTRATION LIMITS			MODELING COMMENTS
							GPD	BOD5/CBOD5, mg/L	NH ₃ -N, mg/L	BOD5/CBOD5, mg/L	NH ₃ -N, mg/L	DO, mg/L	
Diversified Oil Field Services Inc	169801/LA0125334	1/1/2016	STP	001	Into a roadside ditch then into Bayou Vincent then into Bayou Bonfouca	Bayou Vincent	400	30		10	10	2	Not Modeled

^a This TMDL was developed for critical low-flow conditions (7Q10). Therefore the WLAs for all stormwater discharges will be 0.0 lb/d under critical low flow conditions.

Table 21. TMDL Summary 040906 Point Sources vs. a DO Criterion of 4.0 mg/L

FACILITY	AI NO./ PERMIT NO.	PERMIT EXP DATE (MM/DD/YY)	FACILITY TYPE	OUT-FALL NO.	OUTFALL DESCRIPTION	RECEIVING WATER	CURRENT EXPECTED FLOW	CURRENT MONTHLY AVERAGE CONCENTRATION LIMITS		TMDL FLOW	INTERIM PHASE I MONTHLY AVERAGE CONCENTRATION LIMITS			MODELING COMMENTS
							GPD	BOD5/CBOD5, mg/L	NH ₃ -N, mg/L	GPD	BOD5/CBOD5, mg/L	NH ₃ -N, mg/L	DO, mg/L	
St. Tammany Parish Stormwater	108405/LAR041024	12/4/2012	Stormwater	N/A	Ditches to Bayou Liberty	Bayou Liberty	N/A	N/A		N/A	N/A	N/A	N/A	MS4 addressed in model and TMDL. This TMDL will not impose permit limits.
City of Slidell Stormwater	108410/LAR041015	12/4/2012	Stormwater	N/A	Ditches to Bayou Liberty	Bayou Liberty	N/A	N/A		N/A	N/A	N/A	N/A	MS4 addressed in model and TMDL. This TMDL will not impose permit limits.
R&D Automotive	24329/LAG470270	9/1/2014	STP	001	Into an unnamed drainage ditch then into unnamed parish drainage then into Bayou Liberty	Bayou Liberty	500	30		N/A	10	10	2	Not Modeled
Acts 1 Tax Service Inc	40483/LAG530841	12/1/2012	STP	001	Local drainage to Bayou Paquet	Bayou Paquet	60	30		75	20	10	5	Modeled

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

FACILITY	AI NO./ PERMIT NO.	PERMIT EXP DATE (MM/DD/YY)	FACILITY TYPE	OUT-FALL NO.	OUTFALL DESCRIPTION	RECEIVING WATER	CURRENT EXPECTED FLOW	CURRENT MONTHLY AVERAGE CONCENTRATION LIMITS		TMDL FLOW	INTERIM PHASE I MONTHLY AVERAGE CONCENTRATION LIMITS			MODELING COMMENTS
							GPD	BOD5/CBOD5, mg/L	NH ₃ -N, mg/L	GPD	BOD5/CBOD5, mg/L	NH ₃ -N, mg/L	DO, mg/L	
NC Investments LLC-Mom & Dad's Consignment Store	43141/ LAG532804	12/1/2012	STP	001	Ditch to Bayou Paquet	Bayou Paquet	40	30		50	20	10	2	Modeled
Waste Management of LA LLC-St. Tam Hauling Ctr	76287/ LA0078778	6/1/2010	STP	001	Hwy 190 ditch to Bayou Paquet	Bayou Paquet	500	30		625	20	10	2	Modeled
A-1 Remodeling & Building Inc	93349/ LAG531273	12/1/2012	STP	001	Hwy 190 ditch to Bayou Liberty	Bayou Liberty	200	30		250	20	10	2	Modeled
Bayou Liberty Marina	94269/ LAG531330	12/1/2012	STP	001	Ditch to Bayou Liberty	Bayou Liberty	20	30		25	20	10	2	Modeled
Timberland Trailer Park LLC	98284/ LAG531573	12/1/2012	STP	001	To local drainage then to W15 Canal then to Doubloon Bayou then to Fritchie Marsh	W15 Canal	4500	30		N/A	10	10	2	Not Modeled
A Bonfouca Marina	114175/ LAG531465	12/1/2012	STP	001	Directly to Bayou Liberty then into Bayou Bonfouca then into Lake Pontchartrain	Bayou Liberty	860	30		1,075	20	10	2	Modeled
Thompson Road Baptist Church-WWTP	138188/ LAG532165	12/1/2012	STP	001	Hwy 433 ditch to Bayou Liberty	Bayou Liberty	800	30		1,000	20	10	2	Modeled

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

FACILITY	AI NO./ PERMIT NO.	PERMIT EXP DATE (MM/DD/YY)	FACILITY TYPE	OUT-FALL NO.	OUTFALL DESCRIPTION	RECEIVING WATER	CURRENT EXPECTED FLOW	CURRENT MONTHLY AVERAGE CONCENTRATION LIMITS		TMDL FLOW	INTERIM PHASE I MONTHLY AVERAGE CONCENTRATION LIMITS			MODELING COMMENTS
							GPD	BOD5/ CBOD5, mg/L	NH ₃ -N, mg/L	GPD	BOD5/ CBOD5, mg/L	NH ₃ -N, mg/L	DO, mg/L	
Accurate Alignment	151364/ LAG470244	9/1/2014	STP	001	Ditch to Bayou Paquet	Bayou Paquet	20	30		25	20	10	2	Modeled
All American Cargo Elevators LLC WWTP	157614/ LAG532770	12/1/2012	STP	001	Highway 190 ditch to Bayou Liberty	Bayou Liberty	60	30		75	20	10	2	Modeled
St. Genevieve Catholic Church-WWTP	157725/ LAG532800	12/1/2012	STP	001	Pipe to Bayou Liberty	Bayou Liberty	3000	30		3,750	20	10	2	Modeled
Mayfield Elementary School	161289/ LAG541758	7/1/2013	STP	001	Pipe then to ditch then to Bayou Bonfouca	Bayou Bonfouca	14250	10		N/A	10	10	2	Not Modeled
Broadway Inc: K-Bar-B Youth Ranch-Cabins & Admin Complex	164343/ LAG533161	12/1/2012	STP	001	Hwy 190 ditch to Bayou Paquet	Bayou Paquet	2300	30		2,875	20	10	2	Modeled

Table 22. TMDL Summary 040907 Point Sources vs. a DO Criterion of 5.0 mg/L

FACILITY	AI NO./ PERMIT NO.	PERMIT EXP DATE (MM/DD/YY)	FACILITY TYPE	OUT-FALL NO.	OUTFALL DESCRIPTION	RECEIVING WATER	CURRENT EXPECTED FLOW	CURRENT MONTHLY AVERAGE CONCENTRATION LIMITS		TMDL FLOW	INTERIM PHASE I MONTHLY AVERAGE CONCENTRATION LIMITS			MODELING COMMENTS
							GPD	BOD5/ CBOD5, mg/L	NH ₃ -N, mg/L	GPD	BOD5/ CBOD5, mg/L	NH ₃ -N, mg/L	DO, mg/L	
St. Tammany Parish Stormwater	108405/LAR041024	12/4/2012	Stormwater	N/A	Ditches to Bayou Bonfouca	Bayou Bonfouca	N/A	N/A		N/A	N/A	N/A	N/A	MS4 addressed in model and TMDL. This TMDL will not impose permit limits.
City of Slidell Stormwater	108410/LAR041015	12/4/2012	Stormwater	N/A	Ditches to Bayou Bonfouca	Bayou Bonfouca	N/A	N/A		N/A	N/A	N/A	N/A	MS4 addressed in model and TMDL. This TMDL will not impose permit limits.
Cut-Rite, Inc. Cut Rite/Northshore Driveline	13288/LAG533518	12/1/2012	STP	001	Local drainage then to Bayou Liberty	Bayou Liberty	500	30		N/A	10	10	2	Not Modeled
ExxonMobil Oil Corp #51367	13400/LAG530198	12/1/2012	STP	001	Ditch to Bayou Vincent	Bayou Vincent	2500	30		3,125	10	10	2	Modeled
Advantage Tire & Wheel	14744/LAG470293	9/1/2014	STP	001	Unnamed ditch then to Bayou Liberty	Bayou Liberty	1500	30		N/A	10	10	2	Not Modeled
Sunbelt Innovative Plastics Inc STP	17609/LA0090409	2/1/2016	STP	001	Local drainage to Bayou Liberty	Bayou Liberty	2500	30		3,125	10	10	2	Modeled
Stones Throw Apartments	17938/LAG570066	5/1/2014	STP	001	Pipe to Bayou Vincent	Bayou Vincent	19200	10		24,000	10	10	2	Modeled
Eagle Lake Mobile Home Park	19785/LAG570120	5/1/2014	STP	001	Unnamed ditch to Bayou Vincent to Bayou Bonfouca	Bayou Vincent	63000	10		78,750	10	10	2	Modeled
Western International Gas & Cylinder Inc-Slidell Facility	20072/LA0096334	2/1/2016	STP	001	Pipe to an unnamed ditch then into an unnamed canal then into Bayou Liberty	Bayou Liberty	4480	30		N/A	10	10	2	Not Modeled

FACILITY	AI NO./ PERMIT NO.	PERMIT EXP DATE (MM/DD/YY)	FACILITY TYPE	OUT-FALL NO.	OUTFALL DESCRIPTION	RECEIVING WATER	CURRENT EXPECTED FLOW	CURRENT MONTHLY AVERAGE CONCENTRATION LIMITS		TMDL FLOW	INTERIM PHASE I MONTHLY AVERAGE CONCENTRATION LIMITS			MODELING COMMENTS
							GPD	BOD5/CBOD5, mg/L	NH ₃ -N, mg/L	GPD	BOD5/CBOD5, mg/L	NH ₃ -N, mg/L	DO, mg/L	
John's Automotive Machine Shop Inc	24697/ LAG530274	12/1/2012	STP	001	Roadside ditch to Hwy 11 ditch to Bayou Vincent	Bayou Vincent	40	30		50	10	10	2	Modeled
Jung's Automotive, Inc	25610/ LAG470303	9/1/2014	STP	001	To local drainage then to Bayou Liberty	Bayou Liberty	300	30		N/A	10	10	2	Not Modeled
CM Auto Repair Inc	27558/ LAG470149	9/1/2014	STP	001	Open ditch to US Highway 190W then to ditch above Hwy 190 then to Bayou Paquet	Bayou Paquet	500	30		N/A	10	10	2	Not Modeled
Randall A Evans DDS LLC	34988/ LAG533431	12/1/2012	STP	001	Local drainage then to Bayou Bonfouca	Bayou Bonfouca	500	30		N/A	10	10	2	Not Modeled
Rowland Duffour Clinic	36461/ LAG533501	12/1/2012	STP	001	By effluent pipe then into an unnamed ditch then into Bayou Paquet	Bayou Paquet	500	30		N/A	10	10	2	Not Modeled, No State Permit
Brown's Village Road Sand Pit	40412/ LAG490031	2/1/2015	STP	001	Local drainage then to Bayou Bonfouca	Bayou Bonfouca	100	30		N/A	10	10	2	Not Modeled
Northshore Chemical LLC	41239/ LA0122459	4/1/2012	STP	001	Local drainage to Bayou Vincent	Bayou Vincent	55	30		69	10	10	2	Modeled
Factory Direct Furniture	41484/ LAG530200	12/1/2012	STP	001	Ditch to Bayou Vincent	Bayou Vincent	40	30		50	10	10	2	Modeled
Ernest Walder Sr	41768/ LAG530736	12/1/2012	STP	001	Local drainage to Bayou Vincent	Bayou Vincent	360	30		450	10	10	2	Modeled
LCR-M-Plumbing Supply	41993/ LAG530703	12/1/2012	STP	001	Local drainage to Bayou Vincent	Bayou Vincent	120	30		150	10	10	2	Modeled

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

FACILITY	AI NO./ PERMIT NO.	PERMIT EXP DATE (MM/DD/YY)	FACILITY TYPE	OUT-FALL NO.	OUTFALL DESCRIPTION	RECEIVING WATER	CURRENT EXPECTED FLOW	CURRENT MONTHLY AVERAGE CONCENTRATION LIMITS		TMDL FLOW	INTERIM PHASE I MONTHLY AVERAGE CONCENTRATION LIMITS			MODELING COMMENTS
							GPD	BOD5/ CBOD5, mg/L	NH ₃ -N, mg/L	GPD	BOD5/ CBOD5, mg/L	NH ₃ -N, mg/L	DO, mg/L	
J&K Management LLC	41995/ LAG532382	12/1/2012	STP	001	Directly to Bayou Vincent	Bayou Vincent	180	30		225	10	10	2	Modeled
Capitol Steel Inc-Slidell	42161/ LAG530763	12/1/2012	STP	001	By effluent pipe then into parish drainage ditch then to Bayou Bonfouca	Bayou Bonfouca	1400	30		N/A	10	10	2	Not Modeled
New Life Ministries	42622/ LAG530943	12/1/2012	STP	001	Local drainage to Bayou Liberty	Bayou Liberty	490	30		613	10	10	2	Modeled
Nu-Lite Electrical Wholesalers	42686/ LAG530397	12/1/2012	STP	001	I-12 Service Road Ditch to unnamed ditch to Bayou Bonfouca	Bayou Bonfouca	80	30		100	10	10	2	Modeled
Piney Ridge Mobile Home Park LLC	42841/ LAG540932	7/1/2013	STP	001	Ditch to Bayou Vincent	Bayou Vincent	9300	30		11,625	10	10	2	Modeled
S&H Good Eats Café	42865/ LAG533440	12/1/2012	STP	001	Hwy 190 Ditch to Bayou Vincent	Bayou Vincent	490	30		613	10	10	2	Modeled
Coastal Property Holdings LLC-Shady Pines Mobile Home Park	43212/ LAG540642	7/1/2013	STP	001	Roadside ditch to Bayou Bonfouca	Bayou Bonfouca	10500	30		13,125	10	10	2	Modeled
Skater's Paradise II, Inc.	43242/ LAG530811	12/1/2012	STP	001	Hwy 190 ditch to Bayou Bonfouca	Bayou Bonfouca	540	30		675	10	10	2	Modeled

FACILITY	AI NO./ PERMIT NO.	PERMIT EXP DATE (MM/DD/YY)	FACILITY TYPE	OUT-FALL NO.	OUTFALL DESCRIPTION	RECEIVING WATER	CURRENT EXPECTED FLOW	CURRENT MONTHLY AVERAGE CONCENTRATION LIMITS		TMDL FLOW	INTERIM PHASE I MONTHLY AVERAGE CONCENTRATION LIMITS			MODELING COMMENTS
							GPD	BOD5/CBOD5, mg/L	NH ₃ -N, mg/L	GPD	BOD5/CBOD5, mg/L	NH ₃ -N, mg/L	DO, mg/L	
Slidell Welding Service Inc	43249/ LAG530660	12/1/2012	STP	001	Effluent pipe then to State Hwy 190 (Gause West Ditch) then into St. Tammany Ditch then to Bayou Bonfouca	Bayou Bonfouca	100	30		N/A	10	10	2	Not Modeled
Slidell Welding Service Inc	43249/ LAG530660	12/1/2012	STP	001	Effluent pipe then to State Hwy 190 (Gause West Ditch) then into St. Tammany Ditch then to Bayou Bonfouca	Bayou Bonfouca	300	30		N/A	10	10	2	Not Modeled
South Seas Chinese Restaurant	43274/ LAG530987	12/1/2012	STP	001	Ditch to Bayou Vincent	Bayou Vincent	1950	30		2,438	10	10	2	Modeled
Ellis Recycling	43316/ LAG480553	8/1/2011	STP	001	Industrial Dr ditch to Bayou Vincent	Bayou Vincent	120	30		150	10	10	2	Modeled
St Tammany Parish School Board-Slidell Support Facility	43403/ LAG530531	12/1/2012	STP	001	Ditch to Bayou Vincent	Bayou Vincent	100	30		125	10	10	2	Modeled
Wadleigh Industries Inc-Offshore Equipment Solutions	52386/ LA0109495	5/1/2015	STP	001	Ditches to Bayou Vincent	Bayou Vincent	800	30		1,000	10	10	2	Modeled

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

FACILITY	AI NO./ PERMIT NO.	PERMIT EXP DATE (MM/DD/YY)	FACILITY TYPE	OUT-FALL NO.	OUTFALL DESCRIPTION	RECEIVING WATER	CURRENT EXPECTED FLOW	CURRENT MONTHLY AVERAGE CONCENTRATION LIMITS		TMDL FLOW	INTERIM PHASE I MONTHLY AVERAGE CONCENTRATION LIMITS			MODELING COMMENTS
							GPD	BOD5/ CBOD5, mg/L	NH ₃ -N, mg/L	GPD	BOD5/ CBOD5, mg/L	NH ₃ -N, mg/L	DO, mg/L	
Blue Bell Creameries Inc	68576/ LAG532783	12/1/2012	STP	001	Ditch to Bayou Bonfouca	Bayou Bonfouca	780	30		975	20	10	2	Modeled
I-12 Shell	71531/ LAG531734	12/1/2012	STP	001	Local drainage to Bayou Bonfouca	Bayou Bonfouca	160	30		200	10	10	2	Modeled
Jubilee #4815	74005/ LAG480587	8/1/2011	STP	001	Local drainage to Bayou Vincent	Bayou Vincent	1700	30		2,125	10	10	2	Modeled
Circle K #1689	75145/ LAG533633	12/1/2012	STP	001	Into local drainage then into Bayou Bonfouca	Bayou Bonfouca	1000	30		N/A	10	10	2	Not Modeled
Eagle LLC-Eagle Carwash	82445/ LAG750317	3/15/2014	STP	001	Local drainage then to Bayou Vincent	Bayou Vincent	500	30		N/A	10	10	2	Not Modeled
Terminix-Home Estates Drive Office Project	90273/ LAG750602	3/15/2014	STP	001	Unnamed ditch then to Gum Bayou	Gum Bayou	320	30		N/A	10	10	2	Not Modeled
Charter Communications	96374/ LAG531494	12/1/2012	STP	001	Roadside ditch to Bayou Vincent	Bayou Vincent	120	30		150	10	10	2	Modeled
Adams Mobile Home Park	98300/ LAG541621	12/1/2012	STP	001	Local drainage to Bayou Vincent	Bayou Vincent	2100	30		2,625	10	10	2	Modeled
Tymeless Flooring Inc	99281/ LAG531318	12/1/2012	STP	001	Hwy 190 ditch to Bayou Bonfouca	Bayou Bonfouca	100	30		125	10	10	2	Modeled
Baker Sales Inc-Baker Sales Warehouse	103353/ LAG531763	12/1/2012	STP	001	Ditch to Bayou Liberty	Bayou Liberty	40	30		50	10	10	2	Modeled
Johnson Apartments	117172/ LAG531511	12/1/2012	STP	001	Local drainage to Bayou Vincent	Bayou Vincent	800	30		1,000	10	10	2	Modeled

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

FACILITY	AI NO./ PERMIT NO.	PERMIT EXP DATE (MM/DD/YY)	FACILITY TYPE	OUT-FALL NO.	OUTFALL DESCRIPTION	RECEIVING WATER	CURRENT EXPECTED FLOW	CURRENT MONTHLY AVERAGE CONCENTRATION LIMITS		TMDL FLOW	INTERIM PHASE I MONTHLY AVERAGE CONCENTRATION LIMITS			MODELING COMMENTS
							GPD	BOD5/CBOD5, mg/L	NH ₃ -N, mg/L	GPD	BOD5/CBOD5, mg/L	NH ₃ -N, mg/L	DO, mg/L	
Beau's Air Conditioning & Heating LLC	117735/ LAG531519	12/1/2012	STP	001	Local drainage to Hwy 190 ditch to unnamed canal to Bayou Liberty	Bayou Liberty	140	30		175	10	10	2	Modeled
Venson Harold Seal Apartments	117751/ LAG531526	12/1/2012	STP	001	To a pond to Bayou Vincent	Bayou Vincent	750	30		938	10	10	2	Modeled
Acadiana Stor-N-Lock	120264/ LAG531938	12/1/2012	STP	001	Ditch to Bayou Vincent	Bayou Vincent	40	30		50	10	10	2	Modeled
CalWes Properties LLC-CalWes Center	126385/ LAG532174	12/1/2012	STP	001	Hwy 190 ditch to Bayou Bonfouca	Bayou Bonfouca	4145	30		5181	20	10	2	Modeled
Peace Lutheran Church-RV Units	133232/ LAG532329	12/1/2012	STP	001	Hwy ditch to Bayou Bonfouca	Bayou Bonfouca	2370	30		2693	10	10	2	Modeled
Jolly Investments LLC-Jolly Investments Apartments	133963/ LAG541455	7/1/2013	STP	001	Ditch to Bayou Bonfouca	Bayou Bonfouca	5700	30		7125	10	10	2	Modeled
United Medical Care Walk In Clinic	134229/ LAG532037	12/1/2012	STP	001	Ditch to Bayou Vincent	Bayou Vincent	200	30		250	20	10	2	Modeled
Good Shepherd Lutheran Church	148472/ LAG532580	12/1/2012	STP	001	Ditch to Bayou Bonfouca	Bayou Bonfouca	1100	30		1375	10	10	2	Modeled
RDG Properties-Platform Crane-Bldg 2	149820/ LAG532253	12/1/2012	STP	001	Local drainage to Bayou Vincent	Bayou Vincent	600	30		750	10	10	2	Modeled

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

FACILITY	AI NO./ PERMIT NO.	PERMIT EXP DATE (MM/DD/YY)	FACILITY TYPE	OUT-FALL NO.	OUTFALL DESCRIPTION	RECEIVING WATER	CURRENT EXPECTED FLOW	CURRENT MONTHLY AVERAGE CONCENTRATION LIMITS		TMDL FLOW	INTERIM PHASE I MONTHLY AVERAGE CONCENTRATION LIMITS			MODELING COMMENTS
							GPD	BOD5/CBOD5, mg/L	NH ₃ -N, mg/L	GPD	BOD5/CBOD5, mg/L	NH ₃ -N, mg/L	DO, mg/L	
GBR Properties Inc-Advance Auto	151898/ LAG532293	12/1/2012	STP	001	Hwy 190 ditch to canal to Bayou Liberty	Bayou Liberty	100	30		125	20	10	2	Modeled
RDG Properties- SE LA Veterans Healthcare & Omni Eng	161936/ LAG530000	12/1/2012	STP	001	Pipe to local drainage to Bayou Vincent	Bayou Vincent	600	30		750	10	10	2	Modeled
St. Tammany Brake Tag Center-St Tammany Wholesale	165431/ LAG470290	9/1/2014	STP	001	Pipe to Hwy 190 ditch to Bayou Bonfouca	Bayou Bonfouca	40	30		50	10	10	2	Modeled
Coastal Marine Contractors LLC (CMC) - Main Yard - Ship & Barge Repair Facility	167032/ LA0124877	9/1/2015	STP	001	Bayou Bonfouca	Bayou Bonfouca	300	30		N/A	10	10	2	Not Modeled
Manuel Darby Property	167139/ LAG533313	12/1/2012	STP	001	By effluent pipe, then into Hwy 190 ditch then into Bayou Bonfouca	Bayou Bonfouca	490	30		N/A	10	10	2	Not Modeled
Guardian Angel Learning Center	167920/ LAG533301	12/1/2012	STP	001	Parish drainage, then into Bayou Bonfouca	Bayou Bonfouca	510	30		N/A	10	10	2	Not Modeled

FACILITY	AI NO./ PERMIT NO.	PERMIT EXP DATE (MM/DD/YY)	FACILITY TYPE	OUT-FALL NO.	OUTFALL DESCRIPTION	RECEIVING WATER	CURRENT EXPECTED FLOW	CURRENT MONTHLY AVERAGE CONCENTRATION LIMITS		TMDL FLOW	INTERIM PHASE I MONTHLY AVERAGE CONCENTRATION LIMITS			MODELING COMMENTS
							GPD	BOD5/ CBOD5, mg/L	NH ₃ -N, mg/L	GPD	BOD5/ CBOD5, mg/L	NH ₃ -N, mg/L	DO, mg/L	
Slidell Masjid of Al-Islam	167945/ LAG533308	12/1/2012	STP	001	Parish drainage ditch, then into Bayou Vincent, then into Bayou Bonfouca	Bayou Vincent	15	30		N/A	10	10	2	Not Modeled
Ozone Aggregates	168041/ LAG533333	12/1/2012	STP	001	Effluent pipe to a drainage ditch then to Bonfouca Bayou, then to Lake Pontchartrain	Bayou Bonfouca	80	30		N/A	10	10	2	Not Modeled
Arian Nursery & Preschool	168045/ LAG533353	12/1/2012	STP	001	By effluent pipe then to unnamed ditch then to Bayou Bonfouca	Bayou Bonfouca	950	30		N/A	10	10	2	Not Modeled
Romar Services Inc-Warehouse	168139/ LAG533302	12/1/2012	STP	001	Unnamed ditch then into Bayou Bonfouca	Bayou Bonfouca	80	30		N/A	10	10	2	Not Modeled
Carolyn Draperies	168371/ LAG533343	12/1/2012	STP	001	Local drainage then to Bayou Bonfouca	Bayou Bonfouca	20	30		N/A	10	10	2	Not Modeled
Pentecost Missionary Baptist Church of Slidell	169553/ LAG533559	12/1/2012	STP	001	By effluent pipe then into a parish drainage ditch then into Bayou Bonfouca then into Lake Pontchartrain	Bayou Bonfouca	1290	30		N/A	10	10	2	Not Modeled

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

FACILITY	AI NO./ PERMIT NO.	PERMIT EXP DATE (MM/DD/YY)	FACILITY TYPE	OUT-FALL NO.	OUTFALL DESCRIPTION	RECEIVING WATER	CURRENT EXPECTED FLOW	CURRENT MONTHLY AVERAGE CONCENTRATION LIMITS		TMDL FLOW	INTERIM PHASE I MONTHLY AVERAGE CONCENTRATION LIMITS			MODELING COMMENTS
							GPD	BOD5/CBOD5, mg/L	NH ₃ -N, mg/L	GPD	BOD5/CBOD5, mg/L	NH ₃ -N, mg/L	DO, mg/L	
Honaker Funeral Home & Cemeteries Inc-Honaker Funeral Home Forest Lawn Cemetery	169689/ LAG533399	12/1/2012	STP	001	Treatment plant effluent pipe then into State Hwy 190 (W Gause Ditch) then to St. Tammany ditch then into Bayou Bonfouca	Bayou Bonfouca	1800	30		N/A	10	10	2	Not Modeled
Coco's Auto/Truck Repair	169692/ LAG470301	9/1/2014	STP	005	To local drainage then to Bayou Liberty	Bayou Liberty	300	30		N/A	10	10	2	Not Modeled
Sparrows Offshore LLC	169789/ LA0125351	1/1/2016	STP	001	By effluent pipe then into Hwy 190 ditch then into Bayou Bonfouca	Bayou Bonfouca	500	30		N/A	10	10	2	Not Modeled
James & Leonard Brown Commercial Property	169799/ LAG533457	12/1/2012	STP	001	Into an unnamed drainage ditch then into Bayou Vincent then into Bayou Bonfouca	Bayou Vincent	500	30		N/A	10	10	2	Not Modeled
RPM Pizza LLC	170122/ LAG533147	12/1/2012	STP	001	Into parish drainage then into Bayou Bonfouca	Bayou Bonfouca	1500	30		N/A	10	10	2	Not Modeled

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

FACILITY	AI NO./ PERMIT NO.	PERMIT EXP DATE (MM/DD/YY)	FACILITY TYPE	OUT-FALL NO.	OUTFALL DESCRIPTION	RECEIVING WATER	CURRENT EXPECTED FLOW	CURRENT MONTHLY AVERAGE CONCENTRATION LIMITS		TMDL FLOW	INTERIM PHASE I MONTHLY AVERAGE CONCENTRATION LIMITS			MODELING COMMENTS
							GPD	BOD5/ CBOD5, mg/L	NH ₃ -N, mg/L	GPD	BOD5/ CBOD5, mg/L	NH ₃ -N, mg/L	DO, mg/L	
Lee's Hamburgers	170398/ LAG533422	12/1/2012	STP	001	Unnamed ditches then into Lee St. Pumping Station then into Bayou Bonfouca	Bayou Bonfouca	1500	30		N/A	10	10	2	Not Modeled
Flowers Baking Co of New Orleans LLC	170858/ LAG533465	12/1/2012	STP	001	To Hwy 433 ditch then to Bayou Bonfouca	Bayou Bonfouca	500	30		N/A	10	10	2	Not Modeled
John L's Plumbing	171511/ LAG533505	12/1/2012	STP	001	Pipe then into Bayou Bonfouca	Bayou Bonfouca	900	30		N/A	10	10	2	Not Modeled

Table 23. TMDL Summary 040908 Point Sources vs. a DO Criterion of 4.0 mg/L

FACILITY	AI NO./ PERMIT NO.	PERMIT EXP DATE (MM/DD/YY)	FACILITY TYPE	OUT-FALL NO.	OUTFALL DESCRIPTION	RECEIVING WATER	CURRENT EXPECTED FLOW	CURRENT MONTHLY AVERAGE CONCENTRATION LIMITS		TMDL FLOW	INTERIM PHASE I MONTHLY AVERAGE CONCENTRATION LIMITS			MODELING COMMENTS
							GPD	BOD5/ CBOD5, mg/L	NH ₃ -N, mg/L	GPD	BOD5/ CBOD5, mg/L	NH ₃ -N, mg/L	DO, mg/L	
St. Tammany Parish Stormwater	108405/LAR041024	12/4/2012	Stormwater	N/A	Ditches to Bayou Bonfouca	Bayou Bonfouca	N/A	N/A		N/A	N/A	N/A	N/A	MS4 addressed in model and TMDL. This TMDL will not impose permit limits.
City of Slidell Stormwater	108410/LAR041015	12/4/2012	Stormwater	N/A	Ditches to Bayou Bonfouca	Bayou Bonfouca	N/A	N/A		N/A	N/A	N/A	N/A	MS4 addressed in model and TMDL. This TMDL will not impose permit limits.
Slidell Easy Pay Tire Store	5931/LAG470233	9/1/2014	STP	001	Unnamed ditch then to Bayou Liberty	Bayou Liberty	100	30		N/A	30			Not Modeled
Coin du Lestin Subdivision	19211/LAG570065	5/1/2014	STP	001	Pipe to Bayou Bonfouca	Bayou Bonfouca	80000	10		100,000	10			Modeled
Pearl River Navigation Inc	24247/LA0109461	3/1/2011	STP	001	Direct discharge to Bayou Bonfouca	Bayou Bonfouca	3500	30		4375	30			Modeled
Acadian Gardens Condominium Association	40443/LAG540085	7/1/2013	STP	001	To an unnamed ditch then to Bayou Bonfouca	Bayou Bonfouca	7500	30		9375	30			Modeled
St. Tammany Parish-Oakwood Estates STP	43203/LAG570166	5/1/2014	STP	001	Ditch to Bayou Bonfouca	Bayou Bonfouca	12400	10		15,500	10			Modeled
J&J Auto Brokers	104963/LAG470178	9/1/2014	STP	001	Unnamed ditch to Bayou Liberty	Bayou Liberty	40	30		50	30			Modeled
Brian Harris Autoplex	118103/LAG470186	9/1/2014	STP	001	Pipe to the Sunset Drive roadside ditch then to the US Hwy 190 West roadside ditch then to Bayou Bonfouca	Bayou Bonfouca	120	30		N/A	30			Not Modeled

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

FACILITY	AI NO./ PERMIT NO.	PERMIT EXP DATE (MM/DD/YY)	FACILITY TYPE	OUT-FALL NO.	OUTFALL DESCRIPTION	RECEIVING WATER	CURRENT EXPECTED FLOW	CURRENT MONTHLY AVERAGE CONCENTRATION LIMITS		TMDL FLOW	INTERIM PHASE I MONTHLY AVERAGE CONCENTRATION LIMITS			MODELING COMMENTS
							GPD	BOD5/CBOD5, mg/L	NH ₃ -N, mg/L	GPD	BOD5/CBOD5, mg/L	NH ₃ -N, mg/L	DO, mg/L	
Slidell Marine Inc	124476/ LAG532176	12/1/2012	STP	001	Direct to Bayou Bonfouca	Bayou Bonfouca	3700	30		4625	30			Modeled
Carroll Road Building-STP Construction	124764/ LAG531773	12/1/2012	STP	001	Ditch to Bayou Bonfouca	Bayou Bonfouca	800	30		1,000	30			Modeled
JGILS-J&D Investments	125337/ LAG531786	12/1/2012	STP	001	Ditches to Bayou Bonfouca	Bayou Bonfouca	160	30		200	30			Modeled
ARC Mechanical Contractors Inc	138813/ LAG532075	12/1/2012	STP	001	Ditch to Bayou Bonfouca	Bayou Bonfouca	100	30		125	30			Modeled
Casadaban Marine Services	143036/ LAG533292	12/1/2012	STP	001	Local drainage then to Bayou Vincent	Bayou Vincent	500	30		N/A	30			Not Modeled

EXECUTIVE SUMMARY

This report presents the results of a watershed-based, calibrated modeling analysis of Bayou Liberty and Bayou Bonfouca. The modeling was conducted to establish a TMDL for biochemical oxygen-demanding pollutants for the Bayou Liberty and Bayou Bonfouca watershed. The model covers the Bayou Liberty and Bayou Bonfouca Watershed. Bayou Liberty is located in south Louisiana and this subsegment includes Bayou Paquet and many unnamed tributaries. Bayou Liberty is a major tributary to Bayou Bonfouca. Bayou Bonfouca includes Bayou Vincent and many unnamed tributaries. Bayou Liberty and Bayou Bonfouca are in the Lake Pontchartrain Basin and this study includes Water Quality Subsegments 040905, 040906, 040907, and 040908. Bayou Liberty Subsegment 040905 is primarily forest land with some urban build up. Bayou Liberty Subsegment 040906 is primarily forest land with the bottom being primarily brackish marsh. Bayou Bonfouca Subsegment 040907 is primarily forest land with some urban build up. Bayou Bonfouca Subsegment 040908 is primarily brackish marsh with some urban build up.

According to LDEQ's TEMPO database, there were 138 permitted dischargers located within these four subsegments at the time of development of this TMDL. This includes two MS4 permittees. There were too many facilities to sample and model. Therefore, a representative group of facilities were sampled. The same reductions apply to all facilities, modeled or unmodeled. These dischargers are accounted for as nonpoint loading through the process of calibration. Current permit information and discharge monitoring reports were reviewed for all of these facilities.

The watershed drains areas that are regulated by two MS4 permits. The areas covered by these MS4 permits include many permitted and unpermitted facilities. While LDEQ does assume responsibility for these facilities, partial responsibility belongs to the MS4 permittee to ensure that water draining from the area of coverage does not impact the named waterbody. Reductions in the nonpoint loading presented in this report also apply to MS4 regulated areas.

The impact of stormwater loading on the waterbody under critical conditions is difficult to determine. Frequent monitoring at many sites may be monetarily and logistically prohibitive. Therefore it is impractical to set MS4 permit limits. However, appropriate BMP measures shall be incorporated into the MS4 permits to minimize the impacts of stormwater loads on water quality. All facilities discharging into the MS4 permit area should have appropriate limits that ensure the protection of the water quality. Such BMP measures should include the location of all wastewater discharges, the elimination of illicit wastewater discharges, the regionalization of wastewater treatment, rehabilitating and upgrading sewer collection system lines, and other appropriate activities. Stormwater permits may also include a monitoring component, provided it is cost effective.

Input data for the calibration model was developed from data collected during the June 2009 intensive surveys, data collected by LDEQ at WQN stations 0301, 1076, 1077, and 1078 in the watershed, and USGS drainage area and low flow publications. The nonpoint source loads included nonpoint loading not associated with flow. A satisfactory calibration was achieved for the main stem. Ambient temperature and dissolved oxygen records from WQN stations 0301 was used for the projection models because it had the longest period of record. The Louisiana Total Maximum Daily Load Technical Procedures, Revision 12, have been followed in this study.

The various spreadsheets that were used in conjunction with the modeling program may be found in the appendices. Projections are adjusted to meet the dissolved oxygen criteria by reducing total nonpoint source loads. At the time of the survey Bayou Liberty and Bayou Bonfouca could not meet the established DO standard in most of the reaches.

Modeling was limited to low flow scenarios for both the calibration and the projections since the constituent of concern was dissolved oxygen and the available data was limited to low flow conditions. The model used was LAQUAL, a modified version of QUAL-TX, which has been adapted to address specific needs of Louisiana waters.

Bayou Liberty, Subsegments 040905 and 040906, is on the 2006 Integrated Report and EPA's Consent Decree (E. D. La. 2002). Subsegments 040905 and 040906 were found to be "not supporting" its designated use of Fish and Wildlife Propagation. It is found to be supporting its designated uses of Primary Contact Recreation and Secondary Contact Recreation. Bayou Liberty was subsequently scheduled for TMDL development with other listed waters in the Lake Pontchartrain Basin. The Tables 1 - 3 list the 2006, Draft 2008, and Draft 2010 Integrated Reports for Subsegments 040905 and 040906.

Bayou Bonfouca, Subsegments 040907 and 040908, were on the 2006 Integrated Report (combined 305(b) and 303(d) reports) and EPA's Consent Decree (E. D. La. 2002). Subsegment 040907 and 040908 was found to be "not supporting" its designated uses of Primary Contact Recreation and Fish and Wildlife Propagation. It was found to be supporting its designated use of Secondary Contact Recreation. Bayou Bonfouca was subsequently scheduled for Total Maximum Daily Load (TMDL) development with other listed waters in the Lake Pontchartrain Basin. The Tables 4 - 6 list the 2006, Draft 2008, and Draft 2010 Integrated Reports for Subsegments 040905 and 040906. This TMDL report addresses the organic enrichment/low DO impairment.

This TMDL establishes load limitations for oxygen-demanding substances and goals for reduction of those pollutants. LDEQ's position is that when oxygen-demanding loads from point and nonpoint sources are reduced in order to ensure that the dissolved oxygen criterion is supported, nutrients are also reduced. The implementation of this TMDL through wastewater discharge permits and implementation of best management practices to control and reduce runoff of soil and oxygen-demanding pollutants from nonpoint sources in the watershed will also reduce the nutrient loading from those sources.

Louisiana does not have numeric nutrient criteria at the present time. The original nutrient impairment for this waterbody was not based on a quantitative assessment of historical nutrient data. The impairment was based on an evaluative assessment that may have included dissolved oxygen. LDEQ and EPA plan to reevaluate the previous nutrient impairments for this waterbody. As a result, both EPA and LDEQ expect the nutrient impairment to change from category 5 (impairment exists; TMDL required) to category 3 (insufficient data) for the 2010 Integrated Report. A TMDL for dissolved oxygen should adequately address any potential nutrient impairments, in the absence of numeric nutrient criteria and a quantitative assessment.

LDEQ is developing numeric nutrient criteria for waterbody types based on ecoregions in accordance with LDEQ's plan "Developing Nutrient Criteria for Louisiana 2006" which can be found at:

<http://www.deq.louisiana.gov/portal/Portals/0/planning/LA%20Nutrient%20Strategy%20Plan%20Final%20FOR%20WEB.pdf>.

Waterbody types for nutrient criteria development in Louisiana are 1) inland rivers and streams; 2) freshwater wetlands; 3) freshwater lakes and reservoirs; 4) big rivers and floodplains/boundary rivers and associated water bodies; and 5) estuarine and coastal waters (including up to Louisiana's three mile boundary in the Gulf of Mexico). Proposed approaches for nutrient criteria development are currently under review by LDEQ and EPA. Nutrient criteria can be implemented upon state promulgation and EPA approval as per 40 CFR 131.21.

Upon development of nutrient criteria, a subsequent quantitative assessment of the waterbodies, and the development of full nutrient models, nutrient limits may be established for all facilities discharging to impaired waterbodies in the Lake Pontchartrain Basin. LDEQ recommends that all facilities discharging to impaired waterbodies take a proactive approach and prepare to receive nutrient (total nitrogen and total phosphorus) limitations in the near future. Such a proactive approach should include nutrient monitoring and documentation through facility Discharge Monitoring Reports (DMRs) in order to assess their nutrient loads and the need to modify their treatment processes for nutrient removal.

A calibrated water quality model for the watershed was developed and projections were modeled to quantify the non-point source load reductions which would be necessary in order for Bayou Liberty and Bayou Bonfouca, subsegments 040905, 040906, 040907, and 040908 to comply with its established water quality standards and criteria. This report presents the results of that analysis.

This TMDL will implement a phased approach, as shown in Table 7. This report represents Phase I of the TMDL. For Phase I, Figure 1 will apply. However, the implementation will occur in a phased manner. Phase II will be completed after LDEQ has had the opportunity to reevaluate the DO criteria for the watershed, and if needed, the DO criteria has been revised and promulgated. The resulting allocations for Phase I are presented in Tables 8 - 11.

LDEQ is in the process of reevaluating Louisiana's ecoregions and modifying the ecoregion boundaries where appropriate. Bayou Liberty and Bayou Bonfouca appears to partially reside in the Lower Mississippi River Alluvial Plain (LMRAP) ecoregion. Therefore, the current dissolved oxygen criteria for Bayou Liberty and Bayou Bonfouca may be inappropriate. Data for the LMRAP ecoregion indicates that the DO criteria may be 2.3 mg/L. As a result, LDEQ has run a preliminary summer projection based on the DO criteria of 2.3 mg/L. This projection is an indication of what the required load reductions may be if the DO criteria is revised for appropriate waterbodies in the Lake Pontchartrain Basin. The final required load reductions may be different based on the final DO criteria. Existing ecoregion data suggests that the summer and winter DO criterion could be 2.3 mg/L and 5.0 mg/L respectively, for the Lower Mississippi River Alluvial Plain Ecoregion. Based upon a summer criterion of 2.3 mg/L, a 72% reduction of all man-made loading would be required in any Bayou Vincent or Bayou Bonfouca reach above Hwy 433 that may fall within the Lower Mississippi River Alluvial Plain Ecoregion, a 0% reduction of all man-made loading would be required in any Bayou Vincent or Bayou Bonfouca reach below Hwy 433, a 27% reduction of all man-made loading would be required in any Bayou Liberty reaches above Hwy 190 not draining to Bayou Paquet, a 0% reduction of all man-made loading would be required in any Bayou Liberty reaches below Hwy 190

not draining to Bayou Paquet, and an 8% reduction in any reach along Bayou Paquet.

In order to reasonably distribute the load reductions between the existing point and nonpoint sources, LDEQ determined that all facilities will be permitted according to the Phase I Implementation Plan as stated in the Technical Summary and Conclusion sections of this report.

LDEQ recommends that no additional oxygen-demanding loads be permitted to enter the Bayou Liberty and Bayou Bonfouca watershed unless they conform to the Phase I Permit Implementation described in the Technical Summary. This includes new dischargers and increases in existing dischargers.

The table used to develop point source allocations and reductions is shown below.

Table 24. Point Source Allocations to Percent Reductions

RELATION OF POINT SOURCE ALLOCATIONS TO PERCENT REDUCTIONS FROM SECONDARY TREATMENT			
Point Source Allocation			% reduction from secondary treatment
CBOD5	NH3-N	UBOD	
30	15	133.5	
20	10	89	33%
10	10	66	51%
10	5	44.5	67%
10	2	31.6	76%
5	2	20.1	85%
0	0	0	100%
--- Other allocations of choice ---			
Point Source Allocation			% reduction from secondary treatment
CBOD5	NH3-N	UBOD	
5	5	33	75%
2	1	8.9	93%

Numerous individual commercial package plants and individual residential treatment units discharging directly or indirectly within the watershed are suspected of having a major impact on Bayou Liberty and Bayou Bonfouca. For St. Tammany Parish, LDEQ recommends incorporating such dischargers into a regional collection and treatment system.

DEQ will work with other agencies such as local Soil Conservation Districts to implement agricultural best management practices in the watershed through other Clean Water Act Programs such as the 319 program, where appropriate. LDEQ will also continue to monitor the waters to determine whether standards are being attained.

In accordance with Section 106 of the Federal Clean Water Act and under the authority of the Louisiana Environmental Quality Act, the LDEQ has established a comprehensive program for

monitoring the quality of the state's surface waters. The LDEQ collects surface water samples at various locations, utilizing appropriate sampling methods and procedures for ensuring the quality of the data collected. The objectives of the surface water monitoring program are to determine the quality of the state's surface waters, to develop a long-term data base for water quality trend analysis, and to monitor the effectiveness of pollution controls. The data obtained through the surface water monitoring program is used to develop the state's biennial 305(b) report (*Water Quality Inventory*) and the 303 (d) list of impaired waters, also known as the Integrated Report. This information is also utilized in establishing priorities for the LDEQ nonpoint source program.

The LDEQ is continuing to implement a watershed approach to the surface water quality monitoring. Currently, LDEQ utilizes a four year sampling cycle. Approximately one quarter of the state's watersheds will be sampled in each year so that all of the state's watersheds will be sampled within the four year cycle. This will allow the LDEQ to determine whether there has been any improvement in water quality following implementation of the TMDLs. As the monitoring results are evaluated at the end of each year, waterbodies may be added to or removed from the 303(d) list.

TABLE OF CONTENTS

TECHNICAL SUMMARY	ii
EXECUTIVE SUMMARY	lvii
LIST OF TABLES	lxiv
LIST OF FIGURES	lxv
1. Definitions/Acronyms/Abbreviations	1
2. Introduction	2
3. Study Area Description	2
3.1 General Information.....	2
3.2 Water Quality Standards.....	4
3.3 Wastewater Discharges.....	6
3.4 Water Quality Conditions/Assessment.....	9
3.5 Prior Studies.....	10
4. General TMDL Development Process	10
5. Calibration Model Documentation	11
5.1 Program Description.....	11
5.2 Input Data Documentation.....	11
5.2.1 Model Schematics and Maps.....	12
5.2.2 Model Options, Data Type 2.....	12
5.2.3 Program Constants, Data Type 3.....	12
5.2.4 Temperature Correction of Kinetics, Data Type 4.....	18
5.2.5 Reach Identification Data, Data Type 8.....	19
5.2.6 Advective Hydraulic Coefficients, Data Type 9.....	19
5.2.7 Dispersive Hydraulic Coefficients, Data Type 10.....	19
5.2.8 Initial Conditions, Data Type 11.....	20
5.2.9 Reaeration Rates, Data Type 12.....	20
5.2.10 Sediment Oxygen Demand, Data Type 12.....	21
5.2.11 Carbonaceous BOD Decay and Settling Rates, Data Type 12.....	21
5.2.12 Nitrogenous BOD Decay and Settling Rates, Data Type 15.....	21
5.2.13 Incremental Conditions, Data Types 16, 17, and 18.....	21
5.2.14 Nonpoint Sources, Data Type 19.....	22
5.2.15 Headwaters, Data Types 20, 21, and 22.....	22
5.2.16 Wasteloads, Data Types 23, 24, and 25.....	22
5.2.17 Boundary Conditions, Data Type 27.....	22
5.3 Model Discussion and Results.....	23
6. Water Quality Projections	25
6.1 Critical Conditions, Seasonality and Margin of Safety.....	26
6.2 Input Data Documentation.....	27
6.2.1 Model Options, Data Type 2.....	28
6.2.2 Temperature Correction of Kinetics, Data Type 4.....	28
6.2.3 Reach Identification Data, Data Type 8.....	28
6.2.4 Advective Hydraulic Coefficients, Data Type 9.....	28
6.2.5 Initial Conditions, Data Type 11.....	28
6.2.6 Reaeration Rates, Carbonaceous BOD Decay and Settling Rates, Nitrogenous BOD Decay and Settling Rates, Data Type 12 and 15.....	28

6.2.7	Sediment Oxygen Demand, Nonpoint Sources, Headwaters, Wasteloads, Data Type 12, 19, 20, 21, 22, 24, 25, and 26.....	28
6.2.8	Boundary Conditions, Data Type 27	30
6.3	Model Discussion and Results.....	30
6.3.1	Summer Projection	30
6.3.2	Alternate Projection.....	34
6.3.3	Winter Projection.....	36
6.4	Calculated TMDL, WLAs and LAs.....	37
6.4.1	Outline of TMDL Calculations.....	37
6.4.2	Bayou Liberty and Bayou Bonfouca Subsegments 040905, 040906, 040907, and 040908 TMDL 37	
7.	Sensitivity Analysis	38
8.	Conclusions.....	39
9.	References.....	46
10.	Appendices.....	47
Appendix A –	Detailed TMDL Analysis	48
Appendix A1 –	Outline of TMDL Calculations	49
Appendix A2 –	Bayou Liberty 040905 Summer TMDL Summary	51
Appendix A3 –	Bayou Liberty 040905 Winter TMDL Summary.....	53
Appendix A4 –	Bayou Liberty 040906 Summer TMDL Summary	55
Appendix A5 –	Bayou Liberty 040906 Winter TMDL Summary.....	57
Appendix A6 –	Bayou Bonfouca 040907 Summer TMDL Summary.....	59
Appendix A7 –	Bayou Bonfouca 040907 Winter TMDL Summary	61
Appendix A8 –	Bayou Bonfouca 040908 Summer TMDL Summary.....	63
Appendix A9 –	Bayou Bonfouca 040908 Winter TMDL Summary	65
Appendix B –	Calibration Model Input and Output Data Sets	67
Appendix B1 –	Calibration Output Graphs and Input, Overlay, and Output Files.....	68
Appendix B2 –	Calibration Justification.....	299
Appendix C -	Calibration Model Development	340
Appendix C1 –	Vector Diagram	341
Appendix C2 –	Reach Setup	343
Appendix C3 –	Calibration Loading.....	348
Appendix D –	Projection Model Input and Output Data Sets.....	352
Appendix D1 –	Summer Projection Output Graphs and Input, Overlay, and Output Files	353
Appendix D2 –	Bayou Liberty and Bayou Bonfouca Summer Justifications	550
Appendix D3 –	Winter Output Graphs and Input, Overlay, and Output Files	598
Appendix D4 –	Winter Justifications.....	751
Appendix E -	Projection Model Development.....	787
Appendix E1 –	Summer Loading.....	788
Appendix E2 –	Winter Loading	802
Appendix E3 –	MS4 Calculations.....	814
Appendix E4 –	Reference Stream Data	823
Appendix F –	Survey Data Measurements and Analysis Results.....	827
Appendix F1 –	Water Quality Data	828
Appendix F2 –	Cross Sections and Discharge Measurements.....	844
Appendix F3 –	Field Notes	862
Appendix F4 –	Continuous Monitor	1019

Appendix F5 – BOD Calculations	1137
Appendix F6 – Bayou Bonfouca Dye Study Calculations.....	1157
Appendix F7 – Bayou Liberty Dye Study Calculations	1172
Appendix G– Historical and Ambient Data	1184
Appendix G1 – Ambient Data Calcs for current seasonal limits.....	1185
Appendix G2 – Ambient Data Calcs for proposed seasonal limits.....	1190
Appendix G3 – Land Use.....	1192
Appendix G4 – Stage Data.....	1195
Appendix G5 – Ambient vs Survey Data Graphs	1306
Appendix H – Maps and Diagrams	1342
Appendix H1- Overview map	1343
Appendix H2 – Land Use Map	1348
Appendix H3 – La Precipitation Map	1353
Appendix I – Sensitivity Analysis	1355
Appendix I1 – Sensitivity Output Graphs.....	1356
Appendix J – Public Comments and Response to Comments	1571
Appendix J1 – Wildlife and Fisheries Comments	1572
Appendix J2 – Louisiana Urban Stormwater Coalition Comments and LDEQ Responses ...	1574
Appendix J3 – Lake Pontchartrain Basin Foundation Comments and LDEQ Responses.....	1577
Appendix J4 – St. Tammany Parish Comments and LDEQ Responses	1583

LIST OF TABLES

Table 1. 2006 303(d) Listing for Subsegments 040905 and 040906.....	ii
Table 2. Draft 2008 303(d) Listing for Subsegments 040905 and 040906.....	iii
Table 3. Draft 2010 303(d) Listing for Subsegments 040905 and 040906.....	iii
Table 4. 2006 303(d) Listing for Subsegments 040907 and 040908.....	iv
Table 5. Draft 2008 303(d) Listing for Subsegments 040907 and 040908.....	iv
Table 6. Draft 2010 303(d) Listing for Subsegments 040907 and 040908.....	iv
Table 7. Bayou Liberty and Bayou Bonfouca Phased TMDL Approach.....	viii
Table 8. Interim Limits for 040905 Point Sources.....	xii
Table 9. Interim Limits for 040906 Point Sources.....	xvii
Table 10. Interim Limits for 040907 Point Sources.....	xx
Table 11. Interim Limits for 040908 Point Sources.....	xxx
Table 12. 040905 Total Maximum Daily Load (Sum of UCBO¹, UNBOD, and SOD) for a 5.0 mg/L dissolved oxygen standard	xxxiii
Table 13. Summary of MS4 loading for Bayou Liberty Subsegment 040905	xxxiii
Table 14. 040906 Total Maximum Daily Load (Sum of UCBO¹, UNBOD, and SOD) for a 4.0 mg/L dissolved oxygen standard	xxxiv
Table 15. Summary of MS4 loading for Bayou Liberty Subsegment 040906	xxxiv
Table 16. 040907 Total Maximum Daily Load (Sum of UCBO¹, UNBOD, and SOD) for a 5.0 mg/L dissolved oxygen standard	xxxv
Table 17. Summary of MS4 loading for Bayou Bonfouca Subsegment 040907.....	xxxv
Table 18. 040908 Total Maximum Daily Load (Sum of UCBO¹, UNBOD, and SOD) for a 4.0 mg/L dissolved oxygen standard	xxxvi
Table 19. Summary of MS4 loading for Bayou Bonfouca Subsegment 040908.....	xxxvi

Table 20. TMDL Summary 040905 Point Sources vs. a DO Criterion of 5.0 mg/L	xxxvii
Table 21. TMDL Summary 040906 Point Sources vs. a DO Criterion of 4.0 mg/L	xlii
Table 22. TMDL Summary 040907 Point Sources vs. a DO Criterion of 5.0 mg/L	xliv
Table 23. TMDL Summary 040908 Point Sources vs. a DO Criterion of 4.0 mg/L	lv
Table 24. Point Source Allocations to Percent Reductions	lx
Table 25. Land Uses in Subsegment 040905 Bayou Liberty	3
Table 26. Land Uses in Subsegment 040906 Bayou Liberty	3
Table 27. Land Uses in Subsegment 040907 Bayou Bonfouca.....	4
Table 28. Land Uses in Subsegment 040908 Bayou Bonfouca.....	4
Table 29. Water Quality Numerical Criteria and Designated Uses For Subsegment 040905	5
Table 30. Water Quality Numerical Criteria and Designated Uses For Subsegment 040906	5
Table 31. Water Quality Numerical Criteria and Designated Uses For Subsegment 040907	6
Table 32. Water Quality Numerical Criteria and Designated Uses For Subsegment 040908	6
Table 33. Summary of Calibration Model Sensitivity Analysis	38

LIST OF FIGURES

Figure 1. Model Layout	14
Figure 2. Map of Study Area Bayou Liberty 040905.....	15
Figure 3. Map of Study Area Bayou Liberty 040906.....	16
Figure 4. Map of Study Area Bayou Bonfouca 040907	17
Figure 5. Map of Study Area Bayou Bonfouca 040908	18
Figure 6. Bayou Bonfouca Calibration Model Dissolved Oxygen versus River Kilometer	24
Figure 7. Bayou Liberty Calibration Model Dissolved Oxygen versus River Kilometer	25
Figure 8. Summer Projection at 77% Removal of Man-Made Loads to meet a DO Criteria of 5.0/4.0 mg/L for Bayou Bonfouca.....	32
Figure 9. Summer Projection at 80% Removal of Man-Made Loads to meet a DO Criteria of 5.0/4.0 mg/L for Bayou Liberty.....	33
Figure 10. Summer Projection at 72% Removal of Man-Made Loads to meet a DO Criteria of 2.3 mg/L for Bayou Bonfouca.....	34
Figure 11. Summer Projection at 27% Removal of Man-Made Loads to meet a DO Criteria of 2.3 mg/L for Bayou Liberty.....	35
Figure 12. Winter Projection at 38% Removal of Man-Made NPS Loads to meet 5.0/4.0 mg/L DO Criteria for Winter Season for Bayou Bonfouca	36
Figure 13. Winter Projection at 0% Removal of Man-Made NPS Loads to meet 5.0/4.0 mg/L DO Criteria for Winter Season for Bayou Liberty	37

1. Definitions/Acronyms/Abbreviations

TMDL	Total Maximum Daily Load
LDEQ	Louisiana Department of Environmental Quality
EPA	United States Environmental Protection Agency
MS4	Stormwater Discharge From Municipal Separate Storm Sewer System
WQN	Water Quality Network
TEMPO	Tools for Environmental Management and Protection Organizations
WLA	Wasteload Allocation
DO	Dissolved Oxygen
LMRAP	Lower Mississippi River Alluvial Plain
BOD	Biological Oxygen Demand
SOD	Sediment Oxygen Demand
CBOD	Carbonaceous Biological Oxygen Demand
NBOD	Nitrogenous Biological Oxygen Demand
NPS	Nonpoint Source
NPDES	National Pollutant Discharge Elimination System
BMP	Best Management Practices
LAQUAL	Steady State Water Quality Model developed specifically for Louisiana Waterbodies
LTP	Louisiana Total Daily Maximum Daily Load Technical Procedures SOP
SOP	Standard Operating Procedure
BAC	Bacterial Criteria

STEADY STATE MODEL - is a fate and transport model that uses constant values of input variables to predict constant values of receiving water quality concentrations (USEPA, 1991a.)

2. Introduction

Bayou Liberty, Subsegments 040905, 040906, 040907, and 040908, were on the 2006, Draft 2008, and Draft 2010 Integrated Reports and EPA's Consent Decree (E. D. La. 2002). Subsegments 040905, and 040906 is found to be "not supporting" its designated use of Fish and Wildlife Propagation. It is supporting its designated uses of Primary Contact Recreation and Secondary Contact Recreation. The suspected causes of impairment are low dissolved oxygen, mercury, chlorides, sulfates, and total dissolved solids. The suspected source is On-site Treatment Systems (Septic Systems and Similar Decentralized Systems), package plant or other permitted small flows discharges, and unknown source.

Subsegment 040907 and 040908 was found to be "not supporting" its designated uses of Primary Contact Recreation and Fish and Wildlife Propagation. It was found to be supporting its designated use of Secondary Contact Recreation. Bayou Bonfouca was subsequently scheduled for Total Maximum Daily Load (TMDL) development with other listed waters in the Lake Pontchartrain Basin. The suspected causes of impairment are low dissolved oxygen (DO), chlorides, sulfates, fecal coliform, and total dissolved solids. The suspected source is On-site Treatment Systems (Septic Systems and Similar Decentralized Systems, Sanitary Sewer Overflows (Collection System Failures), Municipal (Urbanized High Density Area), drought related impacts and source unknown.

Because of the impairment, these subsegments require the development of a total maximum daily load (TMDL) for oxygen demand substances. A calibrated water quality model for the Bayou Liberty and Bayou Bonfouca, subsegments 040905, 040906, 040907, and 040908 watersheds was developed and projections for current dissolved oxygen standards were run to quantify the wasteload required to meet established dissolved oxygen criteria. This report presents the TMDL development and results.

3. Study Area Description

3.1 General Information

"The Lake Pontchartrain Basin, located in southeastern Louisiana, consists of the tributaries and distributaries of Lake Pontchartrain, a large estuarine lake. The basin is bounded on the north by the Mississippi state line, on the west and south by the east bank Mississippi River levee, on the east by the Pearl River Basin and on the southeast by Breton and Chandeleur Sounds. This basin includes Lake Borgne, Breton Sound, Chandeleur Sound and the Chandeleur Islands. The northern part of the basin consists of wooded uplands, both pine and hardwood forests. The southern portions of the basin consist of cypress-tupelo swamps and lowlands and brackish and saline marshes. The marshes of the southeastern part of the basin constitute the most rapidly eroding area along the Louisiana coast. Elevations in this basin range from minus five feet at New Orleans to over two hundred feet near the Mississippi border." (LA DEQ, 2000)

This TMDL addresses Bayou Liberty and Bayou Bonfouca, located in the Lake Pontchartrain Basin in St. Tammany Parish. This area is typical of the basin and is primarily comprised of forest land, urban development, and brackish marsh as documented in Tables 25 - 28 (LADEQ, 1999).

Detailed land cover maps of Subsegments 040905, 040906, 040907, and 040908 are also included in Appendix H2. Average annual precipitation in the segment, based on the nearest Louisiana Climatic Station, is 60 - 64 inches based on a 30-year period of record (LSU, 1999). A Louisiana average annual precipitation map is included in Appendix H3.

Table 25. Land Uses in Subsegment 040905 Bayou Liberty

Land Type	Acres 040905	Percent Land Cover 040905
Evergreen Forest Land	13154.61	69.09
Deciduous Forest land	2486.87	13.06
Urban or Built-up Land	1360.56	7.15
Forested Wetland	779.27	4.09
Developed Low Density	399.22	2.10
Pasture/Hay	308.49	1.62
Developed Medium Density	272.41	1.43
Water	143.32	0.75
Developed High Density	83.62	0.44
Transitional Areas	23.62	0.12
Sugarcane	14.13	0.07
Wetland Nonforested	9.88	0.05
Gravel Pit, Strip Mine	2.37	0.01
Clouds	1.19	0.01

Table 26. Land Uses in Subsegment 040906 Bayou Liberty

Land Type	Acres 040906	Percent Land Cover 040906
Evergreen Forest Land	3187.96	43.24
Brackish Marsh	1268.84	17.21
Deciduous Forest Land	1184.92	16.07
Forested Wetland	682.70	9.26
Urban or Built-up Land	634.17	8.60
Pasture/Hay	145.50	1.97
Developed Low Density	129.29	1.75
Water	81.54	1.11
Transitional Areas	23.72	0.32
Wetland Nonforested	16.21	0.22
Clouds	8.11	0.11
Developed Medium Density	4.74	0.06
Sugarcane	3.26	0.04
Developed High Density	1.19	0.02

Table 27. Land Uses in Subsegment 040907 Bayou Bonfouca

Land Type	Acres 040907	Percent Land Cover 040907
Evergreen Forest Land	5075.35	42.07
Deciduous Forest Land	2085.97	17.29
Urban or Built-up Land	2039.71	16.91
Developed Low Density	1116.22	9.25
Developed Medium Density	530.49	4.40
Pasture/Hay	493.22	4.09
Water	308.78	2.56
Developed High Density	165.17	1.37
Forested Wetland	141.15	1.17
Transitional Areas	98.55	0.82
Wetland Nonforested	5.83	0.05
Gravel Pit, Strip Mine	3.56	0.03
Sugarcane	0.99	0.01

Table 28. Land Uses in Subsegment 040908 Bayou Bonfouca

Land Type	Acres 040908	Percent Land Cover 040908
Brackish Marsh	4673.46	61.26
Urban or Built-up Land	708.90	9.29
Deciduous Forest Land	707.41	9.27
Forested Wetland	374.12	4.90
Water	357.02	4.68
Developed Low Density	343.97	4.51
Evergreen Forest Land	226.55	2.97
Developed Medium Density	82.43	1.08
Transitional Areas	77.69	1.02
Pasture/Hay	42.11	0.55
Developed High Density	14.04	0.18
Wetland Nonforested	12.45	0.16
Sugarcane	7.31	0.10
Clouds	1.19	0.02

3.2 Water Quality Standards

The Water Quality criteria and designated uses for Bayou Liberty and Bayou Bonfouca Watersheds are shown in Tables 29 - 32. As noted in the table, Bayou Liberty Subsegment 040905 has a year round dissolved oxygen standard of 5.0 mg/L, Bayou Liberty Subsegment 040906 has a year round dissolved oxygen standard of 4.0 mg/L, Bayou Bonfouca Subsegment 040907 has a year round dissolved oxygen standard of 5.0 mg/L, Bayou Bonfouca Subsegment 040908 has a year round dissolved oxygen standard of 4.0 mg/L.

Table 29. Water Quality Numerical Criteria and Designated Uses For Subsegment 040905

Parameter	Value
Designated Uses	A B C
DO, mg/L	5.0
Cl, mg/L	250
SO ₄ , mg/L	100
pH	6.0 – 8.5
BAC	1* (Primary Contact Recreation)
Temperature, deg Celsius	32
TDS, mg/L	500

USES: A – primary contact recreation; B - secondary contact recreation; C – propagation of fish and wildlife; D – drinking water supply; E – oyster propagation; F – agriculture; G – outstanding natural resource water; L – limited aquatic life and wildlife use.

*Note 1 – No more than 25 percent of the total samples collected on a monthly or near-monthly basis shall exceed a fecal coliform density of 400/100 mL. This primary contact recreation criterion shall apply only during the defined recreational period of May 1 through October 31. During the nonrecreational period of November 1 through April 30, the criteria for secondary contact recreation shall apply.

Table 30. Water Quality Numerical Criteria and Designated Uses For Subsegment 040906

Parameter	Value
Designated Uses	A B C
DO, mg/L	4.0
Cl, mg/L	N/A
SO ₄ , mg/L	N/A
pH	6.0 – 8.5
BAC	1* (Primary Contact Recreation)
Temperature, deg Celsius	32
TDS, mg/L	N/A

USES: A – primary contact recreation; B - secondary contact recreation; C – propagation of fish and wildlife; D – drinking water supply; E – oyster propagation; F – agriculture; G – outstanding natural resource water; L – limited aquatic life and wildlife use.

*Note 1 – No more than 25 percent of the total samples collected on a monthly or near-monthly basis shall exceed a fecal coliform density of 400/100 mL. This primary contact recreation criterion shall apply only during the defined recreational period of May 1 through October 31. During the nonrecreational period of November 1 through April 30, the criteria for secondary contact recreation shall apply.

Table 31. Water Quality Numerical Criteria and Designated Uses For Subsegment 040907

Parameter	Value
Designated Uses	A B C
DO, mg/L	5.0
Cl, mg/L	250
SO ₄ , mg/L	100
pH	6.0 – 8.5
BAC	1*
Temperature, deg Celsius	32
TDS, mg/L	500

USES: A – primary contact recreation; B - secondary contact recreation; C – propagation of fish and wildlife; D – drinking water supply; E – oyster propagation; F – agriculture; G – outstanding natural resource water; L – limited aquatic life and wildlife use.

*Note 1 – No more than 25 percent of the total samples collected on a monthly or near-monthly basis shall exceed a fecal coliform density of 400/100 mL. This primary contact recreation criterion shall apply only during the defined recreational period of May 1 through October 31. During the nonrecreational period of November 1 through April 30, the criteria for secondary contact recreation shall apply.

Table 32. Water Quality Numerical Criteria and Designated Uses For Subsegment 040908

Parameter	Value
Designated Uses	A B C
DO, mg/L	4.0
Cl, mg/L	N/A
SO ₄ , mg/L	N/A
pH	6.0 – 8.5
BAC	1* (Primary Contact Recreation)
Temperature, deg Celsius	32
TDS, mg/L	N/A

USES: A – primary contact recreation; B - secondary contact recreation; C – propagation of fish and wildlife; D – drinking water supply; E – oyster propagation; F – agriculture; G – outstanding natural resource water; L – limited aquatic life and wildlife use.

*Note 1 – No more than 25 percent of the total samples collected on a monthly or near-monthly basis shall exceed a fecal coliform density of 400/100 mL. This primary contact recreation criterion shall apply only during the defined recreational period of May 1 through October 31. During the nonrecreational period of November 1 through April 30, the criteria for secondary contact recreation shall apply.

3.3 Wastewater Discharges

According to LDEQ’s TEMPO database, there were 138 permitted dischargers located within these subsegments at the time of development of this TMDL. This includes two MS4 permittees. There were too many facilities to sample. These dischargers are accounted for as nonpoint loading through the process of calibration. LDEQ recognizes that many of the dischargers may not individually impact the mainstem of Bayou Liberty and Bayou Bonfouca during periods of low stream flow. However, the cumulative loading from many small dischargers can reach Bayou Liberty and Bayou Bonfouca during storm events and have a residual impact throughout the year. Because of this and the large quantity of

dischargers, LDEQ has associated discharger allocations with nonpoint load reductions. In the absence of regional plants, LDEQ believes that loading should be reduced equitably for all facilities. Ninety-eight (98) dischargers were included directly in the projection models (Tables 20 - 23). The remaining dischargers were addressed through nonpoint loads. Current permit information and discharge monitoring reports were reviewed for these facilities. The same reductions apply to all facilities, modeled or not.

LDEQ is not able to quantify the number of individual home sewage systems in the watershed. LDEQ realizes that home sewage treatment systems may contribute to the loading. LDEQ recommends that these home systems should be linked regional collection and treatment systems, or community sewer systems.

LDEQ is updating current information on permitted facilities and actively locating unpermitted facilities in the Pontchartrain Basin to get them permitted. Any newly permitted facilities will be subject to the same permits limits assigned to comparable facilities listed in this TMDL.

Phase I and II stormwater systems are additional possible point source contributors in the Pontchartrain Basin. Stormwater discharges are generated by runoff from urban land and impervious areas such as paved streets, parking lots, and rooftops during precipitation events. These discharges often contain high concentrations of pollutants that can eventually enter nearby waterbodies. Most stormwater discharges are considered point sources and require coverage by a National Pollutant Discharge Elimination System (NPDES) permit.

Under the NPDES stormwater program, operators of large, medium, and regulated small municipal separate storm sewer systems (MS4s) must obtain authorization to discharge pollutants. The Stormwater Phase I Rule (55 Federal Register 47990, November 16, 1990) requires all operators of medium and large MS4s to obtain an NPDES permit and develop a stormwater management program. Medium and large MS4s are defined by the size of the population within the MS4 area, not including the population served by combined sewer systems. A medium MS4 has a population between 100,000 and 249,999; a large MS4 has a population of 250,000 or more.

Phase II requires a select subset of small MS4s to obtain an NPDES stormwater permit. A small MS4 is any MS4 not already covered by the Phase I program as a medium or large MS4. The Phase II rule automatically covers all small MS4s in urbanized areas (UAs), as defined by the Bureau of the Census, and also includes small MS4s outside a UA that are so designated by NPDES permitting authorities, case by case (USEPA 2000).

In Louisiana, there are two ways that an MS4 can be identified as a regulated, small MS4. This category includes all cities within UAs and any small MS4 area outside UAs with a population of at least 10,000 and a population density of at least 1,000 people per square mile (LDEQ 2002). MS4 permittees in the Bayou Liberty and Bayou Bonfouca watershed include the city of Slidell, Permit # LAR041015 and St. Tammany Parish, Permit # LAR041024.

The City of Slidell MS4 permit covers their incorporated area (as defined by the 2010 U.S. Census). St. Tammany Parish has MS4 permit coverage but their permit coverage is limited to urbanized areas outside of the City of Slidell. Allocations for each MS4 permit were provided by partitioning the nonpoint loading based on the percentage of the subsegment regulated by each MS4 permit. For

subsegment 040905, the City of Slidell MS4 permit regulates approximately 6% of the subsegment, while the St. Tammany Parish MS4 permit regulates approximately 13% of the subsegment. For subsegment 040906, the City of Slidell MS4 permit regulates approximately 0% of the subsegment, while the St. Tammany Parish MS4 permit regulates approximately 19% of the subsegment. For subsegment 040907, the City of Slidell MS4 permit regulates approximately 15% of the subsegment, while the St. Tammany Parish MS4 permit regulates approximately 21% of the subsegment. For subsegment 040908, the City of Slidell MS4 permit regulates approximately 12% of the subsegment, while the St. Tammany Parish MS4 permit regulates approximately 21% of the subsegment.

EPA's stormwater permitting regulations require municipalities to obtain permit coverage for all stormwater discharges from MS4s. For each MS4 in the basin, a gross load was computed by dividing the acreage of the permitted area in the subsegment by the total area of the subsegment and multiplying the nonpoint source allocation by this percentage. Note that these values are estimates that can be refined in the future as more information about MS4s and land-use-specific loadings becomes available. Note that MS4s are permitted dischargers but function similarly to nonpoint sources (through storm-driven processes). EPA and LDEQ expect that the MS4 WLAs will be achieved through BMPs and adaptive management.

The National Pollutant Discharge Elimination System (NPDES) permitting program for stormwater discharges was established under the Clean Water Act as the result of a 1987 amendment. The Act specifies the level of control to be incorporated into the NPDES stormwater permitting program depending on the source (industrial versus municipal stormwater). These programs contain specific requirements for the regulated communities/facilities to establish a comprehensive stormwater management program (SWMP) or storm water pollution prevention plan (SWPPP) to implement any requirements of the total maximum daily load (TMDL) allocation. [See 40 CFR §130.]

Stormwater discharges are highly variable both in terms of flow and pollutant concentration, and the relationships between discharges and water quality can be complex. For municipal stormwater discharges in particular, the current use of system-wide permits and a variety of jurisdiction-wide BMPs, including educational and programmatic BMPs, does not easily lend itself to the existing methodologies for deriving numeric water quality-based effluent limitations. These methodologies were designed primarily for process wastewater discharges which occur at predictable rates with predictable pollutant loadings under low flow conditions in receiving waters. EPA recognized these problems and developed permitting guidance for stormwater permits. [See "Interim Permitting Approach for Water Quality-Based Effluent Limitations in Stormwater Permits" (EPA-833-D-96-00, Date published: 09/01/1996)]

Due to the nature of stormwater discharges, and the typical lack of information on which to base numeric water quality-based effluent limitations (expressed as concentration and mass), LDEQ considers an interim permitting approach for NPDES storm water permits which is based on BMPs. (The interim permitting approach uses best management practices (BMPs) in first-round stormwater permits, and expanded or better-tailored BMPs in subsequent permits, where necessary, to provide for the attainment of water quality standards.) These BMPs should include the location of all wastewater discharges, elimination of all illicit discharges, regionalization of sewage collection and treatment, and the rehabilitation of all problematic sewage collection lines within the MS4 regulated area.

A monitoring component is also included in the recommended BMP approach. “Each stormwater permit should include a coordinated and cost-effective monitoring program to gather necessary information to determine the extent to which the permit provides for attainment of applicable water quality standards and to determine the appropriate conditions or limitations for subsequent permits.” The details of this approach can be found in a guidance memo issued in 2002. [See Memorandum from Robert Wayland, Director of OWOW and James Hanlon, Director of OWM to Regional Water Division Directors: “Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Storm Water Sources and NPDES Permit requirements Based on Those WLAs ” (Date published: 11/22/2002)] “The policy outlined in this memorandum affirms the appropriateness of an iterative, adaptive management BMP approach, whereby permits include effluent limits (e.g., a combination of structural and nonstructural BMPs) that address storm water discharges, implement mechanisms to evaluate the performance of such controls, and make adjustments (i.e., more stringent controls or specific BMPs) as necessary to protect water quality. If it is determined that a BMP approach (including an iterative BMP approach) is appropriate to meet the storm water component of the TMDL, LDEQ makes sure the TMDL reflect this.” This BMP-based approach to stormwater sources in TMDLs is also recognized and described in the most recent EPA guidance. [See “TMDLs To Stormwater Permits Handbook” (DRAFT), EPA, November 2008]

This TMDL relies on appropriate BMPs for implementation. Recent EPA memos regarding stormwater guidance, indicate where numeric effluent limitations should be applied to MS4 permits. However, as a result of this TMDL, no numeric effluent limitations are required for municipal stormwater discharge permits as a result of this TMDL.

3.4 Water Quality Conditions/Assessment

Bayou Liberty and Bayou Bonfouca, subsegments 040905, 040906, 040907, and 040908, of the Lake Pontchartrain Basin are listed on the 2006 Integrated Report and EPA’s Consent Decree (E. D. La. 2002). Subsegments 040905 and 040906 are listed as not supporting its designated use of Fish and Wildlife Propagation. It is supporting its designated uses of Primary Contact Recreation and Secondary Contact Recreation. For more information see Tables 1 – 3.

Subsegment 040907 and 040908 was found to be "not supporting" its designated uses of Primary Contact Recreation and Fish and Wildlife Propagation. It was found to be supporting its designated use of Secondary Contact Recreation. Bayou Bonfouca was subsequently scheduled for Total Maximum Daily Load (TMDL) development with other listed waters in the Lake Pontchartrain Basin. For more information see Tables 4 – 6.

Because of the impairment of low DO, TMDLs for biochemical-oxygen demanding substances were developed for subsegments 040905, 040906, 040907, and 040908.

The survey data was plotted with the last ten years of ambient data at sites WQN 0301, 1076, 1077, and 1078. All survey data values fell within the same range as the ambient data at the nearest station. The plots are presented in Appendix G5.

3.5 Prior Studies

This is the first TMDL study conducted on Bayou Liberty and Bayou Bonfouca. Prior studies include the following:

- 1) 040905, 040907 Hurricane Katrina Impact Study
- 2) 040905 Nutrient Reference Data
- 3) 040907 Bayou Bonfouca Post Remediation Study
- 4) 040905, 040907 Hurricane Gustav Ambient Sampling
- 5) 040905, 040907, 040908 Mercury Contaminant Levels in Louisiana

For Bayou Liberty subsegment 040905, LDEQ has one monthly water quality sampling station, WQN 1077. LDEQ Water Quality Site 1077, Bayou Liberty and Bayou Bonfouca at Hwy 433 bridge, has periods of record from January 2001 to December 2001, January 2007 to October 2007 and October 2010 to December 2010.

For Bayou Liberty subsegment 040906, LDEQ has one monthly water quality sampling station, WQN 1076. LDEQ Water Quality Site 1076, Bayou Liberty at Bayou Paquet, has periods of record from January 2001 to December 2001, January 2007 to October 2007 and October 2010 to December 2010.

For Bayou Bonfouca subsegment 040907, LDEQ has one monthly water quality sampling station, WQN 0301. LDEQ Water Quality Site 0301, Bayou Bonfouca at Slidell, Louisiana, has periods of record from January 1991 to May 1998, January 2001 to December 2001, January 2007 to October 2007, and October 2010 to December 2010. This station had the longest period of record of all four stations in the watersheds and was the station used for projections.

For Bayou Bonfouca subsegment 040908, LDEQ has one monthly water quality sampling station, WQN 1078. LDEQ Water Quality Site 1078, Bayou Bonfouca 3.2 miles south of Hwy 433, has periods of record from January 2001 to December 2001, January 2007 to October 2007 and October 2010 to December 2010.

Data collected during the Eularian TMDL survey conducted in June 2009, included discharge data, cross-section data, field in-situ data, continuous monitor data, several dye studies, and lab water quality data. This data was used to establish the input for the model calibration and is presented in Appendix F.

4. General TMDL Development Process

The development of a TMDL for dissolved oxygen generally occurs in 3 stages. Stage 1 encompasses the data collection activities. These activities may include gathering such information as stream cross-sections, stream flow, stream water chemistry, stream temperature and dissolved oxygen at various locations on the stream, location of the stream centerline and the boundaries of the watershed which drains into the stream, and other physical and chemical factors which are associated with the stream. Additional data gathering activities include gathering all available information on each facility which discharges pollutants in to the stream, gathering all available stream water quality chemistry and flow data from other agencies and groups, gathering population statistics for the watershed to assist in developing projections of future loadings to the water body, land use and crop rotation data where

available, and any other information which may have some bearing on the quality of the waters within the watershed. During Stage 1, any data available from reference or least impacted streams which can be used to gauge the relative health of the watershed is also collected.

Stage 2 involves organizing all of this data into one or more useable forms from which the input data required by the model can be obtained or derived. Water quality samples, field measurements, and historical data must be analyzed and statistically evaluated in order to determine a set of conditions which have actually been measured in the watershed. The findings are then input to the model. Best professional judgment is used to determine initial estimates for parameters which were not or could not be measured in the field. These estimated variables are adjusted in sequential runs of the model until the model reproduces the field conditions which were measured. In other words, the model produces a value of dissolved oxygen, temperature, or other parameter which matches the measured value within an acceptable margin of error at the locations along the stream where the measurements were actually made. When this happens, the model is said to be calibrated to the actual stream conditions. At this point, the model should confirm that there is an impairment and give some indications of the causes of the impairment. If a second set of measurements is available for slightly different conditions, the calibrated model is run with these conditions to see if the calibration holds for both sets of data. When this happens, the model is said to be verified.

Stage 3 covers the projection modeling which results in the TMDL. The critical conditions of flow and temperature are determined for the waterbody and the maximum pollutant discharge conditions from the point sources are determined. These conditions are then substituted into the model along with any related condition changes which are required to perform worst case scenario predictions. At this point, the loadings from the point and nonpoint sources (increased by an acceptable margin of safety) are run at various levels and distributions until the model output shows that dissolved oxygen criteria are achieved. It is critical that a balanced distribution of the point and nonpoint source loads be made in order to predict any success in future achievement of water quality standards. At the end of Stage 3, a TMDL is produced which shows the point source permit limits and the amount of reduction in man-made nonpoint source pollution which must be achieved to attain water quality standards. The man-made portion of the NPS pollution is estimated from the difference between the calibration loads and the loads observed on reference or least impacted streams.

5. Calibration Model Documentation

5.1 Program Description

The model used for this TMDL was LA-QUAL, a steady-state one-dimensional water quality model. LA-QUAL has the mechanisms for incorporating tidal fluctuations, dispersion, and algal impacts in the analysis and was particularly suitable for use in modeling Bayou Liberty and Bayou Bonfouca. For a history of LA-QUAL, refer to the LA-QUAL for Windows User's Manual (LDEQ, 2007).

5.2 Input Data Documentation

Data collected during the intensive survey conducted from June 15 - 19, 2009 for Bayou Liberty and Bayou Bonfouca, was used to establish the input for the model calibration. The data is presented in Appendix F. The flows in each reach were based on the measured survey discharges or minimal flows

from the cross sections and velocities. The headwater flows were a minimal flow as per the Louisiana Total Maximum Daily Load Technical Procedures SOP (LTP).

Field and laboratory water quality data were entered in a spreadsheet for ease of analysis. The survey data was the primary source of the model input data for initial conditions, decay rates, mainstem water temperature, dissolved oxygen loading, headwater temperature, and DO data.

The survey data was also compared to the reference stream data. Generally, the chloride for the lower reaches were higher than the values for the upstream reaches, indicating the tidal influences from Lake Pontchartrain. Although point source discharges may contribute a portion of the chloride loading, it appears to be insignificant. Values for Ammonia nitrogen, Nitrate+Nitrite nitrogen, and Total phosphorus were mostly higher than the corresponding values seen on LDEQ's reference stream data. Values for ammonia nitrogen, Total Kjeldahl Nitrogen, and total phosphorus were extremely high at sites BV02 (3851) and BL03 (3861). Both of these sites are located along I-12, in areas impacted by point source discharges. This trend indicates the possible degree to which Bayou Liberty and Bayou Bonfouca are being impacted by loading from point sources and urban nonpoint sources of loading. The reference stream data is provided in Appendix E6. Ratios of TOC to CBOD were inconsistent, ranging from 0.41 to 2.14.

5.2.1 Model Schematics and Maps

A vector diagram of the modeled area is presented in Figure 1 and Appendix C1. The vector diagram shows the locations of survey stations, the reach/element design, and the locations of the tributaries. An ARCVIEW map of the stream and subsegment showing river kilometers, survey stations, subsegment boundary and other points of interest are also included in Figures 2 - 6 and Appendix H1.

This model uses Bayou Liberty as a major tributary to Bayou Bonfouca.

5.2.2 Model Options, Data Type 2

Five constituents were modeled during the calibration process. These were dissolved oxygen, carbonaceous biochemical oxygen demand, nitrogenous biochemical oxygen demand, chloride, and conductivity. The continuous monitors did show small diurnal swings indicative of algal activity in a few of the reaches. The algae cycle was not modeled; however, the measured chlorophyll A values were included in the initial conditions. This allowed the model to simulate the oxygen production associated with algae without modeling the entire algal cycle.

5.2.3 Program Constants, Data Type 3

A minimum K_L value of 0.7 m/day was used. This value is a conversion from 2.3 ft/day which is a Louisiana standard minimum. The K_2 maximum was set to 25 1/day at 20° C, which is the EPA Policy in the absence of a measured value.

The inhibition control value was set to option 3 which is all rates but sediment oxygen demand. The water column dissolved oxygen demand is assumed to come primarily from facultative bacteria under

anoxic conditions and SOD is not influenced by modeled dissolved oxygen levels in the upper water column.

The hydraulic calculation method was set to option 2 or “widths and depths.” This was done because the low slopes in these waterbodies cause a substantial amount of water to be present in some reaches during critical flow. Using a modified Leopold relationship allows the model to predict a more accurate depth and width during low flow.

Two options are available for the settling rate units. Option 1 is to be used when the model utilizes a settling velocity. This option essentially ties the settling rate to the stream depth. Option 2 is to be used when the model utilizes a settling rate. Option 2 states that a defined percentage of the constituent will settle out of the water column in one day. Option 2 was used for Bayou Liberty and Bayou Bonfouca.

Dispersion equation 3 was used to account for all modes of transport.

The Tidal Period, Period of Tidal Rise, and Tide Height were calculated using survey data.

Figure 1. Model Layout

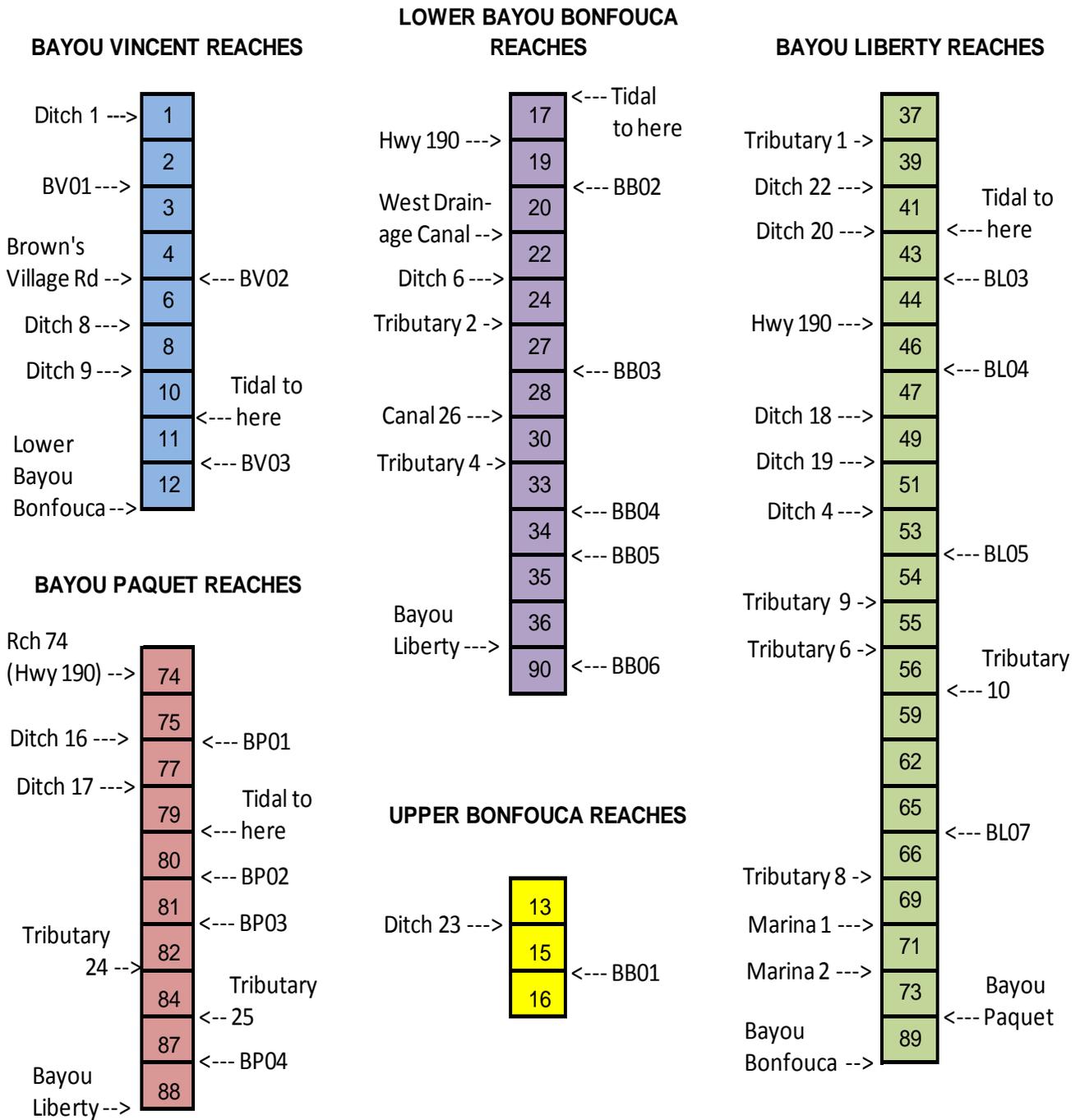


Figure 2. Map of Study Area Bayou Liberty 040905

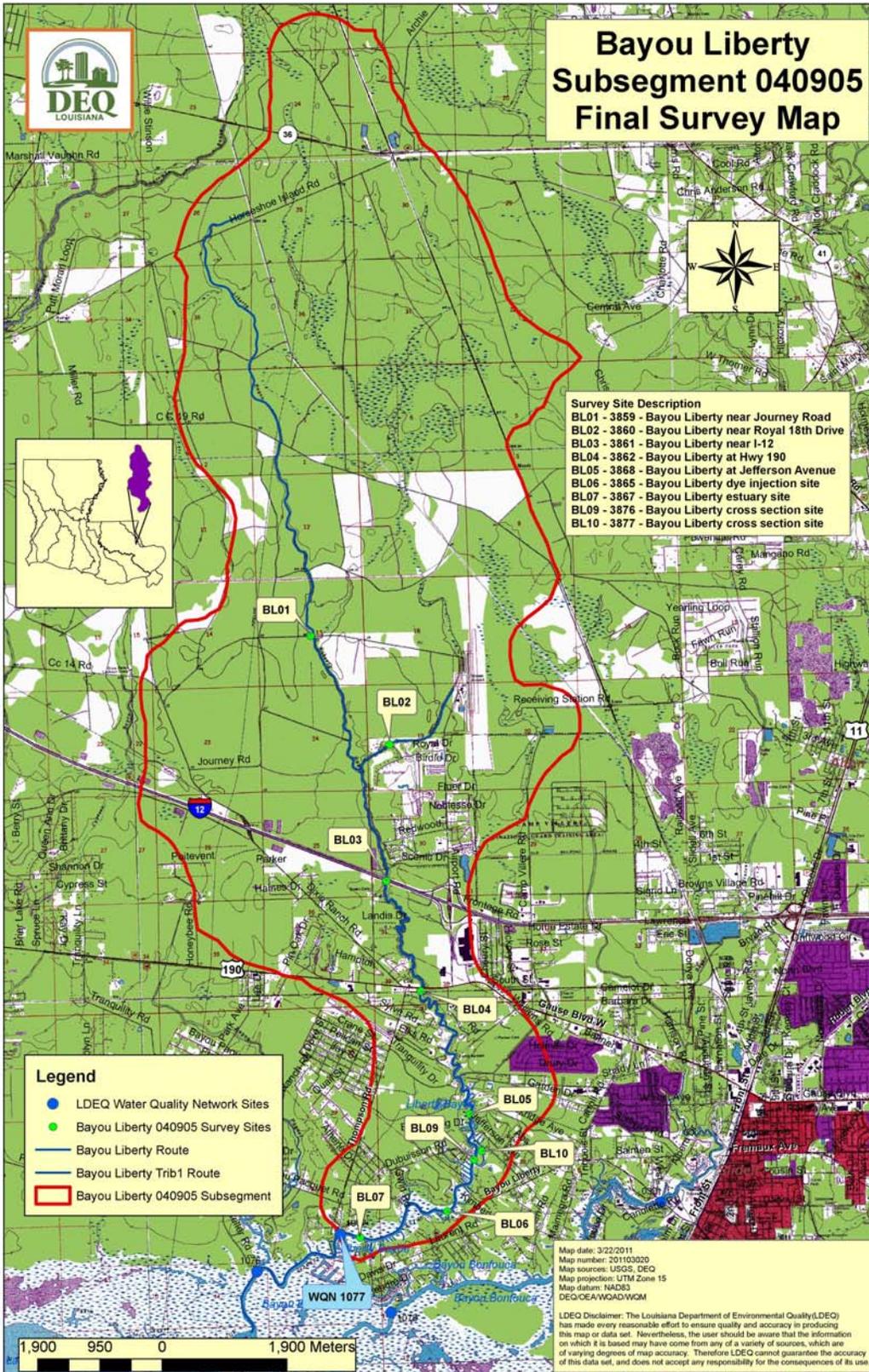


Figure 3. Map of Study Area Bayou Liberty 040906

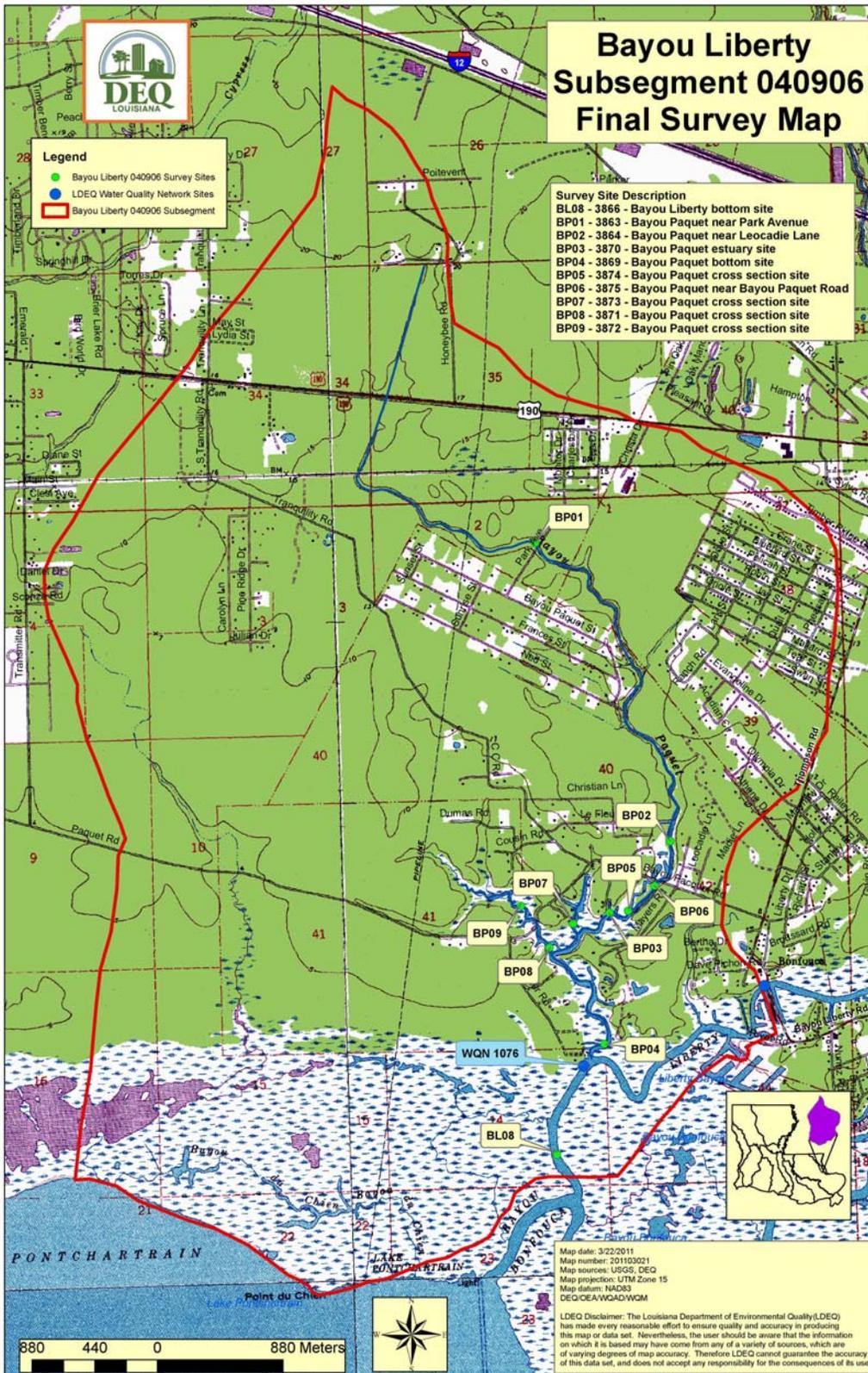


Figure 4. Map of Study Area Bayou Bonfouca 040907

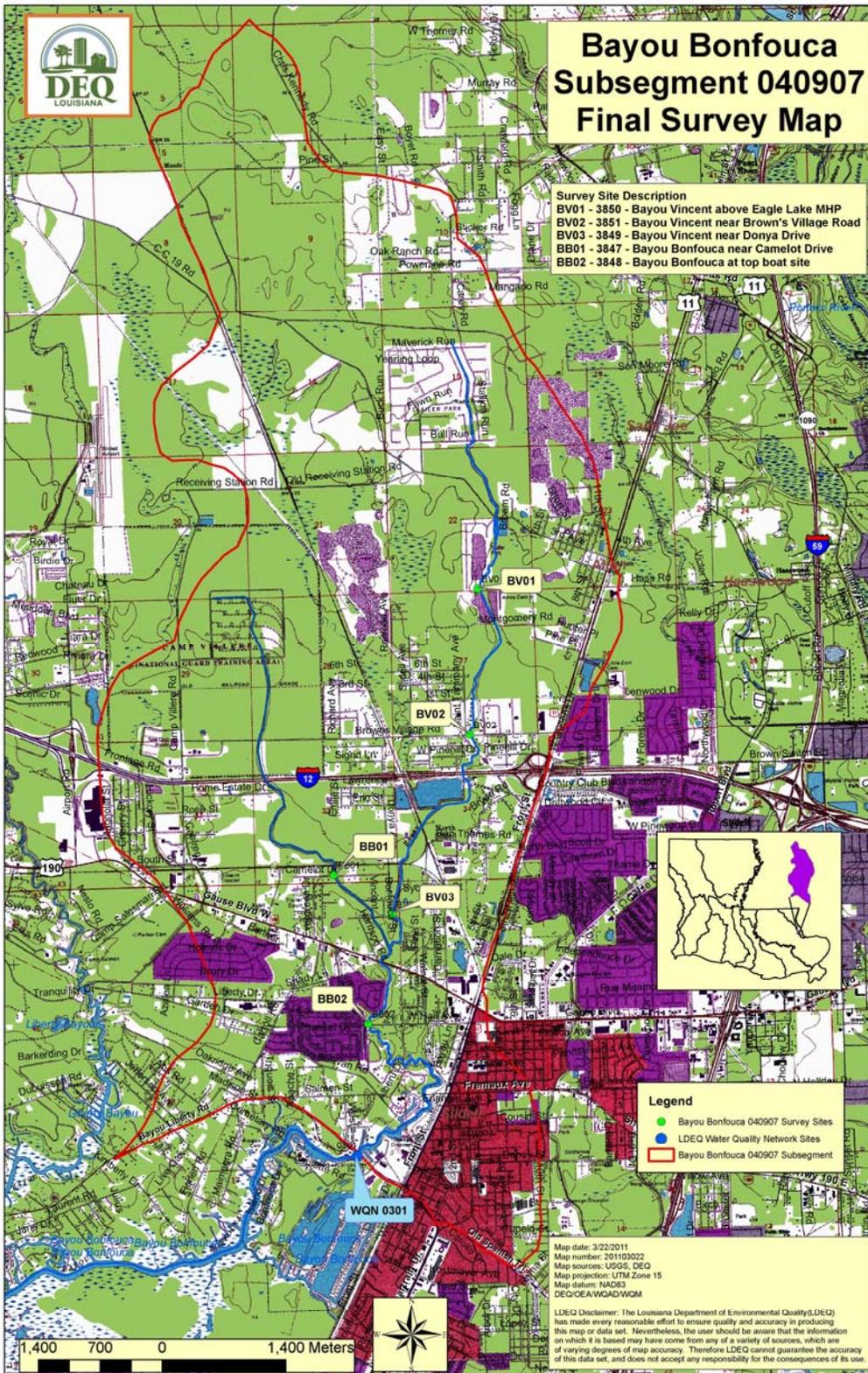
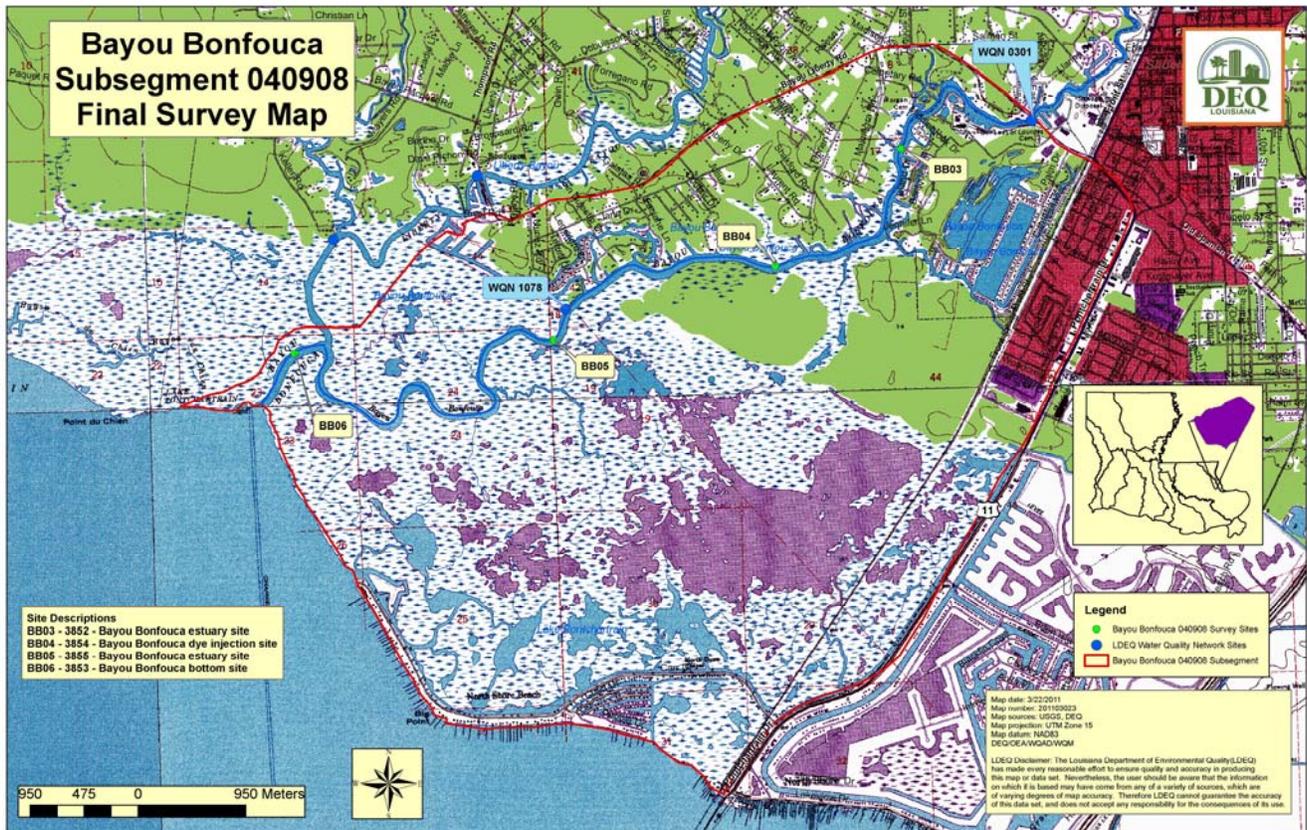


Figure 5. Map of Study Area Bayou Bonfouca 040908



5.2.4 Temperature Correction of Kinetics, Data Type 4

The temperature values computed are used to correct the rate coefficients in the source/sink terms for the other water quality variables. These coefficients are input at 20 °C and are then corrected to temperature using the following equation:

$$X_T = X_{20} * \text{Theta}^{(T-20)}$$

Where:

X_T = the value of the coefficient at the local temperature T in degrees Celsius

X_{20} = the value of the coefficient at the standard temperature at 20 degrees Celsius

Theta = an empirical constant for each reaction coefficient

In the absence of specified values for data type 4, the model uses default values. A complete listing of these values can be found in the LA-QUAL for Windows User's Manual (LDEQ, 2004). For this model all values used were LA-QUAL default values.

5.2.5 Reach Identification Data, Data Type 8

A diagram of the modeled area is presented in Appendix C1. The vector diagram shows the reach/element design and the location of all modeled tributaries and mainstem. The modeled area is characterized by modeling from the headwaters of Bayou Bonfouca to its confluence with Lake Pontchartrain. Bayou Vincent was modeled as a major tributary to Bayou Bonfouca. Additionally, Bayou Liberty was modeled as a major tributary to Bayou Bonfouca. Bayou Paquet was modeled as a major tributary to Bayou Liberty. This calibrated model includes 91 reaches, 906 elements, and 31 headwaters. Digitized maps of the streams showing river kilometers and the June 2009 survey sampling sites are included in Figures 3 – 6 and Appendix H1.

5.2.6 Advective Hydraulic Coefficients, Data Type 9

The Leopold equations are used to scale the velocity (U), width (W), and depth (H) of a free flowing stream from a lower value of flow to a higher value or from a higher value of flow to a lower value. Note that the exponents add to one and the coefficients multiply to 1. This is known as the rule of ones. This method is not appropriate for streams which are not dependent entirely on flow such as waterbodies where flow approaches zero, but contain some depth.

$$U = aQ^b \quad H = cQ^d \quad W = eQ^f$$

$$b + d + f = 1 \quad (a)(c)(e) = 1$$

The Leopold equations presume that the water surface width and average depth of a stream are zero at zero flow. Most Louisiana streams, such as Bayou Liberty and Bayou Bonfouca, retain a significant width and depth at zero flow. The equations have therefore been modified to allow for a zero flow width and depth. The rule of ones does not apply to the modified equations. The modified Leopold equations are:

$$W = aQ^b + c \quad H = dQ^e + f \quad U = gQ^h$$

Four of the cross sections were adjusted for changes in elevation between the cross section and the water quality work.

For the tidal reaches, the widths and depths were assumed to be independent of flow and relatively constant. Consequently, the modified Leopold coefficients and exponents were not calculated for the tidal reaches. For the upland reached, the hydraulic geometry of the stream channels was used to calculate coefficients and exponents. The equations above were then utilized by the model to calculate the widths and depths based on the advective flow.

5.2.7 Dispersive Hydraulic Coefficients, Data Type 10

The dispersion was estimated based on the dye studies.

The calculated dispersion rates are:

Bayou Bonfouca at 25.7 hours from dye injection	3.0 sq m/sec	at RKm 4.5 – 7.7
Bayou Bonfouca at 34.5 hours from dye injection	1.2 sq m/sec	at RKm 4.5 – 8.4

Bayou Liberty at 26.2 hours from dye injection	2.0 sq m/sec	at Rkm 3.5 – 5.7
Bayou Liberty at 35.3 hours from dye injection	1.4 sq m/sec	at Rkm 3.6 – 6.1
Average measured dispersion rate	1.9 sq m/sec	

Ultimately the dispersion rates were calibrated to chlorides, conductivity, and salinity using the dispersion equation of Tracor (Rates & constants, pg 40).

Dispersion in upland reaches was set to zero.

All documentation can be found in Appendix F6.

5.2.8 Initial Conditions, Data Type 11

The initial conditions are used to reduce the number of iterations required by the model. The values required for this model were temperature and DO by reach. The input values came from the survey station(s) located closest to the reach.

When the continuous monitoring dissolved oxygen (DO) data for at least one diurnal cycle is available and the diurnal variation is less than 2 mg/L, it is standard practice for LDEQ to calibrate to the mean DO. The Bayou Liberty and Bayou Bonfouca data sets collected at most stations had a diurnal variation ranging from 2 mg/L to 9 mg/L. The standard LDEQ practice at some sites for this is as follows:

1. Calibrate without simulating algal production as follows:

Range of DO cycle	Calibrate
0 – 2 mg/l	Mean DO for one or more full cycles
2 – 9 mg/l	One mg/l over minimum DO
>9 mg/l	0.11*DO cycle over minimum DO

These practices were followed for this model. The input data and sources are shown in Appendix B2.

Chlorophyll a values were also used since the mild effects of algae on the dissolved oxygen concentrations were also simulated with this model. The initial conditions are only a starting point for the model, therefore, all values were set to the measured and interpolated values. The input data and sources are shown in Appendix B2.

5.2.9 Reaeration Rates, Data Type 12

The applicability of the various reaeration equations was examined and utilized based upon appropriate hydrology of the reach. The Texas Equation was considered to be the most appropriate equation for some reaches. The equation is stated below.

$$K_2 = \frac{1.923 V^{0.273}}{D^{0.894}}$$

where: V = stream velocity

D = stream depth

The Louisiana Equation was considered appropriate for some reaches. The equation is stated below.

$$K_2 = \frac{0.664 (1 + 21.52 V)}{D}$$

where: V = stream velocity
D = stream depth

Reaeration in the lower reaches of Bayou Bonfouca, Bayou Liberty, and Bayou Paquet was adjusted for wind effects using the relation of Mattingly (Rates & Constants, pg 122). Weather data for 6-17-2009 and reaeration calculations can be found in Appendix F.

5.2.10 Sediment Oxygen Demand, Data Type 12

The SOD values were achieved through calibration. The SOD value for each reach is shown in Appendix B2. The values were considered to be reasonable for this type of stream. The subsegment is mainly forestry and therefore, a large part of the stream is high canopy. The high canopy means large amounts of leaf fall to the stream are present, leaving bottom sediments. The conversion ratio of settled CBOD and settled NBOD to SOD was considered to be one for most reaches.

5.2.11 Carbonaceous BOD Decay and Settling Rates, Data Type 12

The in-stream carbonaceous BOD decay rates (bottle rates) ranged from 0.042 1/day to 0.134 1/day, with an average of 0.08 1/day. There was not much variation rates. The values were comparable to instream values observed in other Lake Pontchartrain Basin waterbodies of comparable hydrology. Calibration started with 0.10 and was adjusted to 0.08 to improve calibration. The CBOD curves presented in Appendix F5 are derived using the Microsoft Excel Solver and were based on the measured daily CBOD values. The decay and settling rates used for each reach are shown in Appendix F5.

5.2.12 Nitrogenous BOD Decay and Settling Rates, Data Type 15

The in-stream nitrogenous BOD decay rates (bottle rates) were extremely variable. The decay rates ranged from 0.079 1/day to 0.451 1/day, providing an average of 0.19 1/day. Both the maximum and the average values were higher than in-stream values observed in other Lake Pontchartrain Basin waterbodies of comparable hydrology. A much lower rate of 0.03 was needed to calibrate. The decay and settling rates used for each reach are shown in Appendix F5.

5.2.13 Incremental Conditions, Data Types 16, 17, and 18

Incremental flow was not used in this model.

5.2.14 Nonpoint Sources, Data Type 19

Nonpoint source loads which are not associated with a flow are input into this part of the model. These can be most easily understood as resuspended load from the bottom sediments and are modeled as SOD, CBOD, and NBOD loads. These values are achieved through calibration. The loads determined through calibration were reasonable for a waterbody with low slope and velocity and bed sediment composed primarily of silt and clay.

5.2.15 Headwaters, Data Types 20, 21, and 22

The headwater flow was assumed to be 0.01 cfs as per the LTP. The main stem headwaters for Bayou Bonfouca and Bayou Liberty were also modeled with assumed geometry and headwater flow for the same reason, but the flows were 0.1 cfs. The headwaters of the Bonfouca - Liberty system are intermittent, flowing in response to significant rainfall events. Bayou Vincent does pick up some flow in the vicinity of some ponds near the Eagle Lake MHP, probably as a result of groundwater flow into the ponds and resulting surface and subsurface flow into Bayou Vincent. Bayou Vincent was sampled just upstream of the Eagle Lake MHP discharge and downstream of the ponds. A second sample was taken at Brown's Village Road, and a third near Donya Drive and Jackson Road. The Donya Drive site is tidal. The upland reaches of Bayou Bonfouca, Bayou Liberty, and Bayou Paquet were not sampled because they consisted of isolated pools of water with no flow. Except for the upland reaches of Bayou Vincent, calibration was limited to the tidal reaches of the Bonfouca-Liberty watershed. The UCBOD and UNBOD loading measured in Bayou Vincent just downstream of the groundwater inflow (UCBOD/UNBOD = 2.2/1.0 mg/l) was used as loading for all headwaters. Nonpoint (benthic) loading for generic ditches and tributaries was set to maintain levels of UCBOD/UNBOD in the water column of 2.0/1.0 mg/l by modeling each generic ditch/tributary without facility discharges. SOD in the generic waters was input at 0.5 gm/sq m-d. The data and sources are presented in Appendix B2.

5.2.16 Wasteloads, Data Types 23, 24, and 25

According to LDEQ's TEMPO database, there were 138 permitted dischargers located within this subsegment at the time of development of this TMDL. This includes two MS4 permittees. There were too many facilities to sample and model. Ninety-eight (98) dischargers were included directly in the projection models. Unpermitted and/or unmodeled dischargers are accounted for as nonpoint loading through the process of calibration. Loading for facilities that were not sampled was obtained from DMR data where available. If DMR data was not available, permit limits were used. UCBOD was calculated as $BOD5 * 2.3$. UNBOD is generally assumed to be $4.3 * BOD5 / 2$. UNBOD by this method is so close to UCBOD that calibration assumed $UNBOD = UCBOD$. The default effluent DO was 2.0.

5.2.17 Boundary Conditions, Data Type 27

The UCBOD and UNBOD loading measured in Bayou Vincent just downstream of the groundwater inflow (UCBOD/UNBOD = 2.2/1.0 mg/l) was used as loading for headwaters. Nonpoint (benthic) loading for generic ditches and tributaries was set to maintain levels of UCBOD/UNBOD in the water column of 2.0/1.0 mg/l by modeling each generic ditch/tributary without facility discharges. SOD in the generic waters was input at 0.5 gm/sq m-d. The depth was determined based upon a width to depth ratio of 20:1. Many of the dischargers discharge to unnamed ditches. In an attempt to provide

more accurate wasteload allocations in the Bayou Bonfouca and Bayou Liberty Watershed, ditches were set up to bring these facilities in.

5.3 Model Discussion and Results

The Bayou Liberty and Bayou Bonfouca watershed was simulated with a branched model. The model begins at the headwaters of Bayou Bonfouca and ends at its confluence with Lake Pontchartrain. Bayous Liberty, Paquet, and Vincent were major tributaries that were modeled. The watershed contains many dischargers that are not discharging directly into Bayous Bonfouca, Liberty, Paquet, or Vincent. In order to better represent these facilities and provide more accurate wasteload allocations, these facilities were brought into the model through uncalibrated channels. The widths of those channels was set to 1 meter (3.281 ft). Based on a width to depth ratio of 20:1, the depths were set to 0.05 meters (0.164 ft). The width to depth ratio was comparable to some of the ratios obtained from cross sections measured during the survey. The uncalibrated channels were intended to represent ditches and therefore not used to project the load reductions.

The calibration model input and output is presented in Appendix B. The overlay plotting option was used to determine if calibration had been achieved. A plot of the dissolved oxygen concentration versus river kilometer is presented in Figure 3. The calibration points for temperature were calculated based on the continuous monitor readings. The dissolved oxygen readings at most sites had a diurnal swing of greater than 2 but less than 9. Therefore, the calibration points for dissolved oxygen were based on the DO minimum + 1. The calibration points for CBOD and NBOD were the measured values obtained from the water quality samples. The calibration points for conductivity were based on the insitu readings. The calibration points for the chlorides and chlorophyll A were the measured values obtained from the water quality samples. The graph for DO is presented in Figure 3.

The model was adequately calibrated for DO, UCBOD, and NBOD on the main stem. The calibration model shows that during June 2009 survey period, the DO standard of 5 mg/l was not being met in subsegments 040905 and 040907 in many of the modeled reaches. The DO standard of 4 mg/l was not being met in subsegments 040906 and 040908 in many of the modeled reaches. The calibration model minimum DO on the main stem was 0.76 mg/l.

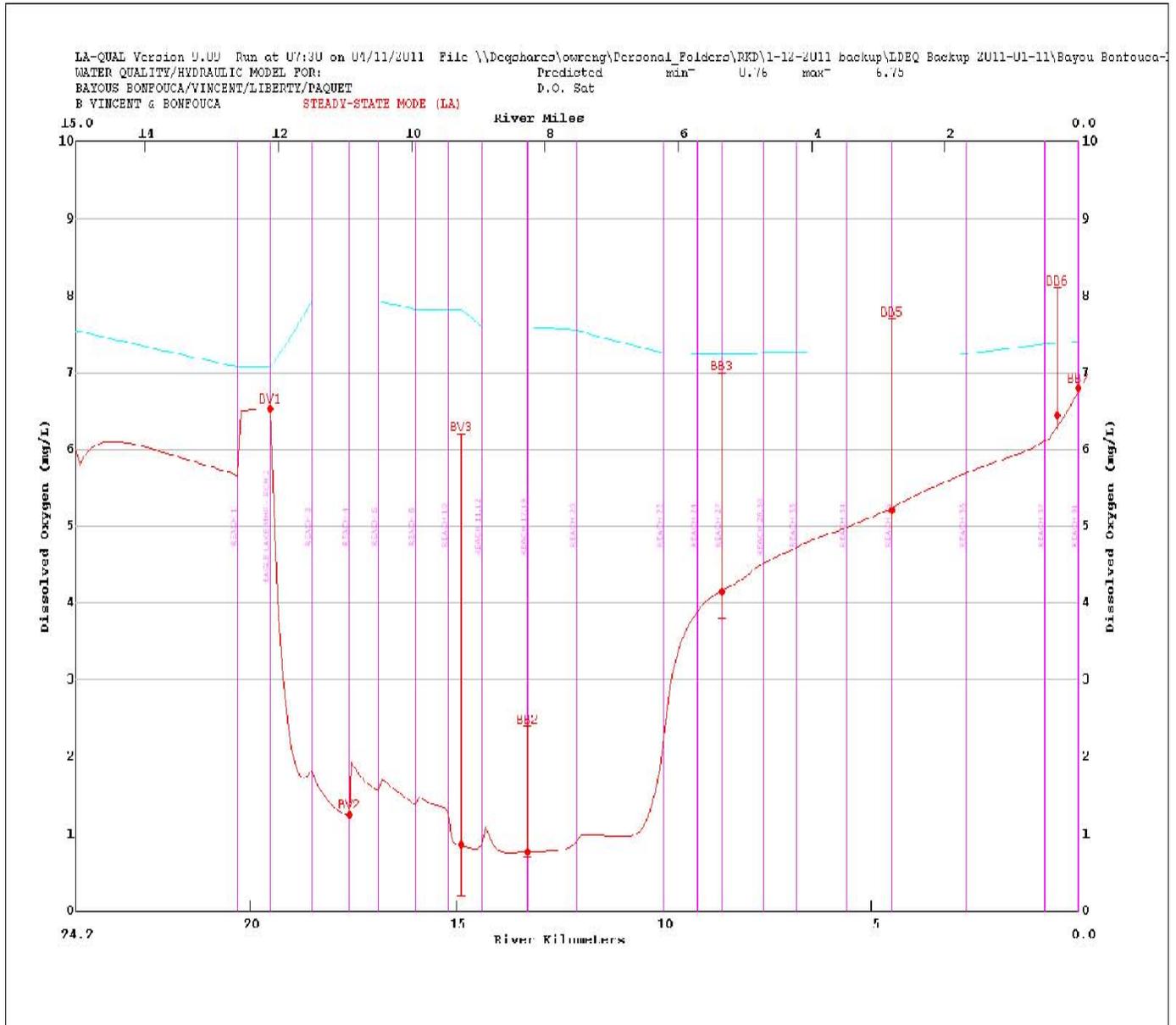
The Texas Reaeration Equation, the Louisiana Reaeration Equation and wind-aided reaeration equations were used in this model. The equation was determined to be what was most appropriate for each reach within the LAQUAL modeling software. The use of these equations produced a calibration model with reasonable values for both sediment oxygen demand (SOD) and nonpoint loading.

It is the determination of LDEQ that a significant portion of the loading comes from man-made sources, including many permitted and unpermitted dischargers located within the watershed. The CBOD and NBOD decay rates are discussed in Sections 4.2.11 and 4.2.12. The settling rates and SOD were achieved through calibration. The resulting values were reasonable for a waterbody with low slope, low stream velocity, and bed sediment composition consisting of silt and clay.

It was observed that the lower tidal reaches of Bayous Bonfouca, Liberty, and Paquet get good tidal flushing and therefore, do not have the water quality problems of the upper tidal and upland reaches. The drop in dissolved oxygen probably represents upland loading, including loading from facility discharges, getting to the tidal reaches of Bayou Bonfouca and Bayou Liberty more quickly. The

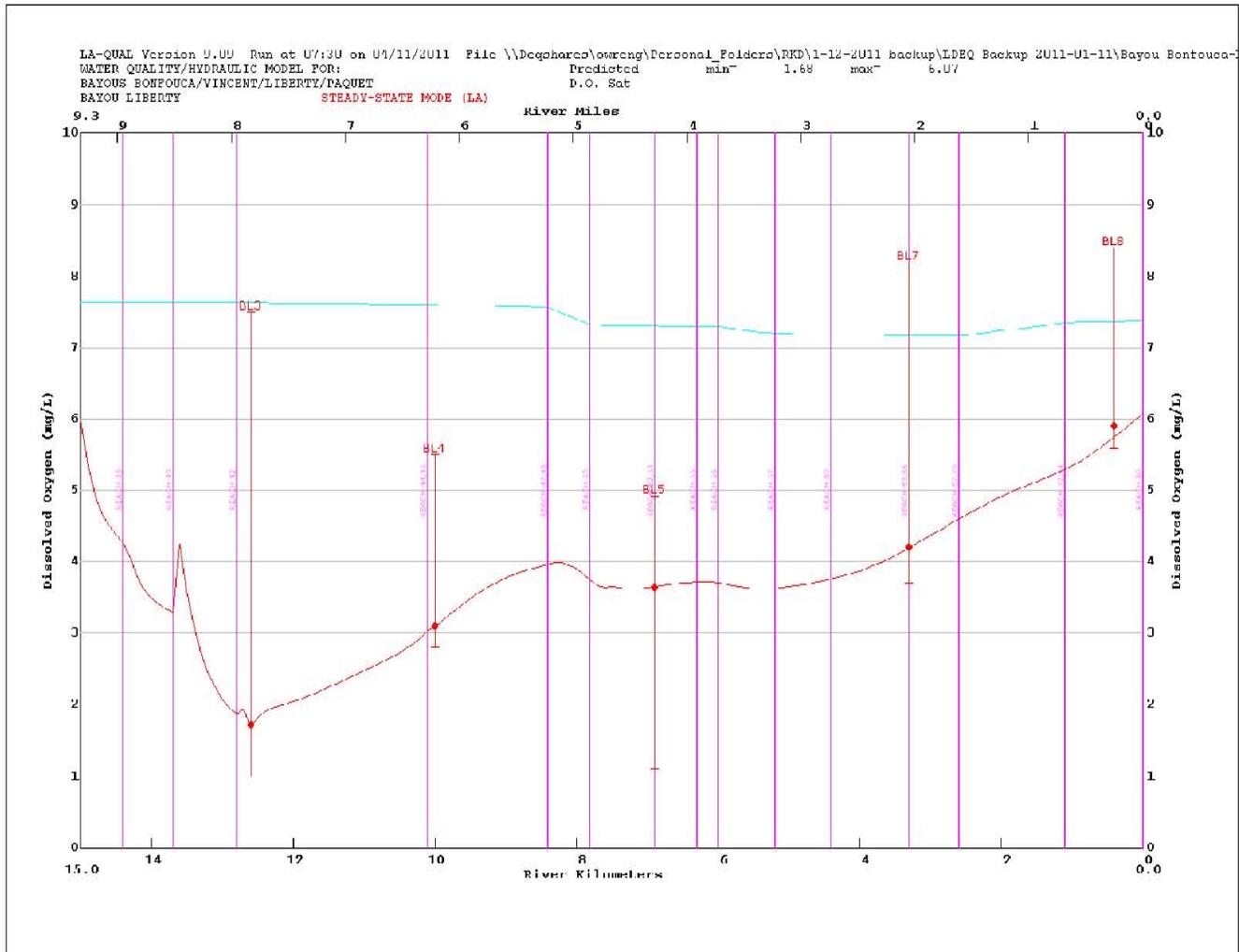
loading tends to travel more quickly through the upland reaches, with less time for decay and settling. Near the upstream boundaries of the tidal reaches, the stream velocity and reaeration tend to decrease, and the loading has its greatest impact. For Bayou Bonfouca, Hwy 433 seems to be the point below which DO is projected to be improved by increased tidal flushing. For Bayou Liberty, Hwy 190 seems to be the point below which DO is projected to be improved by increased tidal flushing.

Figure 6. Bayou Bonfouca Calibration Model Dissolved Oxygen versus River Kilometer



- numbered points indicate survey stations
- vertical lines indicate beginning of reach
- the horizontal line indicates the DO Criterion
- upper plotted line indicates DO saturation
- lower plotted line indicates calibration model output

Figure 7. Bayou Liberty Calibration Model Dissolved Oxygen versus River Kilometer



- numbered points indicate survey stations
- vertical lines indicate beginning of reach
- the horizontal line indicates the DO Criterion
- upper plotted line indicates DO saturation
- lower plotted line indicates calibration model output

6. Water Quality Projections

The traditional summer critical projection loading scenario was performed at the current annual DO standard. This scenario was based on reduced total nonpoint loads at summer season critical conditions (i.e. 90th percentile seasonal temperatures and summer default flows) in accordance with the Louisiana Technical Procedures (LTP). A winter projection was run based on the percent reduction of total nonpoint loads required for the summer critical projections.

6.1 Critical Conditions, Seasonality and Margin of Safety

The Clean Water Act requires the consideration of seasonal variation of conditions affecting the constituent of concern, and the inclusion of a margin of safety (MOS) in the development of a TMDL. For the Bayou Liberty and Bayou Bonfouca, subsegments 040905, 040906, 040907, and 040908 TMDL, an analysis of LDEQ ambient data has been employed to determine critical seasonal conditions and an appropriate margin of safety.

Critical conditions for dissolved oxygen were determined for Bayou Liberty and Bayou Bonfouca using water quality data from Ambient Water Quality Network Site No. 0301 on the LDEQ Ambient Monitoring Network. There were four water quality network sites, 1076, 1077, 1078, and 0301 for these waterbodies. However, site 0301 was used because it had the longest period of record. The 90th percentile temperature for each season and the corresponding 90% of saturation DO was determined. Ambient temperature data, critical temperature and DO saturation determinations are shown in Appendix G1.

Graphical and regression analysis techniques have been used by LDEQ historically to evaluate the temperature and dissolved oxygen data from the Ambient Monitoring Network and run-off determinations from the Louisiana Office of State Climatology water budget. Since nonpoint loading is conveyed by run-off, this was a reasonable correlation to use. Temperature is strongly inversely proportional to dissolved oxygen and moderately inversely proportional to run-off. Dissolved oxygen and run-off are also moderately directly proportional. The analysis concluded that the critical conditions for stream dissolved oxygen concentrations were those of negligible nonpoint run-off and low stream flow combined with high stream temperature.

When the rainfall run-off (and non-point loading) and stream flow are high, turbulence is higher due to the higher flow and the temperature is lowered by the run-off. In addition, run-off coefficients are higher in cooler weather due to reduced evaporation and evapotranspiration, so that the high flow periods of the year tend to be the cooler periods. Reaeration rates and DO saturation are, of course, much higher when water temperatures are cooler, but BOD decay rates are much lower. For these reasons, periods of high loading are periods of higher reaeration and dissolved oxygen but not necessarily periods of high BOD decay.

This phenomenon is interpreted in TMDL modeling by assuming that nonpoint loading associated with flows into the stream are responsible for the benthic blanket which accumulates on the stream bottom and that the accumulated benthic blanket of the stream, expressed as SOD and/or resuspended BOD in the calibration model, has reached steady state or normal conditions over the long term and that short term additions to the blanket are off set by short term losses. In waterbodies dominated by loading from point source discharges, these point sources may also contribute to the benthic blanket. This accumulated loading has its greatest impact on the stream during periods of higher temperature and lower flow. The manmade portion of the NPS loading is the difference between the calibration load and the reference stream load where the calibration load is higher. The only mechanisms for changing this normal benthic blanket condition is reduce the amount of loading from both point and nonpoint source discharges. This may be done through the implementation of best management practices for nonpoint source loads and more stringent permit limits for point source loads.

In reality, the highest temperatures occur in July-August, the lowest stream flows occur in October-November, and the maximum point source discharge occurs following a significant rainfall, i.e., high-flow conditions. The summer projection model is established as if all these conditions happened at the same time. The winter projection model accounts for the seasonal differences in flows and BMP efficiencies. Other conservative assumptions regarding rates and loadings are also made during the modeling process. In addition to the conservative measures, an explicit MOS of 20% was used for all loads to account for future growth, safety, model uncertainty and data inadequacies.

6.2 Input Data Documentation

The headwaters of Bayou Vincent, Bayou Bonfouca, Bayou Liberty, and Bayou Paquet were not flowing at the time of the survey. They are intermittent, and by definition have a 7Q10 value of zero. Bayou Vincent at BV01 was flowing at 0.194 cfs at the time of the survey because of groundwater inflow from one or both to the ponds immediately above BV01 and below the road to the Eagle Lake Mobile Home Park. Bayou Vincent was not flowing at the road. Therefore, critical season conditions were simulated in the Bayou Liberty, Bayou Bonfouca, Bayou Paquet, and ditches and tributaries dissolved oxygen TMDL projection modeling by using the LTP seasonal defaults for all flows, and the 90th percentile temperature. The flow used for Bayou Vincent was 0.194 cfs. For the headwater DO, the 90% of DO Saturation from the ambient monitoring site 0301 was used.

Segmentation of waterbodies for projections: It was observed that the lower tidal reaches of Bayous Bonfouca, Liberty, and Paquet get good tidal flushing and do not have the water quality problems of the upper tidal and upland reaches. The waterbodies were therefore divided as follows for projection purposes:

- Bayou Vincent & Bonfouca above Hwy 433 – These reaches include upland Bayou Vincent and upper tidal reaches of Bayou Vincent and Bayou Bonfouca.
- Upper Bayou Bonfouca – Bayou Bonfouca above the junction of Bayou Vincent was not surveyed.
- Bayou Bonfouca below Hwy 433 – Highway 433 is the point below which dissolved oxygen is projected to be improved by increased tidal flushing.
- Bayou Liberty above Hwy 190 – All of the surveyed reaches are tidal. The upland reaches of Bayou Liberty were not surveyed due to intermittent characteristics.
- Bayou liberty below Hwy 190 – Highway 190 is the point below which dissolved oxygen is projected to be improved by increased tidal flushing.
- Bayou Paquet – Bayou Paquet was divided into upper and lower reaches. All of the surveyed reaches are tidal.

Critical conditions include temperature and flow. Pollutant loading is adjusted in the projection models to meet the dissolved oxygen criteria.

The calibration values were retained for the remaining parameters and used as input values in the summer and winter projections. The model adjusts the input values for SOD, CBODU decay, and

NBODU decay based upon the input temperature. The width and depth values were retained from the calibration model.

6.2.1 Model Options, Data Type 2

Three constituents were modeled during the projection process. These were dissolved oxygen, carbonaceous biochemical oxygen demand, and nitrogenous biochemical oxygen demand.

6.2.2 Temperature Correction of Kinetics, Data Type 4

The temperature correction factors specified in the LTP are entered in the model.

6.2.3 Reach Identification Data, Data Type 8

The reach-element design from the calibration was used in the projection modeling.

6.2.4 Advective Hydraulic Coefficients, Data Type 9

The hydraulic coefficients, exponents, and constants determined for the calibration were used in the projection model.

6.2.5 Initial Conditions, Data Type 11

The initial conditions were set to the 90th percentile critical season temperature in accordance with the LTP. For summer and winter the temperature was set to 33.8°C. The dissolved oxygen values for the initial conditions were set at the stream criteria (5mg/L) with the exception of the headwater dissolved oxygen value. The headwater DO for summer and winter was set to 6.00 mg/L.

6.2.6 Reaeration Rates, Carbonaceous BOD Decay and Settling Rates, Nitrogenous BOD Decay and Settling Rates, Data Type 12 and 15

The reaeration rate equations, CBOD decay and settling rates, NBOD decay and settling rates, and the fractions converting settled CBOD and settled NBOD to SOD were not changed from the calibration.

6.2.7 Sediment Oxygen Demand, Nonpoint Sources, Headwaters, Wasteloads, Data Type 12, 19, 20, 21, 22, 24, 25, and 26

The NPS values were calculated for each projection scenario using a load equivalent spreadsheet. An analysis was made of the calibration NPS and SOD loads in terms of loading in units of gm-O₂/m²/day. The same spreadsheet also calculated load reductions for the headwaters and wasteloads. The values and sources of the input data and the load analyses are presented in Appendix D for each of the projection runs.

LDEQ has collected and measured the CBOD and NBOD oxygen demand loading components for a number of years. These loads have been found in all streams including the non-impacted reference streams. Much of this loading is attributable to run-off loads which are flushed into the stream during run-off events, and subsequently settle to the bottom in slow moving streams. These benthic loads

decay and breakdown during the year, becoming easily resuspended into the water column during the low flow/high temperature season. This season has historically been identified as the critical dissolved oxygen season.

LDEQ simulates part of the non-point source oxygen demand loading as resuspended benthic load and SOD. The calibrated non-point loads, UCBOD, UNBOD and SOD, are summed to produce the total calibrated benthic load. The total calibrated benthic load is then reduced by the total background benthic load (determined from LDEQ's reference stream research) to determine the total manmade benthic loading. The manmade portion is then reduced incrementally on a percentage basis to determine the necessary percentage reduction of manmade loading required to meet the water body's dissolved oxygen criteria. These reductions are applied uniformly to all reaches sharing similar hydrology and land uses.

Following the same protocol as the point source discharges, the total reduced manmade benthic load is adjusted for the margin of safety by dividing the value by one minus the margin of safety. This adjusted load is added back to the total background benthic value to obtain the total projection model benthic load. This total projection benthic load is then broken out into its components of SOD, resuspended CBOD and resuspended NBOD by multiplying the total projection benthic load by the ratio of each calibrated component to the total calibrated benthic load.

LDEQ has found variations in the breakdown of the individual CBOD and NBOD components. While the total BOD is reliable, the carbonaceous and nitrogenous component allocation is subject to the type of test method. In the past, LDEQ used a method which suppressed the nitrogenous component to obtain the carbonaceous component value, which was then subtracted from the total measured BOD to determine the nitrogenous value. The suppressant in this method was only reliable for twenty days thus leading to the assumption that the majority of the carbonaceous loading was depleted within that period of time. The test results supported this assumption. A new method was found in Standard Methods for testing long term BODs and was implemented in 2000. This new method was necessary because the nitrogen suppressant started failing around day seven and the manufacturer of the suppressant will only guarantee its potency for a five day period. LDEQ felt a five day test would not adequately depict the water quality of streams.

This proposed method is a sixty day test which measures the incremental total BOD of the sample while at the same time measuring the increase in nitrite/nitrate in the sample. This increase in nitrite/nitrate allows LDEQ to calculate the incremental nitrogenous portion by multiplying the increase by 4.57 to determine the NBOD daily readings. These NBOD daily readings are then subtracted from the daily reading for total BOD to determine the CBOD daily values. A curve fit algorithm is then applied to the daily component readings to obtain the estimated ultimate values of each component as well as the decay rate and lag times of the first order equations.

The results obtained using the new method showed that a portion of the CBOD first order equation does begin to level off prior to the twentieth day, however a secondary CBOD component begins to use dissolved oxygen sometime between day ten and day twenty-five. This secondary CBOD component was not being assessed as CBOD using the previous method but was being included in the NBOD load. Thus the CBOD and NBOD component loading used in the reference stream studies is not consistent with the results using the new proposed 60 day method and the individual values should not be used to determine background values for samples processed using the new test methods.

However, the sum of CBOD and NBOD should be about the same for both new and old test methods. For this reason LDEQ decided to use the average of reference stream benthic loads as background values.

The projections show that Bayou Bonfouca 040907 and Bayou Liberty 040905 cannot meet the current 5.0 mg/L standard and Bayou Bonfouca 040908 and Bayou Liberty 040906 with the current 4.0 mg/L standard without significant load reductions. Since LDEQ assumes these benthic loads are long-term loads brought to the stream by various sources throughout the year, the same percentage reductions were made in the winter projection model as were in the summer critical projection model. These reductions met the summer dissolved oxygen criteria and well surpassed requirements in the non-critical winter projection.

The reductions were determined using the calibrated values for nonpoint CBOD and NBOD. These values were summed by reach, as justified above and adjusted for the margin of safety. Each reach's total benthic nonpoint load was then reduced to meet the dissolved oxygen criteria in each reach. Using the ratios determined in calibration, this reduced total nonpoint load was then broken into its components of CBOD, NBOD, and SOD. The percentage reduction within the mainstem was calculated based on the comparison of the reduced total nonpoint benthic load to the calibration total nonpoint benthic load. These calculations are shown in Appendix E. The value and sources of CBOD and NBOD for each projection run are presented in Appendix F5.

6.2.8 Boundary Conditions, Data Type 27

The lower boundary conditions were not changed from the calibration model.

6.3 Model Discussion and Results

Load reductions varied from zero to 80 percent as follows:

- Bayou Vincent & Bonfouca above Hwy 433 – 77% - min DO – 4.92
- Bayou Vincent & Bonfouca below Hwy 433 – 0% - min DO – ~4.9
- Bayou Liberty above Hwy 190 – 80% - min DO – ~4.9
- Bayou liberty below Hwy 190 – 38% - min DO – 4.89
- Bayou Paquet – 35% - min DO – 4.01

These are the summer season projected required reductions to meet DO criteria 4.0 (040906 & 040908) / 5.0 (040905 & 040907).

The proposed allocations for summer season projections are given in Figure 1.

The projection model input and output data sets are presented in Appendix D. The reference stream data is located in Appendix E6.

6.3.1 Summer Projection

This summer projection revealed that as much as an 80% removal of man-made nonpoint sources would result in a minimum DO of 4.9 mg/l and Bayou Liberty and as much as a 77% removal of man-

made nonpoint sources would result in a minimum DO of 4.92 on Bayou Bonfouca. Such large reductions usually indicate the DO criteria is inappropriate. LDEQ is investigating the need to reevaluate the DO criteria for waterbodies in this ecoregion. Previous ecoregion studies indicate the summer season should be May through November for any portion of Bayou Liberty and Bayou Bonfouca that may be designated Lower Mississippi River Alluvial Plains Ecoregion and the criterion could be 2.3 mg/L. The same study indicates the winter season could be October through April and the winter criterion should be 5.0 mg/L. The recommended criteria were derived through the application of EPA approved statistical methods. This TMDL supports the potential revision of the seasonal DO criterion.

For a summer season projection to meet DO target of 2.3/5.0 the load reductions varied from zero to 72 percent as follows:

- Bayou Vincent & Bonfouca above Hwy 433 – 72% - min DO – ~4.95
- Bayou Vincent & Bonfouca below Hwy 433 – 0% - min DO – 4.57
- Bayou Liberty above Hwy 190 – 27% - min DO – 2.27
- Bayou liberty below Hwy 190 – 0% - min DO – ~3.2
- Bayou Paquet – 8% - min DO – 2.29

This information is provided in order to demonstrate what reductions might be required if the dissolved oxygen criteria is revised. Final criteria, and therefore final reductions may be different.

The summer projections for Bayous Bonfouca and Liberty are presented in Figures 9 & 10. Winter projections are presented in Figures 13 & 14.

Figure 8. Summer Projection at 77% Removal of Man-Made Loads to meet a DO Criteria of 5.0/4.0 mg/L for Bayou Bonfouca

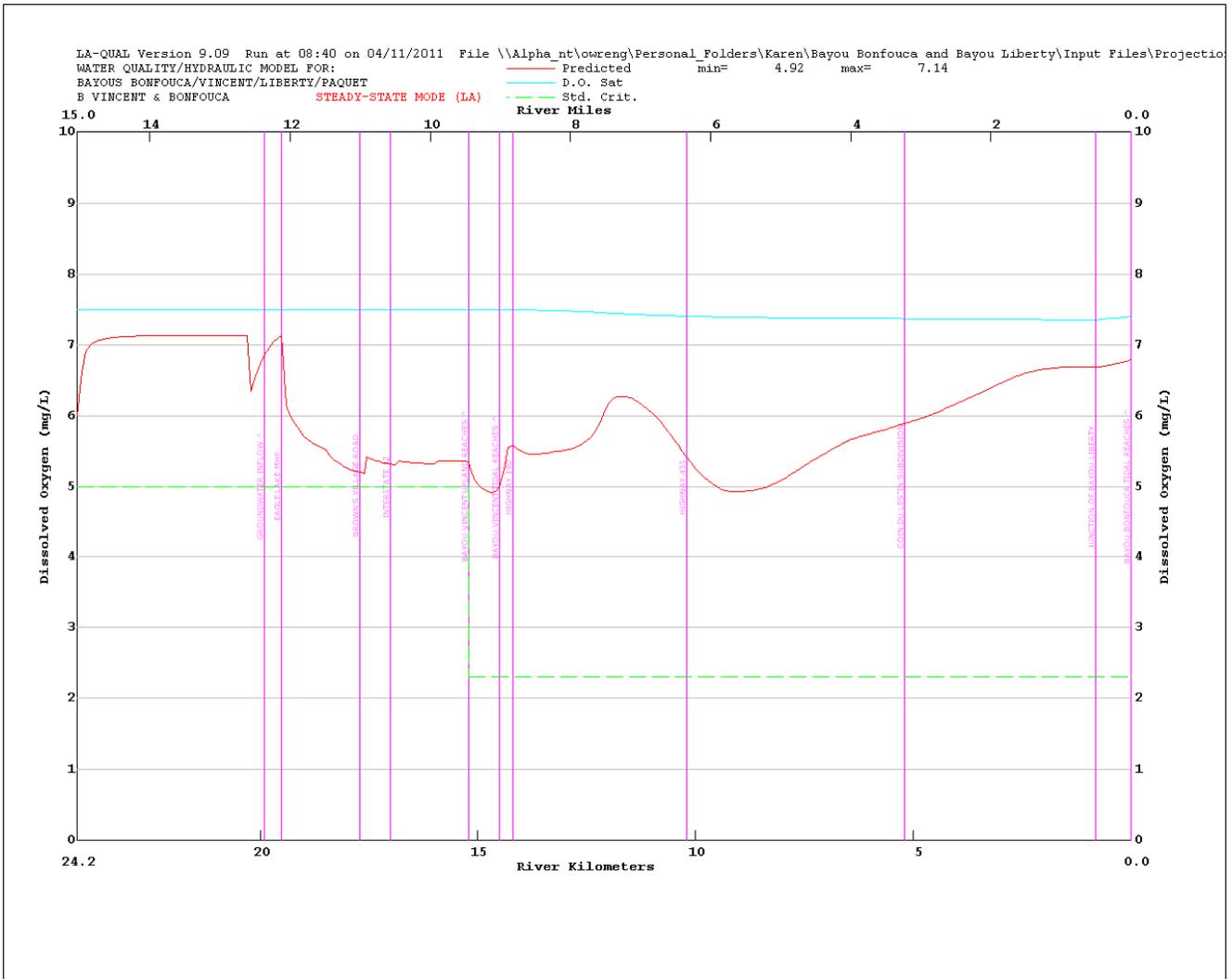
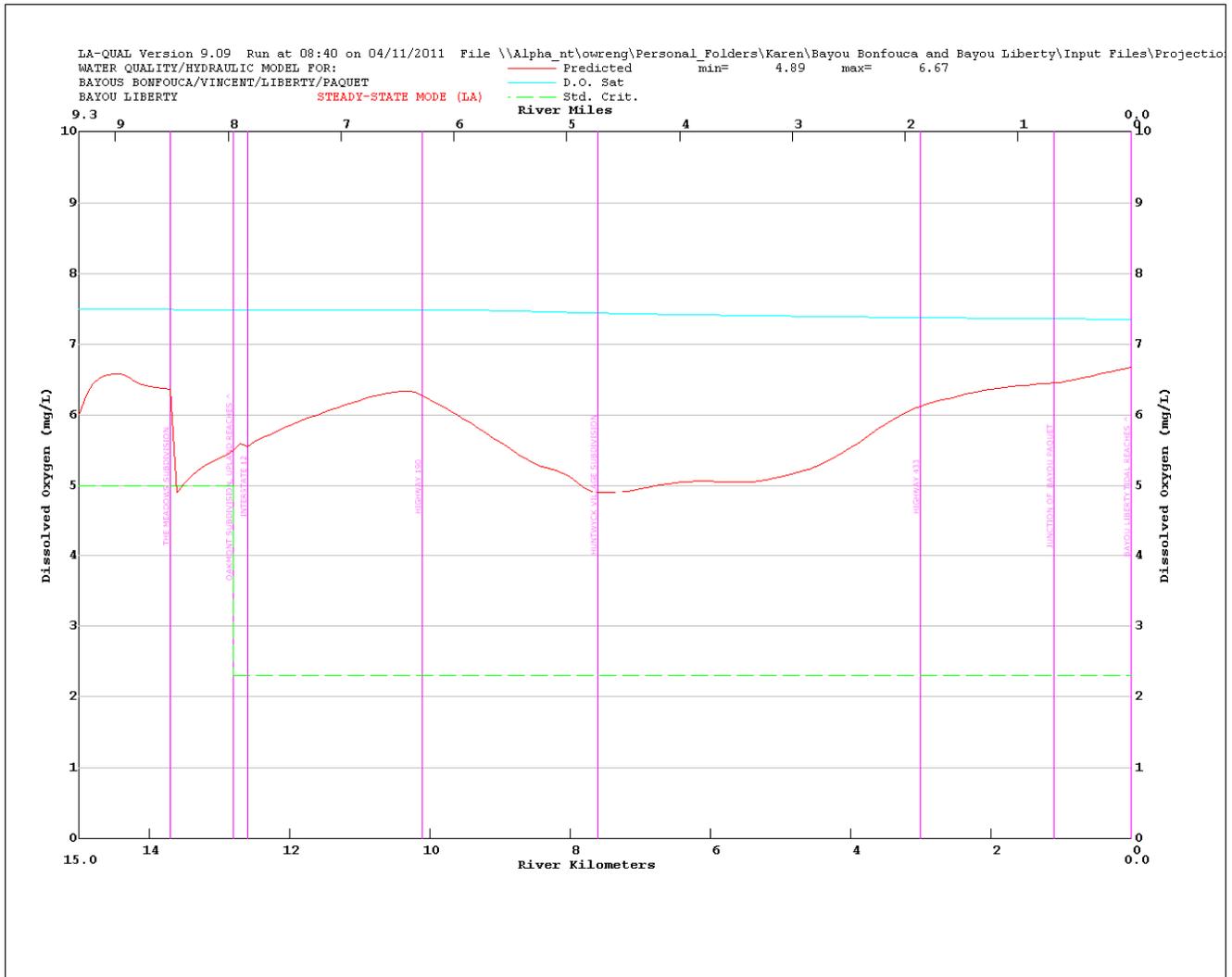


Figure 9. Summer Projection at 80% Removal of Man-Made Loads to meet a DO Criteria of 5.0/4.0 mg/L for Bayou Liberty



6.3.2 Alternate Projection

An additional summer critical season projection was based on alternate DO targets. For a DO target of 2.3 mg/L, a 72% reduction in man-made loading is required for Bayou Bonfouca. This is shown in Figure 7.

Figure 10. Summer Projection at 72% Removal of Man-Made Loads to meet a DO Criteria of 2.3 mg/L for Bayou Bonfouca

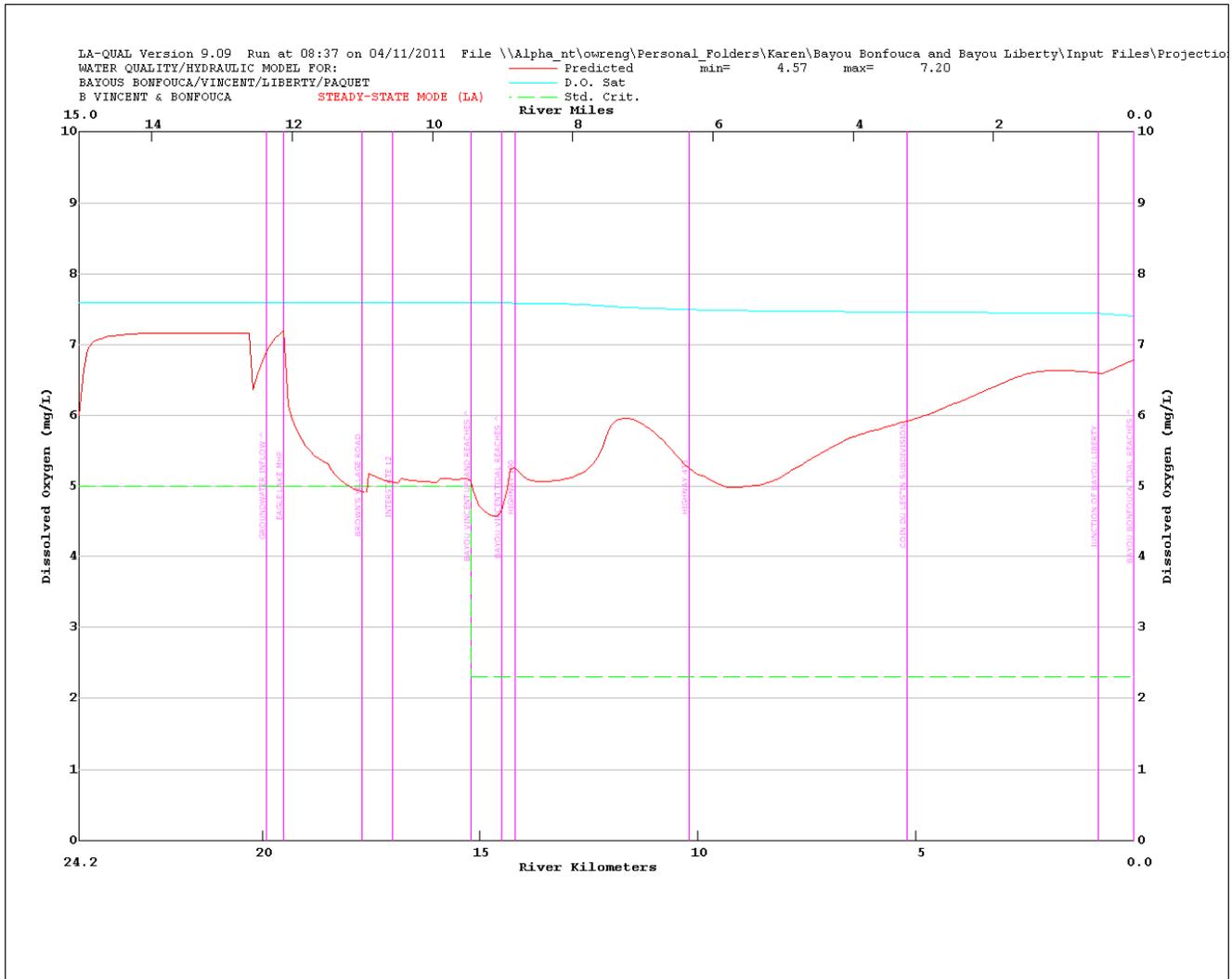
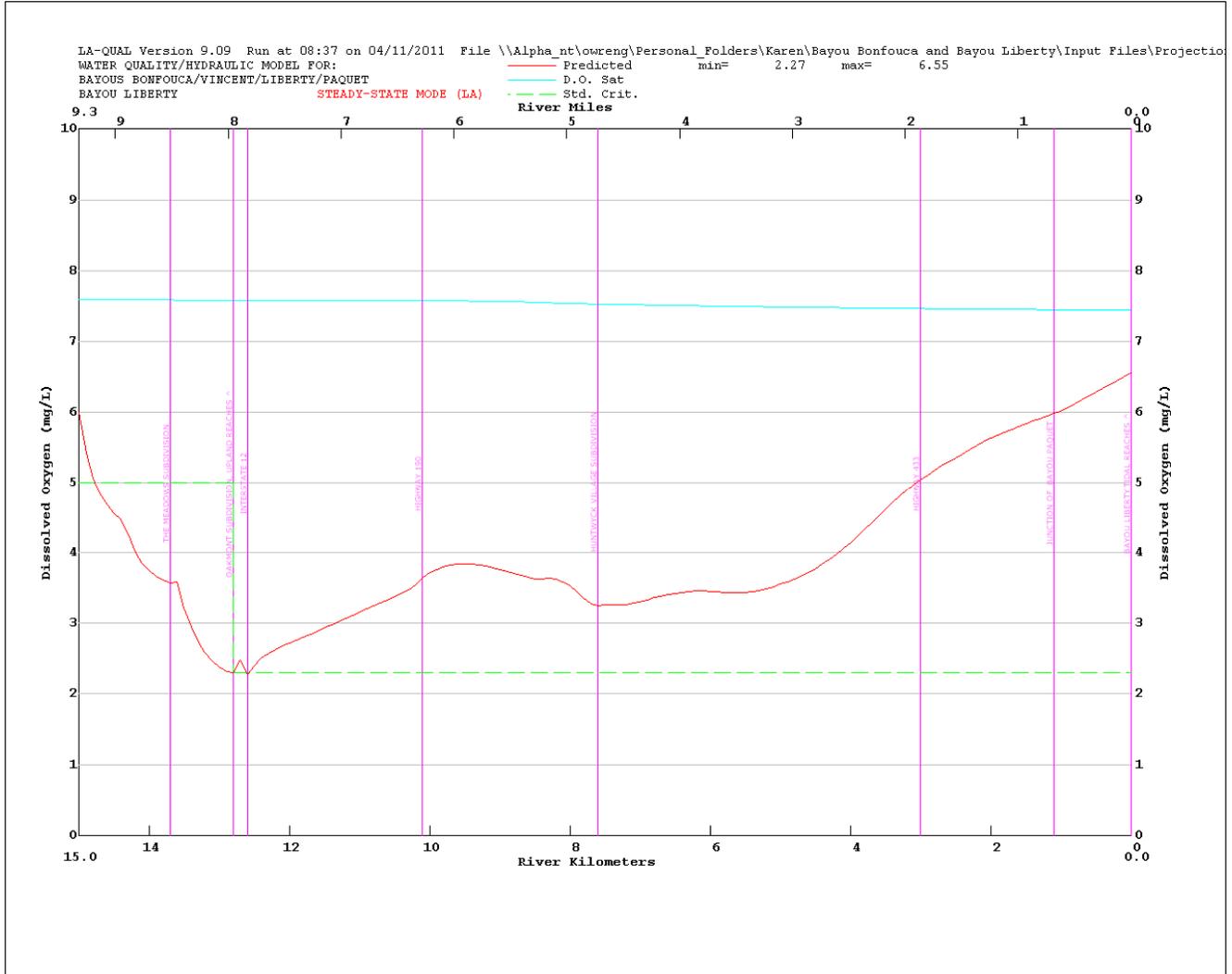


Figure 11. Summer Projection at 27% Removal of Man-Made Loads to meet a DO Criteria of 2.3 mg/L for Bayou Liberty



6.3.3 Winter Projection

Winter runs were made at the same level of reduction as the summer runs. A graph of the dissolved oxygen concentration versus river kilometer for the winter projections are presented in figures 13 and 14.

Figure 12. Winter Projection at 77% Removal of Man-Made Loads to meet a Summer DO Criteria of 5.0/4.0 mg/L for Bayou Bonfouca

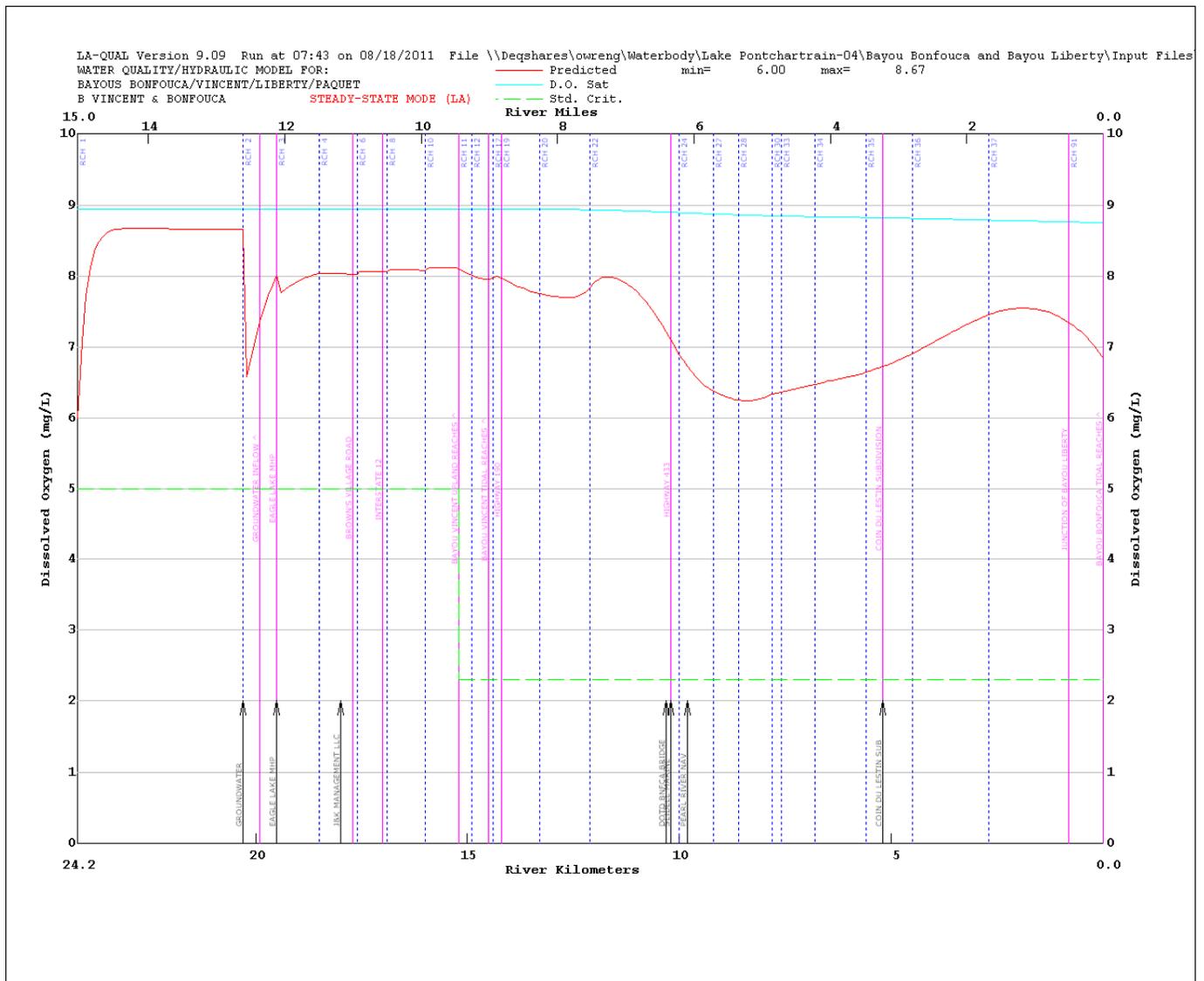
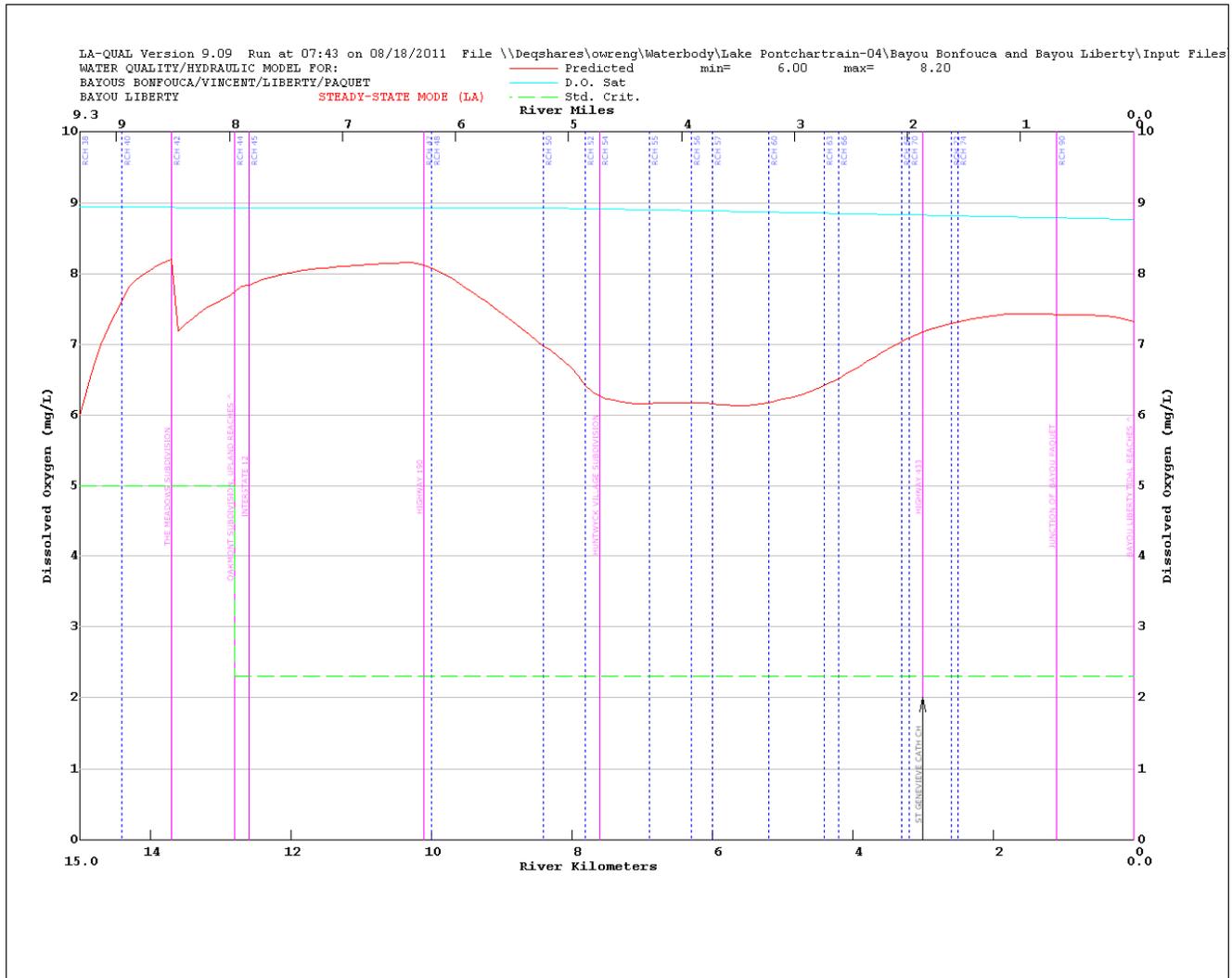


Figure 13. Winter Projection at 80% Removal of Man-Made Loads to meet a Summer DO Criteria of 5.0/4.0 mg/L for Bayou Liberty



6.4 Calculated TMDL, WLAs and LAs

6.4.1 Outline of TMDL Calculations

An outline of the TMDL calculations is provided to assist in understanding the TMDL calculations. The outline is presented in Appendix A1.

6.4.2 Bayou Liberty and Bayou Bonfouca Subsegments 040905, 040906, 040907, and 040908 TMDL

EPA's stormwater permitting regulations require municipalities to obtain permit coverage for all stormwater discharges from MS4s. For each MS4 in the basin, a gross load was computed by dividing the acreage of the permitted area in the subsegment by the total area of the subsegment and multiplying the nonpoint source allocation by this percentage. Note that these values are estimates that can be

refined in the future as more information about MS4s and land-use-specific loadings becomes available. Note that MS4s are permitted dischargers but function similarly to nonpoint sources (through storm-driven processes). EPA and LDEQ expect that the MS4 WLAs will be achieved through BMPs and adaptive management. The MS4 loads are presented in Tables 13, 15, 17, and 19.

TMDLs for the biochemical oxygen demanding constituents (CBOD, NBOD, and SOD), have been calculated for the summer and winter critical seasons based on current and proposed dissolved oxygen criteria. They are presented in Appendix A by reach. A summary of the loads is presented in Tables 12, 14, 16, and 18.

7. Sensitivity Analysis

All modeling studies necessarily involve uncertainty and some degree of approximation. It is therefore of value to consider the sensitivity of the model output to changes in model coefficients, and in the hypothesized relationships among the parameters of the model. The LAQUAL model allows multiple parameters to be varied with a single run. The model adjusts each parameter up or down by the percentage given in the input set. The rest of the parameters listed in the sensitivity section are held at their original projection value. Thus the sensitivity of each parameter is reviewed separately.

A sensitivity analysis was performed on the calibration. The sensitivity of the model's minimum DO projections to these parameters is presented in Appendix I2. Parameters were varied by +/- 30%, except temperature, which was adjusted +/- 2 degrees Centigrade.

Values reported in Appendix I2 are percentage variation of minimum DO in the main stem Bayou Liberty and Bayou Bonfouca. As shown in Table 33, stream reaeration, initial temperature, and benthic demand are the parameters to which DO is most sensitive for Bayou Bonfouca. The model is slightly sensitive to insensitive to the remaining parameters. For Bayou Liberty stream reaeration, initial temperature, benthic demand, stream depth, and wasteload flow are the parameters to which DO is most sensitive. The model is slightly sensitive to insensitive to the remaining parameters.

Table 33. Summary of Calibration Model Sensitivity Analysis

SENSITIVITY ANALYSIS SUMMARY

WATER QUALITY/HYDRAULIC MODEL FOR:
 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

B VINCENT & BONFOUCA Base Model Minimum DO = 0.76

Parameter	%Param Chg	Min D.O.	%D.O. Chg	%Param Chg	Min D.O.	%D.O. Chg
Sediment Oxygen Demand	30.0	0.61	-19.3	-30.0	1.08	43.0
Chlorophyll/Algae(phyto) Ratio	30.0	0.76	0.0	-30.0	0.76	0.0
Stream Velocity	30.0	0.74	-2.4	-30.0	0.78	3.1
Initial Temperature	2.0	0.68	-10.2	-2.0	0.84	11.3
CBOD1 Aerobic Decay Rate	30.0	0.75	-0.8	-30.0	0.76	0.9
CBOD1 Settling Rate	30.0	0.76	0.1	-30.0	0.76	0.0
NBOD Decay Rate	30.0	0.76	0.0	-30.0	0.76	0.0
NBOD Settling Rate	30.0	0.76	0.0	-30.0	0.76	0.0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

Stream Dispersion	30.0	0.76	-0.1	-30.0	0.76	0.1
Stream Reaeration	30.0	0.97	28.2	-30.0	0.54	-28.5
Headwater Flow	30.0	0.76	0.5	-30.0	0.75	-0.6
Headwater DO	30.0	0.76	0.0	-30.0	0.76	0.0
Headwater CBOD1	30.0	0.76	0.0	-30.0	0.76	0.0
Headwater NBOD	30.0	0.76	0.0	-30.0	0.76	0.0
Stream Depth	30.0	0.74	-2.3	-30.0	0.74	-2.2
Wasteload Flow	30.0	0.76	0.1	-30.0	0.76	-0.2
Wasteload Temperature	2.0	0.76	0.0	-2.0	0.76	0.0
Wasteload DO	30.0	0.76	0.0	-30.0	0.76	0.0
Wasteload CBOD1	30.0	0.75	-1.0	-30.0	0.76	0.9
Wasteload NBOD	30.0	0.76	0.0	-30.0	0.76	0.0
Lower Boundary Temperature	2.0	0.76	0.0	-2.0	0.76	0.0
Lower Boundary DO	30.0	0.76	0.0	-30.0	0.76	0.0
Lower Boundary CBOD1	30.0	0.76	0.0	-30.0	0.76	0.0
Lower Boundary NBOD	30.0	0.76	0.0	-30.0	0.76	0.0

BAYOU LIBERTY Base Model Minimum DO = 1.68

Parameter	%Param Chg	Min D.O.	%D.O. Chg	%Param Chg	Min D.O.	%D.O. Chg
Sediment Oxygen Demand	30.0	0.91	-45.7	-30.0	2.90	72.9
Chlorophyll/Algae(phyto) Ratio	30.0	1.68	0.0	-30.0	1.68	0.0
Stream Velocity	30.0	1.91	13.9	-30.0	1.52	-9.6
Initial Temperature	2.0	1.17	-30.6	-2.0	2.29	36.4
CBOD1 Aerobic Decay Rate	30.0	1.60	-4.7	-30.0	1.77	5.7
CBOD1 Settling Rate	30.0	1.59	-5.4	-30.0	1.79	6.6
NBOD Decay Rate	30.0	1.66	-1.3	-30.0	1.70	1.5
NBOD Settling Rate	30.0	1.68	0.3	-30.0	1.67	-0.4
Stream Dispersion	30.0	1.69	0.8	-30.0	1.66	-1.0
Stream Reaeration	30.0	2.83	68.4	-30.0	0.81	-51.9
Headwater Flow	30.0	1.75	4.2	-30.0	1.61	-4.2
Headwater DO	30.0	1.68	0.0	-30.0	1.68	0.0
Headwater CBOD1	30.0	1.68	-0.2	-30.0	1.68	0.2
Headwater NBOD	30.0	1.68	0.0	-30.0	1.68	0.0
Stream Depth	30.0	1.48	-12.0	-30.0	2.06	22.5
Wasteload Flow	30.0	1.94	15.6	-30.0	1.38	-17.8
Wasteload Temperature	2.0	1.68	0.0	-2.0	1.68	0.0
Wasteload DO	30.0	1.69	0.4	-30.0	1.67	-0.4
Wasteload CBOD1	30.0	1.57	-6.6	-30.0	1.80	7.3
Wasteload NBOD	30.0	1.67	-0.3	-30.0	1.68	0.3
Lower Boundary Temperature	2.0	1.68	0.0	-2.0	1.68	0.0
Lower Boundary DO	30.0	1.68	0.0	-30.0	1.68	0.0
Lower Boundary CBOD1	30.0	1.68	0.0	-30.0	1.68	0.0
Lower Boundary NBOD	30.0	1.68	0.0	-30.0	1.68	0.0

8. Conclusions

This TMDL establishes load limitations for oxygen-demanding substances and goals for reduction of those pollutants. LDEQ's position is that when oxygen-demanding loads from point and nonpoint sources are reduced in order to ensure that the dissolved oxygen criterion is supported, nutrients are also reduced. The implementation of this TMDL through wastewater discharge permits and implementation of best management practices to control and reduce runoff of soil and oxygen-

demanding pollutants from nonpoint sources in the watershed will also reduce the nutrient loading from those sources.

A calibrated water quality model and projections were developed for the watershed to quantify the nonpoint source load reductions which would be necessary in order for Bayou Liberty and Bayou Bonfouca, subsegments 040905, 040906, 040907, and 040908, to comply with its established water quality standards and criteria. This report presents the results of that analysis.

LDEQ is utilizing a phased TMDL approach for Bayou Liberty and Bayou Bonfouca as shown in Table 7. This approach provides LDEQ with the opportunity to revise the DO criteria and at the same time, allows LDEQ to develop a meaningful and implementable DO TMDL based upon the appropriate DO criteria and in accordance with EPA's Consent Decree (E. D. La. 2002) deadlines. At the same time, it will lead to improved water quality while providing local governments and businesses the opportunity to prepare and adjust to the new permit requirements that will be implemented as a result of the TMDL developed in Phases I and II.

Phase I will include the development of loading values for the existing DO criteria for Bayou Liberty and Bayou Bonfouca. However, full implementation of permit limits will occur in a phased manner. Phase I will serve as the first step towards meeting the DO criteria for Bayou Liberty and Bayou Bonfouca. This approach gives local governments and stakeholders time to make the necessary adjustments to meet these limits. The implementation of permit limits will occur in accordance with the following strategy:

Phase I Permit Implementation

All TMDL, permitting, and enforcement activities will be conducted in accordance with the Clean Water Act, the Louisiana Environmental Regulatory Code, and applicable state laws.

1. New discharges of oxygen-demanding loads:

In general, LDEQ may not be able to permit additional discharges of oxygen-demanding loads. However, in the event that one of the following requirements can be attained, LDEQ may permit a new discharge. The typical permit limits will be 5 mg/L BOD₅ / 2 mg/L NH₃ / 5 mg/L DO. Such new facilities may be required to submit an environmental impact assessment to LDEQ's permitting staff, which will conduct a thorough evaluation of the proposed facility based on environmental impacts, economic benefits, an analysis of alternatives, and other pertinent factors.

- a. The facility demonstrates that it will provide a significant load reduction of man-made oxygen-demanding constituents to the impaired watershed(s) serviced by the facility. The facility must also contribute to a reduction in the number of facilities discharging to the watershed(s). Facilities that may be considered for permits under this provision include, but are not limited to:

- i. A facility that will provide improved sewage treatment to multiple subdivisions previously serviced by wastewater treatment plants that are incapable of treating to tertiary limits.
 - ii. A facility that will provide sewage collection and treatment to previously unsewered areas in which many of the sanitary discharges from permitted facilities and individual home treatment units were entering an impaired watershed. As a result, the facility would be expected to provide more efficient treatment to the wastewater and reduce the net loading of oxygen-demanding substances in the watershed.
- b. The facility demonstrates that its wastewater will not leave the facility or its property. Significant stormwater events do not apply to this provision. For the purpose of this provision, a significant stormwater event is defined as the 25 year, 24 hour rainfall event or its numerical equivalent, as defined by the Southern Regional Climate Center.
 - i. Facilities that may be considered under this provision include, but are not limited to:
 - a. Effluent reduction systems that have been approved by the Louisiana Department of Health and Hospitals.
 - b. Wastewater treatment plants equipped with overland flow systems in which the effluent will not leave the facility.
 - c. Wastewater treatment plants equipped with holding ponds that will retain the effluent such that the effluent will not leave the facility.
 - ii. LDEQ recognizes that some local governments are in the process of building or expanding regional sewage collection and treatment systems. In such areas, LDEQ may, on a limited basis, grant permits of limited durations to facilities that agree to tie into a regional collection and treatment system when it becomes available. LDEQ must have absolute assurance that the regional collection system will be available to the facility and the facility will connect to the regional collection system on or before the expiration date of the permit. Such assurance may include a formal agreement between the facility, the owner and operator of the regional wastewater treatment system, and LDEQ. The regional system must have the capacity to treat the additional wastewater. Such a permit may have a duration of less than five years or it may have a five year duration with interim

permit limits. The permit will be written based on projected completion dates for the construction of the collection and treatment system. The facility will be required to cease all wastewater discharges to the Bayou Liberty watershed and transfer the discharge to the regional collection system once the permit or interim limits expire or the collection system is available to the facility, whichever comes first. If the permit or interim limits expire, but, due to unforeseen circumstances, the availability of the collection system has been temporarily delayed, the duration of the permit or interim limits may be extended. If the availability of the collection system has been indefinitely delayed, the facility may be required to cease all discharges to the Bayou Liberty watershed. Such facilities may resort to options covered in item 1.b.i. above.

- c. LDEQ reassesses Subsegments 040905, 040906, 040907, and 040908 (Bayou Liberty and Bayou Bonfouca). LDEQ determines that Subsegments 040905, 040906, 040907, and 040908 is meeting the appropriate DO criteria and designated uses.

2. Existing discharges of oxygen demanding loads:

The Phase I reductions for existing dischargers in the Bayou Liberty and Bayou Bonfouca Watersheds are presented in Tables 8 - 11. Existing facilities discovered to be discharging oxygen-demanding loads without LPDES permits as of the TMDL approval date are to be permitted in accordance with the limits established for existing facilities with permits. Unpermitted facilities that are newly activated or reactivated and discharging after the TMDL approval date may be subjected to enforcement actions and will be required to tie into regional collection and treatment systems, once those systems are available.

3. Nutrient monitoring (i.e., reporting for Total Nitrogen and Total Phosphorus) will be required for individual permits. Nutrient monitoring will be added to the general permit series (LAG530000, LAG540000, LAG560000, and LAG570000) upon the next scheduled renewal of each series.

Phase II will be developed based on the outcome of an ecoregion-based use attainability analysis (UAA) that is currently under development. Based on existing data, this UAA is expected to propose new DO criteria for many of the Lake Pontchartrain Basin TMDLs that are currently being developed. These TMDLs have a final deadline of March, 2012. This new DO criteria is expected to be developed and promulgated within the next two to three years.

In the event the new criteria is not developed and promulgated within five years from the TMDL approval date, LDEQ intends to proceed in the following manner:

Case 1: The UAA study indicates that the current DO criterion is appropriate - the TMDL will be fully implemented based on the existing DO criteria.

Case 2: The UAA is not likely to be completed and/or approved - the TMDL will be fully implemented based on the existing DO criteria.

Case 3: The UAA is in process and is expected to be approved – Phase II of the TMDL will be postponed for a maximum period of 2 years. If the UAA has not been completed at the end of this period, the UAA status will be reviewed again according to Cases 1 - 3.

Louisiana does not have numeric nutrient criteria at the present time. The original nutrient impairments for the Pontchartrain Basin were not based on quantitative assessments of historical nutrient data. The impairments were based on evaluative assessments that may have included dissolved oxygen. LDEQ and EPA plan to reevaluate the previous nutrient impairments in the Pontchartrain Basin. As a result, both the EPA and LDEQ expect the nutrient impairments to change from category 5 (impairment exists; TMDL required) to category 3 (insufficient data). Therefore LDEQ believes that TMDLs for dissolved oxygen should adequately address any potential nutrient impairments, in the absence of numeric nutrient criteria and quantitative assessments.

LDEQ is developing numeric nutrient criteria for waterbody types based on ecoregions in accordance with LDEQ's plan "Developing Nutrient Criteria for Louisiana 2006" which can be found at:

<http://www.deq.louisiana.gov/portal/Portals/0/planning/LA%20Nutrient%20Strategy%20Plan%20Final%20FOR%20WEB.pdf>.

Waterbody types for nutrient criteria development in Louisiana are 1) inland rivers and streams; 2) freshwater wetlands; 3) freshwater lakes and reservoirs; 4) big rivers and floodplains/boundary rivers and associated water bodies; and 5) estuarine and coastal waters (including up to Louisiana's three mile boundary in the Gulf of Mexico). Proposed approaches for nutrient criteria development are currently under review by LDEQ and EPA. Nutrient criteria can be implemented upon state promulgation and EPA approval as per 40 CFR 131.21

Upon development of nutrient criteria, a subsequent quantitative assessment of the waterbodies, and the development of full nutrient models, nutrient limits may be established for all facilities discharging to impaired waterbodies in the Pontchartrain Basin. LDEQ recommends that all facilities discharging to impaired waterbodies take a proactive approach and prepare for the possibility of nutrient limitations in their wastewater discharge permits in the near future. Such a proactive approach should include nutrient monitoring and documentation through facility Discharge Monitoring Reports (DMRs) in order to assess their nutrient loads and the need to modify their treatment processes for nutrient removal.

LDEQ recognizes there may be many unpermitted sources of oxygen-demanding loading within the Lake Pontchartrain Basin. These sources may include unpermitted facilities (privately owned treatment units for subdivisions or businesses). LDEQ has been locating unpermitted facilities and updating location information on permitted facilities in the Pontchartrain Basin. The unpermitted facilities are required to apply for the appropriate NPDES (National Pollutant Discharge Elimination System) permits. LDEQ may conduct field surveys to gather information on facilities within the Bayou Liberty and Bayou Bonfouca watershed in the future. These unpermitted sources of oxygen-demanding loading may also include individual treatment units for residential homes and small

businesses. The ability to accurately quantify the loads provided from these systems is extremely difficult due to lack of reliable information regarding the number of units and the loading provided by each individual unit. These unpermitted sources of loading add to the uncertainty of this TMDL and provide additional justification for the use of the phased TMDL approach.

LDEQ recommends that the primary solution to the water quality problems for Bayou Liberty and Bayou Bonfouca include the large-scale regionalization of sewage treatment and the rehabilitation and upgrade of existing problematic (leaks, overflows, improperly sized pipes, etc.) sewage collection systems. In addition, nonpoint loading may contribute to the water quality impairments in Bayou Liberty and Bayou Bonfouca. This includes loading contributed by the MS4 permit for City of Slidell and St. Tammany Parish.

LDEQ recommends that no additional oxygen-demanding loads be permitted to enter the Bayou Liberty and Bayou Bonfouca watershed unless they conform to the Phase I Permit Implementation described in the Technical Summary. This includes new dischargers and increases in existing dischargers.

The watershed drains areas that are regulated by two MS4 permits. The areas covered by these MS4 permits include many permitted and unpermitted facilities. While LDEQ does assume responsibility for these facilities, partial responsibility belongs to the MS4 permittee to ensure that water draining from the area of coverage does not impact the named waterbody. Reductions in the nonpoint loading presented in this report should apply to MS4 regulated areas.

The impact of stormwater loading on the waterbody under critical conditions is difficult to determine. Monitoring is monetarily and logistically prohibitive. Therefore it is impractical to set MS4 permit limits. However, appropriate BMP measures shall be incorporated into the MS4 permits to minimize the impacts loads emanating from the MS4 regulated areas on the water quality in Bayou Liberty and Bayou Bonfouca. Such BMP measures may include the elimination of illicit wastewater discharges, the regionalization of wastewater treatment, rehabilitating and upgrading sewer collection system lines, and other appropriate activities. BMPs included in MS4 permits should also include measures to reduce the impact of stormwater loading on the water quality of Bayou Liberty and Bayou Bonfouca.

LDEQ is updating current information on permitted facilities and actively locating unpermitted facilities in the Pontchartrain Basin. The unpermitted facilities are encouraged to apply for the appropriate NPDES permit.

LDEQ has developed this TMDL to be consistent with the state antidegradation policy (LAC 33:IX.1109.A).

LDEQ will work with other agencies such as local Soil Conservation Districts to implement agricultural best management practices in the watershed through other Clean Water Act Programs such as the 319 programs. LDEQ will also continue to monitor the waters to determine whether standards are being attained.

In accordance with Section 106 of the federal Clean Water Act and under the authority of the Louisiana Environmental Quality Act, the LDEQ has established a comprehensive program for monitoring the quality of the state's surface waters. The LDEQ collects surface water samples at

various locations, utilizing appropriate sampling methods and procedures for ensuring the quality of the data collected. The objectives of the surface water monitoring program are to determine the quality of the state's surface waters, to develop a long-term database for water quality trend analysis, and to monitor the effectiveness of pollution controls. The data obtained through the surface water monitoring program is used to develop the state's biennial 305(b) report (*Water Quality Inventory*) and the 303(d) list of impaired waters. This information is also utilized in establishing priorities for the LDEQ nonpoint source program.

The LDEQ is continuing to implement a watershed approach to surface water quality monitoring. In 2004 a four year sampling cycle replaces the previous five year cycle. Approximately one quarter of the states watersheds will be sampled each year so that all of the state's watersheds will be sampled within the four year cycle. This will allow LDEQ to determine whether there has been any improvement in water quality following implementation of the TMDLs. As the monitoring results are evaluated by LDEQ and approved by EPA, waterbodies may be added to or removed from the 303(d) list.

9. References

Bowie, G.L., et. al. *Rates, Constants, and Kinetics Formulations in Surface Water Quality Modeling (Second Edition)*. Env. Res. Lab., USEPA, EPA/600/3-85/040. Athens, GA: 1985.

LDEQ (Louisiana Department of Environmental Quality). 2002. Office of Environmental Services Water Discharge Permit, Final: Discharges from Small Municipal Separate Storm Sewer Systems. Louisiana Department of Environmental Quality, Baton Rouge, LA.

Lee, Fred N. *Low-Flow on Streams in Louisiana*. Louisiana Department of Environmental Quality. Baton Rouge, LA: March, 2000.

Louisiana Department of Environmental Quality. *State of Louisiana Water Quality Management Plan, Volume 6, Part A, Nonpoint Source Pollution Assessment Report*. Baton Rouge, LA: 2000. <http://nonpoint.deq.louisiana.gov/wqa/NPSManagementPlan.htm>

Louisiana Department of Environmental Quality. *Environmental Regulatory Code, Part IX. Water Regulations*. Baton Rouge, LA: 2009.

LSU, Southern Regional Climate Center. www.srcc.lsu.edu/southernClimate/atlas/images/LAprcp.html. Baton Rouge, LA: 2004.

Sierra Club vs. Cooke, 96-0527 (E.D. La. 2002).

Smythe, E. deEtte. *Overview of the 1995 and 1996 Reference Streams*. Louisiana Department of Environmental Quality. Baton Rouge, LA: June 28, 1999.

USEPA (U.S. Environmental Protection Agency). 2000. Storm Water Phase II Final Rule. (Fact sheet). EPA 833-F-00-002. U.S. Environmental Protection Agency, Office of Water, Washington, DC.

Waldon M. G., R. K. Duerr, and Marian U. Aguiard. *Louisiana Total Maximum Daily Load Technical Procedures*. Louisiana Department of Environmental Quality. Baton Rouge, LA: January, 2008.

Wiland, Bruce L. *LA-QUAL for Windows User's Manual (Model Version 9.05)*. Permits Division, Water Quality Modeling/TMDL Section, Louisiana Department of Environmental Quality. Baton Rouge LA: May 20, 2010.

10. Appendices

Appendix A – Detailed TMDL Analysis

Appendix A1 – Outline of TMDL Calculations

Outline of Typical TMDL Calculations

The calculations described below apply for waterbodies where an appropriate reference stream is available. For cases where no reference stream data is applicable, calculations and reductions are determined based upon the total load. Slight variances may occur based on individual cases.

- 1) The natural background benthic loading was estimated from reference stream resuspension (nonpoint CBOD and NBOD), and SOD load data.
- 2) The calibration man-made benthic loading was determined as follows:
 - a) Calibration resuspension and SOD loads were summed for each reach as $\text{gm O}_2/\text{m}^2\text{-day}$ to get the calibration benthic loading.
 - b) The natural background benthic loading was subtracted from the calibration benthic loading to obtain the man-made calibration benthic loading.
- 3) Projection loads are determined by trial and error during the modeling process
 - a) Resuspension and SOD loads are reduced by uniform percentages.
 - b) Point sources are reduced as necessary to subsequently more stringent levels of treatment consistent with the size of the treatment facility as much as possible. Point source design flows are increased to obtain an explicit MOS of 20%.
 - c) Headwater and tributary concentrations of CBOD, NBOD and DO range from reference stream levels to calibration levels based on the character of the headwater. Where headwaters and tributaries exhibit man-made pollutant loads in excess of reference stream values, the loadings are reduced by the same uniform percentages as the benthic loads.
- 4) The projection benthic loading at 20 °C is calculated as the sum of the projection resuspension and SOD components expressed as $\text{gm O}_2/\text{m}^2\text{-day}$.
- 5) The natural background benthic load is subtracted from the projection benthic load to obtain the man-made projection benthic load for each reach.
- 6) The percent reduction of man-made loads for each reach is determined from the difference between the projected man-made non-point load and the man-made non-point load found during calibration.
- 7) The projection loads are also computed in units of lb/d and kg/d for each kind.
- 8) The total stream loading capacity at critical water temperature is calculated as the sum of:
 - a) Headwater and tributary CBOD and NBOD loading in lb/d and kg/d.
 - b) The natural and man-made projection benthic loading for all reaches of the stream, converted to the loading at critical temperature and summed in lb/d and kg/d.
 - c) Point source CBOD and NBOD loading in lb/d and kg/d.
 - d) The margin of safety in lb/d and kg/d.

Appendix A2 – Bayou Liberty 040905 Summer TMDL Summary

BAYOU LIBERTY 040905

Calculation of the TMDL - Kilograms per day									
Load description	WLA (kg O ₂ /day)	CBOD1 LA (kg O ₂ /day)	CBOD2 LA (kg O ₂ /day)	Organic-N LA (kg/day)	Ammonia-N LA (kg/day)	NBOD LA (kg O ₂ /day)	SOD LA (kg O ₂ /day)	LA (kg O ₂ /day)	MOS Load (kg O ₂ /day)
Point Source loads	78								20
Headwater / Tributary loads		0	0	0	0	0		1	0
Benthic loads		602	0	0	0	82	72	757	189
Incremental Loads		0	0	0	0	0		0	0
SUB-TOTAL	78	603	0	0	0	82	72	757	209
TMDL = WLA + LA + MOS								1,044 kg/day	

Notes:
 (1) - Load(lbs/day) = Load(kg/day) x 2.205

Calculation of the TMDL - Pounds per day									
Load description	WLA (lbs O ₂ /day)	CBOD1 LA (lbs O ₂ /day)	CBOD2 LA (lbs O ₂ /day)	Organic- N LA (lbs/day)	Ammonia-N LA (lbs/day)	NBOD LA (lbs O ₂ /day)	SOD LA (lbs O ₂ /day)	LA (lbs O ₂ /day)	MOS Load (lbs O ₂ /day)
Point Source loads	172								43
Headwater / Tributary loads		1	0	0	0	0		1	0
Benthic loads		1,328	0	0	0	181	159	1,668	417
Incremental Loads		0	0	0	0	0		0	0
SUB-TOTAL	172	1,329	0	0	0	181	159	1,669	460
TMDL = WLA + LA + MOS								2,302 lbs/day	

Notes:
 (1) - Load(lbs/day) = Load(kg/day) x 2.205

Calculation of the TMDL - Kilograms per day									
Load description	WLA (kg O ₂ /day)	CBOD1 LA (kg O ₂ /day)	CBOD2 LA (kg O ₂ /day)	Organic-N LA (kg/day)	Ammonia-N LA (kg/day)	NBOD LA (kg O ₂ /day)	SOD LA (kg O ₂ /day)	LA (kg O ₂ /day)	MOS Load (kg O ₂ /day)
Point Source loads	78								20
Natural Nonpoint Loads		0	0	0	0	0	0	0	
Manmade Nonpoint Loads		603	0	0	0	82	72	757	189
SUB-TOTAL	78	603	0	0	0	82	72	757	209
TMDL = WLA + LA + MOS								1,044 kg/day	

Calculation of the TMDL - Pounds per day									
Load description	WLA (lbs O ₂ /day)	CBOD1 LA (lbs O ₂ /day)	CBOD2 LA (lbs O ₂ /day)	Organic- N LA (lbs/day)	Ammonia-N LA (lbs/day)	NBOD LA (lbs O ₂ /day)	SOD LA (lbs O ₂ /day)	LA (lbs O ₂ /day)	MOS Load (lbs O ₂ /day)
Point Source loads	172								43
Natural Nonpoint Loads		0	0	0	0	0	0	0	
Manmade Nonpoint Loads		1,330	0	0	0	181	159	1,669	417
SUB-TOTAL	172	1,330	0	0	0	181	159	1,669	460
TMDL = WLA + LA + MOS								2,302 lbs/day	

Appendix A3 – Bayou Liberty 040905 Winter TMDL Summary

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011
Winter TMDL Summary:

BAYOU LIBERTY 040905

Calculation of the TMDL - Kilograms per day									
Load description	WLA (kg O ₂ /day)	CBOD1 LA (kg O ₂ /day)	CBOD2 LA (kg O ₂ /day)	Organic-N LA (kg/day)	Ammonia-N LA (kg/day)	NBOD LA (kg O ₂ /day)	SOD LA (kg O ₂ /day)	LA (kg O ₂ /day)	MOS Load (kg O ₂ /day)
Point Source loads	78								20
Headwater / Tributary loads		4	0	0	0	2		5	1
Benthic loads		604	0	0	0	84	43	731	183
Incremental Loads		0	0	0	0	0		0	0
SUB-TOTAL	78	607	0	0	0	85	43	736	203
TMDL = WLA + LA + MOS								1,017 kg/day	

Notes:
 (1) - Load(lbs/day) = Load(kg/day) x 2.205

Calculation of the TMDL - Pounds per day									
Load description	WLA (lbs O ₂ /day)	CBOD1 LA (lbs O ₂ /day)	CBOD2 LA (lbs O ₂ /day)	Organic- N LA (lbs/day)	Ammonia-N LA (lbs/day)	NBOD LA (lbs O ₂ /day)	SOD LA (lbs O ₂ /day)	LA (lbs O ₂ /day)	MOS Load (lbs O ₂ /day)
Point Source loads	172								43
Headwater / Tributary loads		8	0	0	0	4		11	3
Benthic loads		1,332	0	0	0	185	95	1,611	403
Incremental Loads		0	0	0	0	0		0	0
SUB-TOTAL	172	1,339	0	0	0	188	95	1,622	449
TMDL = WLA + LA + MOS								2,243 lbs/day	

Notes:
 (1) - Load(lbs/day) = Load(kg/day) x 2.205

Calculation of the TMDL - Kilograms per day									
Load description	WLA (kg O ₂ /day)	CBOD1 LA (kg O ₂ /day)	CBOD2 LA (kg O ₂ /day)	Organic-N LA (kg/day)	Ammonia-N LA (kg/day)	NBOD LA (kg O ₂ /day)	SOD LA (kg O ₂ /day)	LA (kg O ₂ /day)	MOS Load (kg O ₂ /day)
Point Source loads	78								20
Natural Nonpoint Loads		0	0	0	0	0	0	0	
Manmade Nonpoint Loads		607	0	0	0	85	43	735	184
SUB-TOTAL	78	607	0	0	0	85	43	735	203
TMDL = WLA + LA + MOS								1,017 kg/day	

Calculation of the TMDL - Pounds per day									
Load description	WLA (lbs O ₂ /day)	CBOD1 LA (lbs O ₂ /day)	CBOD2 LA (lbs O ₂ /day)	Organic- N LA (lbs/day)	Ammonia-N LA (lbs/day)	NBOD LA (lbs O ₂ /day)	SOD LA (lbs O ₂ /day)	LA (lbs O ₂ /day)	MOS Load (lbs O ₂ /day)
Point Source loads	172								43
Natural Nonpoint Loads		0	0	0	0	0	0	0	
Manmade Nonpoint Loads		1,339	0	0	0	187	95	1,622	405
SUB-TOTAL	172	1,339	0	0	0	187	95	1,622	449
TMDL = WLA + LA + MOS								2,243 lbs/day	

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

Appendix A4 – Bayou Liberty 040906 Summer TMDL Summary

BAYOU LIBERTY 040906

Calculation of the TMDL - Kilograms per day									
Load description	WLA (kg O ₂ /day)	CBOD1 LA (kg O ₂ /day)	CBOD2 LA (kg O ₂ /day)	Organic-N LA (kg/day)	Ammonia-N LA (kg/day)	NBOD LA (kg O ₂ /day)	SOD LA (kg O ₂ /day)	LA (kg O ₂ /day)	MOS Load (kg O ₂ /day)
Point Source loads	5								1
Headwater / Tributary loads		1	0	0	0	0		1	0
Benthic loads		583	0	0	0	86	101	769	192
Incremental Loads		0	0	0	0	0		0	0
SUB-TOTAL	5	583	0	0	0	86	101	770	194
TMDL = WLA + LA + MOS									969 kg/day

Notes:
 (1) - Load(lbs/day) = Load(kg/day) x 2.205

Calculation of the TMDL - Pounds per day									
Load description	WLA (lbs O ₂ /day)	CBOD1 LA (lbs O ₂ /day)	CBOD2 LA (lbs O ₂ /day)	Organic- N LA (lbs/day)	Ammonia-N LA (lbs/day)	NBOD LA (lbs O ₂ /day)	SOD LA (lbs O ₂ /day)	LA (lbs O ₂ /day)	MOS Load (lbs O ₂ /day)
Point Source loads	11								3
Headwater / Tributary loads		1	0	0	0	0		1	0
Benthic loads		1,284	0	0	0	190	222	1,697	424
Incremental Loads		0	0	0	0	0		0	0
SUB-TOTAL	11	1,285	0	0	0	190	222	1,698	427
TMDL = WLA + LA + MOS									2,136 lbs/day

Notes:
 (1) - Load(lbs/day) = Load(kg/day) x 2.205

Calculation of the TMDL - Kilograms per day									
Load description	WLA (kg O ₂ /day)	CBOD1 LA (kg O ₂ /day)	CBOD2 LA (kg O ₂ /day)	Organic-N LA (kg/day)	Ammonia-N LA (kg/day)	NBOD LA (kg O ₂ /day)	SOD LA (kg O ₂ /day)	LA (kg O ₂ /day)	MOS Load (kg O ₂ /day)
Point Source loads	5								1
Natural Nonpoint Loads		0	0	0	0	0	0	0	
Manmade Nonpoint Loads		583	0	0	0	86	101	770	192
SUB-TOTAL	5	583	0	0	0	86	101	770	194
TMDL = WLA + LA + MOS									969 kg/day

Calculation of the TMDL - Pounds per day									
Load description	WLA (lbs O ₂ /day)	CBOD1 LA (lbs O ₂ /day)	CBOD2 LA (lbs O ₂ /day)	Organic- N LA (lbs/day)	Ammonia-N LA (lbs/day)	NBOD LA (lbs O ₂ /day)	SOD LA (lbs O ₂ /day)	LA (lbs O ₂ /day)	MOS Load (lbs O ₂ /day)
Point Source loads	11								3
Natural Nonpoint Loads		0	0	0	0	0	0	0	
Manmade Nonpoint Loads		1,286	0	0	0	190	223	1,698	424
SUB-TOTAL	11	1,286	0	0	0	190	223	1,698	427
TMDL = WLA + LA + MOS									2,136 lbs/day

Appendix A5 – Bayou Liberty 040906 Winter TMDL Summary

Winter TMDL Summary:

BAYOU LIBERTY 040906

Calculation of the TMDL - Kilograms per day									
Load description	WLA (kg O ₂ /day)	CBOD1 LA (kg O ₂ /day)	CBOD2 LA (kg O ₂ /day)	Organic-N LA (kg/day)	Ammonia-N LA (kg/day)	NBOD LA (kg O ₂ /day)	SOD LA (kg O ₂ /day)	LA (kg O ₂ /day)	MOS Load (kg O ₂ /day)
Point Source loads	5								1
Headwater / Tributary loads		6	0	0	0	3		9	2
Benthic loads		582	0	0	0	86	58	726	182
Incremental Loads		0	0	0	0	0		0	0
SUB-TOTAL	5	588	0	0	0	89	58	735	185
TMDL = WLA + LA + MOS								926 kg/day	

Notes:

(1) - Load(lbs/day) = Load(kg/day) x 2.205

Calculation of the TMDL - Pounds per day									
Load description	WLA (lbs O ₂ /day)	CBOD1 LA (lbs O ₂ /day)	CBOD2 LA (lbs O ₂ /day)	Organic- N LA (lbs/day)	Ammonia-N LA (lbs/day)	NBOD LA (lbs O ₂ /day)	SOD LA (lbs O ₂ /day)	LA (lbs O ₂ /day)	MOS Load (lbs O ₂ /day)
Point Source loads	11								3
Headwater / Tributary loads		14	0	0	0	6		20	5
Benthic loads		1,283	0	0	0	190	129	1,602	400
Incremental Loads		0	0	0	0	0		0	0
SUB-TOTAL	11	1,297	0	0	0	196	129	1,621	408
TMDL = WLA + LA + MOS								2,041 lbs/day	

Notes:

(1) - Load(lbs/day) = Load(kg/day) x 2.205

Calculation of the TMDL - Kilograms per day									
Load description	WLA (kg O ₂ /day)	CBOD1 LA (kg O ₂ /day)	CBOD2 LA (kg O ₂ /day)	Organic-N LA (kg/day)	Ammonia-N LA (kg/day)	NBOD LA (kg O ₂ /day)	SOD LA (kg O ₂ /day)	LA (kg O ₂ /day)	MOS Load (kg O ₂ /day)
Point Source loads	5								1
Natural Nonpoint Loads		0	0	0	0	0	0	0	
Manmade Nonpoint Loads		588	0	0	0	89	58	735	184
SUB-TOTAL	5	588	0	0	0	89	58	735	185
TMDL = WLA + LA + MOS								926 kg/day	

Calculation of the TMDL - Pounds per day									
Load description	WLA (lbs O ₂ /day)	CBOD1 LA (lbs O ₂ /day)	CBOD2 LA (lbs O ₂ /day)	Organic- N LA (lbs/day)	Ammonia-N LA (lbs/day)	NBOD LA (lbs O ₂ /day)	SOD LA (lbs O ₂ /day)	LA (lbs O ₂ /day)	MOS Load (lbs O ₂ /day)
Point Source loads	11								3
Natural Nonpoint Loads		0	0	0	0	0	0	0	
Manmade Nonpoint Loads		1,297	0	0	0	196	129	1,621	405
SUB-TOTAL	11	1,297	0	0	0	196	129	1,621	408
TMDL = WLA + LA + MOS								2,041 lbs/day	

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

Appendix A6 – Bayou Bonfouca 040907 Summer TMDL Summary

BAYOU BONFOUCA 040907

Calculation of the TMDL - Kilograms per day									
Load description	WLA (kg O ₂ /day)	CBOD1 LA (kg O ₂ /day)	CBOD2 LA (kg O ₂ /day)	Organic-N LA (kg/day)	Ammonia-N LA (kg/day)	NBOD LA (kg O ₂ /day)	SOD LA (kg O ₂ /day)	LA (kg O ₂ /day)	MOS Load (kg O ₂ /day)
Point Source loads	21								5
Headwater / Tributary loads		1	0	0	0	1		2	1
Benthic loads		42	0	0	0	6	182	230	57
Incremental Loads		0	0	0	0	0		0	0
SUB-TOTAL	21	43	0	0	0	7	182	232	63
TMDL = WLA + LA + MOS								316 kg/day	

Notes:
 (1) - Load(lbs/day) = Load(kg/day) x 2.205

Calculation of the TMDL - Pounds per day									
Load description	WLA (lbs O ₂ /day)	CBOD1 LA (lbs O ₂ /day)	CBOD2 LA (lbs O ₂ /day)	Organic- N LA (lbs/day)	Ammonia-N LA (lbs/day)	NBOD LA (lbs O ₂ /day)	SOD LA (lbs O ₂ /day)	LA (lbs O ₂ /day)	MOS Load (lbs O ₂ /day)
Point Source loads	46								11
Headwater / Tributary loads		2	0	0	0	2		4	2
Benthic loads		93	0	0	0	13	401	507	126
Incremental Loads		0	0	0	0	0		0	0
SUB-TOTAL	46	95	0	0	0	15	401	512	139
TMDL = WLA + LA + MOS								697 lbs/day	

Notes:
 (1) - Load(lbs/day) = Load(kg/day) x 2.205

Calculation of the TMDL - Kilograms per day									
Load description	WLA (kg O ₂ /day)	CBOD1 LA (kg O ₂ /day)	CBOD2 LA (kg O ₂ /day)	Organic-N LA (kg/day)	Ammonia-N LA (kg/day)	NBOD LA (kg O ₂ /day)	SOD LA (kg O ₂ /day)	LA (kg O ₂ /day)	MOS Load (kg O ₂ /day)
Point Source loads	21								5
Natural Nonpoint Loads		0	0	0	0	0	0	0	
Manmade Nonpoint Loads		43	0	0	0	7	182	232	58
SUB-TOTAL	21	43	0	0	0	7	182	232	63
TMDL = WLA + LA + MOS								316 kg/day	

Calculation of the TMDL - Pounds per day									
Load description	WLA (lbs O ₂ /day)	CBOD1 LA (lbs O ₂ /day)	CBOD2 LA (lbs O ₂ /day)	Organic- N LA (lbs/day)	Ammonia-N LA (lbs/day)	NBOD LA (lbs O ₂ /day)	SOD LA (lbs O ₂ /day)	LA (lbs O ₂ /day)	MOS Load (lbs O ₂ /day)
Point Source loads	46								11
Natural Nonpoint Loads		0	0	0	0	0	0	0	
Manmade Nonpoint Loads		95	0	0	0	15	401	512	128
SUB-TOTAL	46	95	0	0	0	15	401	512	139
TMDL = WLA + LA + MOS								697 lbs/day	

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

Appendix A7 – Bayou Bonfouca 040907 Winter TMDL Summary

BAYOU BONFOUCA 040907

Calculation of the TMDL - Kilograms per day									
Load description	WLA (kg O ₂ /day)	CBOD1 LA (kg O ₂ /day)	CBOD2 LA (kg O ₂ /day)	Organic-N LA (kg/day)	Ammonia-N LA (kg/day)	NBOD LA (kg O ₂ /day)	SOD LA (kg O ₂ /day)	LA (kg O ₂ /day)	MOS Load (kg O ₂ /day)
Point Source loads	21								5
Headwater / Tributary loads		2	0	0	0	1		3	1
Benthic loads		43	0	0	0	6	106	155	39
Incremental Loads		0	0	0	0	0		0	0
SUB-TOTAL	21	45	0	0	0	7	106	158	45
TMDL = WLA + LA + MOS								224 kg/day	

Notes:
 (1) - Load(lbs/day) = Load(kg/day) x 2.205

Calculation of the TMDL - Pounds per day									
Load description	WLA (lbs O ₂ /day)	CBOD1 LA (lbs O ₂ /day)	CBOD2 LA (lbs O ₂ /day)	Organic- N LA (lbs/day)	Ammonia-N LA (lbs/day)	NBOD LA (lbs O ₂ /day)	SOD LA (lbs O ₂ /day)	LA (lbs O ₂ /day)	MOS Load (lbs O ₂ /day)
Point Source loads	46								11
Headwater / Tributary loads		5	0	0	0	2		7	2
Benthic loads		94	0	0	0	14	233	341	86
Incremental Loads		0	0	0	0	0		0	0
SUB-TOTAL	46	99	0	0	0	16	233	348	99
TMDL = WLA + LA + MOS								494 lbs/day	

Notes:
 (1) - Load(lbs/day) = Load(kg/day) x 2.205

Calculation of the TMDL - Kilograms per day									
Load description	WLA (kg O ₂ /day)	CBOD1 LA (kg O ₂ /day)	CBOD2 LA (kg O ₂ /day)	Organic-N LA (kg/day)	Ammonia-N LA (kg/day)	NBOD LA (kg O ₂ /day)	SOD LA (kg O ₂ /day)	LA (kg O ₂ /day)	MOS Load (kg O ₂ /day)
Point Source loads	21								5
Natural Nonpoint Loads		0	0	0	0	0	0	0	
Manmade Nonpoint Loads		45	0	0	0	7	106	158	40
SUB-TOTAL	21	45	0	0	0	7	106	158	45
TMDL = WLA + LA + MOS								224 kg/day	

Calculation of the TMDL - Pounds per day									
Load description	WLA (lbs O ₂ /day)	CBOD1 LA (lbs O ₂ /day)	CBOD2 LA (lbs O ₂ /day)	Organic- N LA (lbs/day)	Ammonia-N LA (lbs/day)	NBOD LA (lbs O ₂ /day)	SOD LA (lbs O ₂ /day)	LA (lbs O ₂ /day)	MOS Load (lbs O ₂ /day)
Point Source loads	46								11
Natural Nonpoint Loads		0	0	0	0	0	0	0	
Manmade Nonpoint Loads		99	0	0	0	16	234	349	88
SUB-TOTAL	46	99	0	0	0	16	234	349	99
TMDL = WLA + LA + MOS								494 lbs/day	

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

Appendix A8 – Bayou Bonfouca 040908 Summer TMDL Summary

BAYOU BONFOUCA 040908

Calculation of the TMDL - Kilograms per day									
Load description	WLA (kg O ₂ /day)	CBOD1 LA (kg O ₂ /day)	CBOD2 LA (kg O ₂ /day)	Organic-N LA (kg/day)	Ammonia-N LA (kg/day)	NBOD LA (kg O ₂ /day)	SOD LA (kg O ₂ /day)	LA (kg O ₂ /day)	MOS Load (kg O ₂ /day)
Point Source loads	31								8
Headwater / Tributary loads		0	0	0	0	0		0	0
Benthic loads		1,708	0	0	0	181	462	2,352	588
Incremental Loads		0	0	0	0	0		0	0
SUB-TOTAL	31	1,708	0	0	0	181	462	2,352	596
TMDL = WLA + LA + MOS								2,979 kg/day	

Notes:
 (1) - Load(lbs/day) = Load(kg/day) x 2.205

Calculation of the TMDL - Pounds per day									
Load description	WLA (lbs O ₂ /day)	CBOD1 LA (lbs O ₂ /day)	CBOD2 LA (lbs O ₂ /day)	Organic- N LA (lbs/day)	Ammonia-N LA (lbs/day)	NBOD LA (lbs O ₂ /day)	SOD LA (lbs O ₂ /day)	LA (lbs O ₂ /day)	MOS Load (lbs O ₂ /day)
Point Source loads	68								18
Headwater / Tributary loads		0	0	0	0	0		0	0
Benthic loads		3,766	0	0	0	400	1,020	5,186	1,297
Incremental Loads		0	0	0	0	0		0	0
SUB-TOTAL	68	3,766	0	0	0	400	1,020	5,186	1,315
TMDL = WLA + LA + MOS								6,569 lbs/day	

Notes:
 (1) - Load(lbs/day) = Load(kg/day) x 2.205

Calculation of the TMDL - Kilograms per day									
Load description	WLA (kg O ₂ /day)	CBOD1 LA (kg O ₂ /day)	CBOD2 LA (kg O ₂ /day)	Organic-N LA (kg/day)	Ammonia-N LA (kg/day)	NBOD LA (kg O ₂ /day)	SOD LA (kg O ₂ /day)	LA (kg O ₂ /day)	MOS Load (kg O ₂ /day)
Point Source loads	31								8
Natural Nonpoint Loads		0	0	0	0	0	0	0	
Manmade Nonpoint Loads		1,708	0	0	0	182	462	2,352	588
SUB-TOTAL	31	1,708	0	0	0	182	462	2,352	596
TMDL = WLA + LA + MOS								2,979 kg/day	

Calculation of the TMDL - Pounds per day									
Load description	WLA (lbs O ₂ /day)	CBOD1 LA (lbs O ₂ /day)	CBOD2 LA (lbs O ₂ /day)	Organic- N LA (lbs/day)	Ammonia-N LA (lbs/day)	NBOD LA (lbs O ₂ /day)	SOD LA (lbs O ₂ /day)	LA (lbs O ₂ /day)	MOS Load (lbs O ₂ /day)
Point Source loads	68								18
Natural Nonpoint Loads		0	0	0	0	0	0	0	
Manmade Nonpoint Loads		3,766	0	0	0	401	1,019	5,186	1,297
SUB-TOTAL	68	3,766	0	0	0	401	1,019	5,186	1,315
TMDL = WLA + LA + MOS								6,569 lbs/day	

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

Appendix A9 – Bayou Bonfouca 040908 Winter TMDL Summary

BAYOU BONFOUCA 040908

Calculation of the TMDL - Kilograms per day									
Load description	WLA (kg O ₂ /day)	CBOD1 LA (kg O ₂ /day)	CBOD2 LA (kg O ₂ /day)	Organic-N LA (kg/day)	Ammonia-N LA (kg/day)	NBOD LA (kg O ₂ /day)	SOD LA (kg O ₂ /day)	LA (kg O ₂ /day)	MOS Load (kg O ₂ /day)
Point Source loads	31								8
Headwater / Tributary loads		2	0	0	0	1		3	1
Benthic loads		1,708	0	0	0	182	254	2,144	536
Incremental Loads		0	0	0	0	0		0	0
SUB-TOTAL	31	1,710	0	0	0	183	254	2,147	545
TMDL = WLA + LA + MOS								2,723 kg/day	

Notes:
 (1) - Load(lbs/day) = Load(kg/day) x 2.205

Calculation of the TMDL - Pounds per day									
Load description	WLA (lbs O ₂ /day)	CBOD1 LA (lbs O ₂ /day)	CBOD2 LA (lbs O ₂ /day)	Organic- N LA (lbs/day)	Ammonia-N LA (lbs/day)	NBOD LA (lbs O ₂ /day)	SOD LA (lbs O ₂ /day)	LA (lbs O ₂ /day)	MOS Load (lbs O ₂ /day)
Point Source loads	68								18
Headwater / Tributary loads		4	0	0	0	2		7	2
Benthic loads		3,766	0	0	0	401	560	4,728	1,182
Incremental Loads		0	0	0	0	0		0	0
SUB-TOTAL	68	3,770	0	0	0	403	560	4,735	1,202
TMDL = WLA + LA + MOS								6,004 lbs/day	

Notes:
 (1) - Load(lbs/day) = Load(kg/day) x 2.205

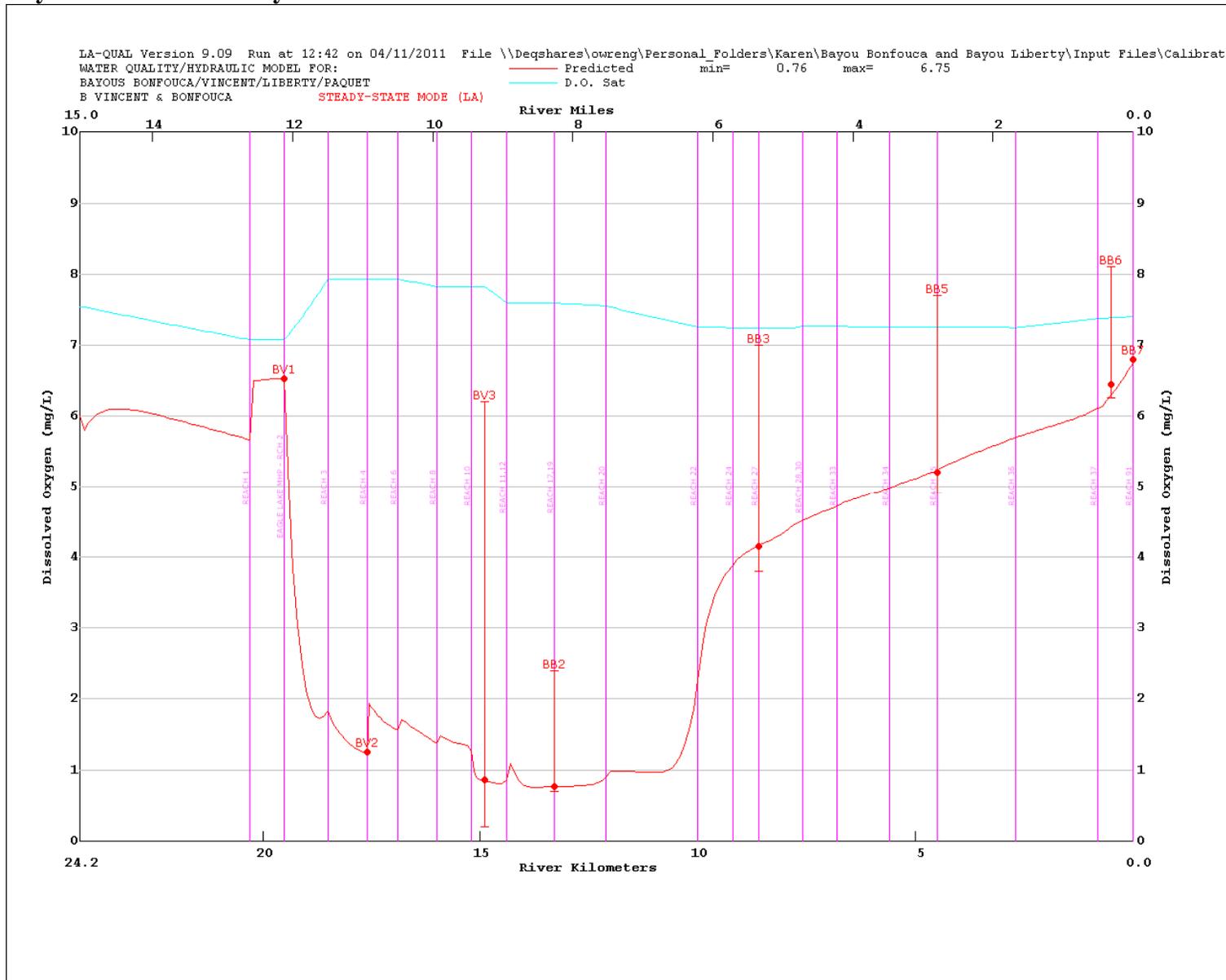
Calculation of the TMDL - Kilograms per day									
Load description	WLA (kg O ₂ /day)	CBOD1 LA (kg O ₂ /day)	CBOD2 LA (kg O ₂ /day)	Organic-N LA (kg/day)	Ammonia-N LA (kg/day)	NBOD LA (kg O ₂ /day)	SOD LA (kg O ₂ /day)	LA (kg O ₂ /day)	MOS Load (kg O ₂ /day)
Point Source loads	31								8
Natural Nonpoint Loads		0	0	0	0	0	0	0	
Manmade Nonpoint Loads		1,710	0	0	0	183	254	2,147	537
SUB-TOTAL	31	1,710	0	0	0	183	254	2,147	545
TMDL = WLA + LA + MOS								2,723 kg/day	

Calculation of the TMDL - Pounds per day									
Load description	WLA (lbs O ₂ /day)	CBOD1 LA (lbs O ₂ /day)	CBOD2 LA (lbs O ₂ /day)	Organic- N LA (lbs/day)	Ammonia-N LA (lbs/day)	NBOD LA (lbs O ₂ /day)	SOD LA (lbs O ₂ /day)	LA (lbs O ₂ /day)	MOS Load (lbs O ₂ /day)
Point Source loads	68								18
Natural Nonpoint Loads		0	0	0	0	0	0	0	
Manmade Nonpoint Loads		3,771	0	0	0	404	560	4,734	1,184
SUB-TOTAL	68	3,771	0	0	0	404	560	4,734	1,202
TMDL = WLA + LA + MOS								6,004 lbs/day	

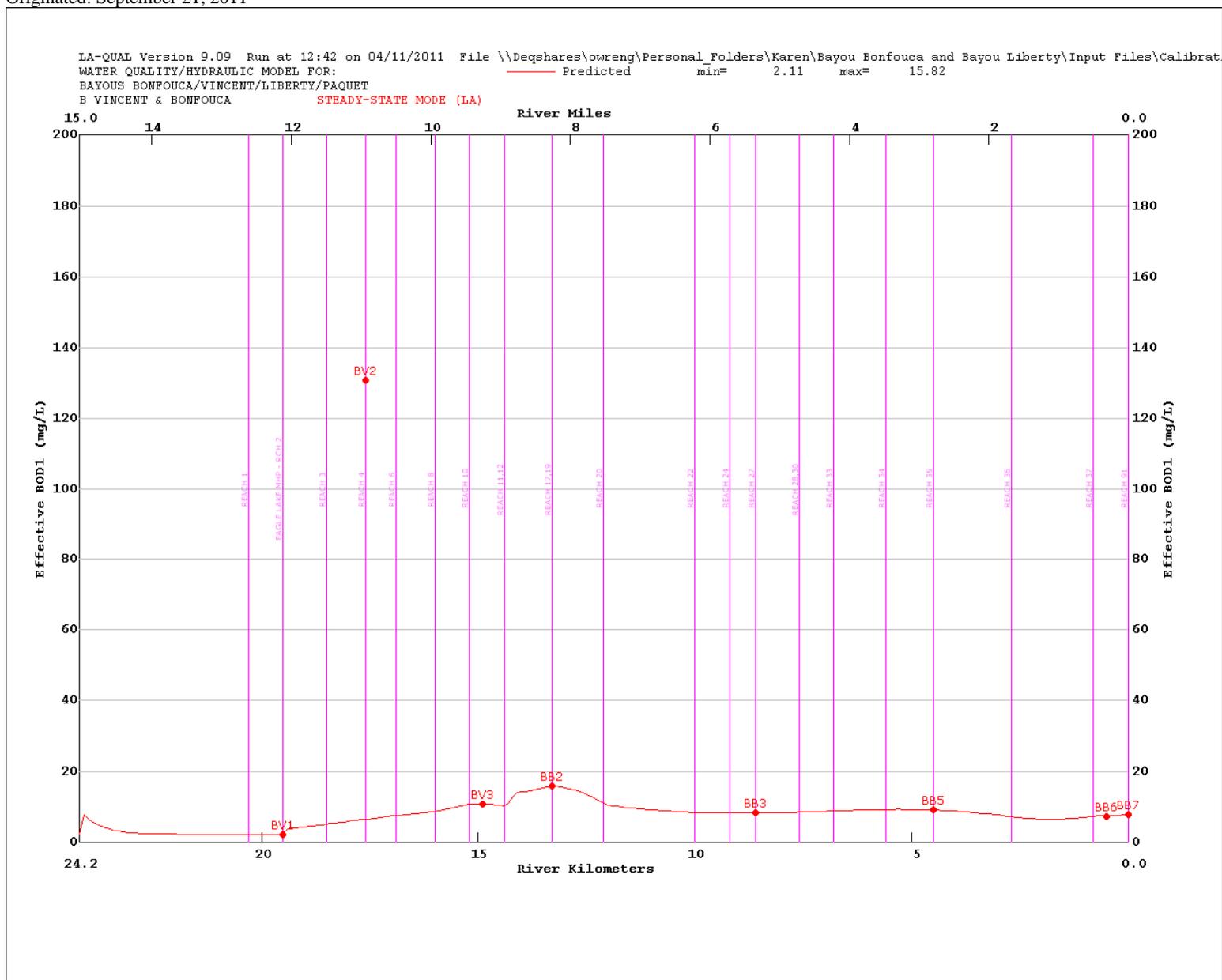
Appendix B – Calibration Model Input and Output Data Sets

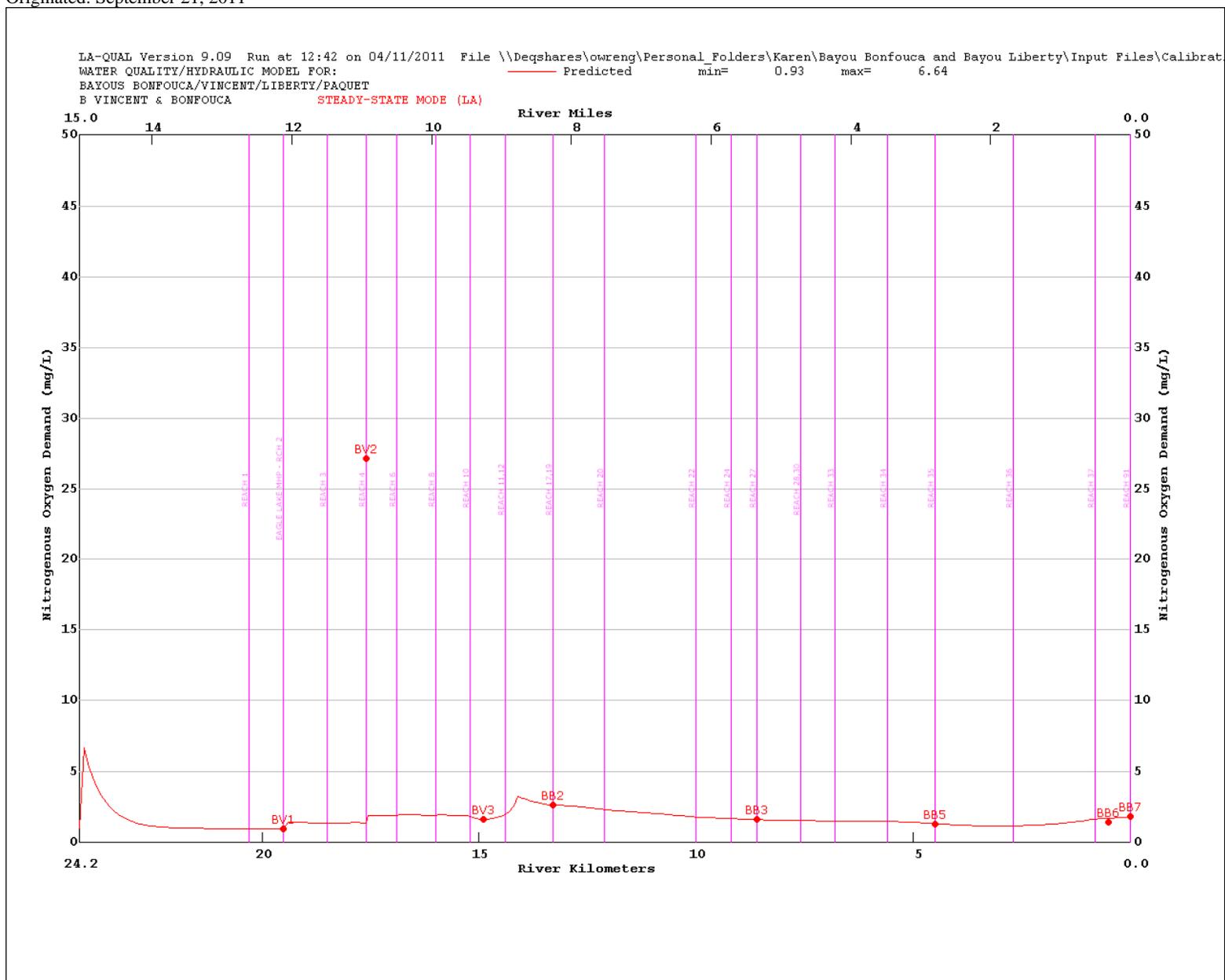
Appendix B1 – Calibration Output Graphs and Input, Overlay, and Output Files

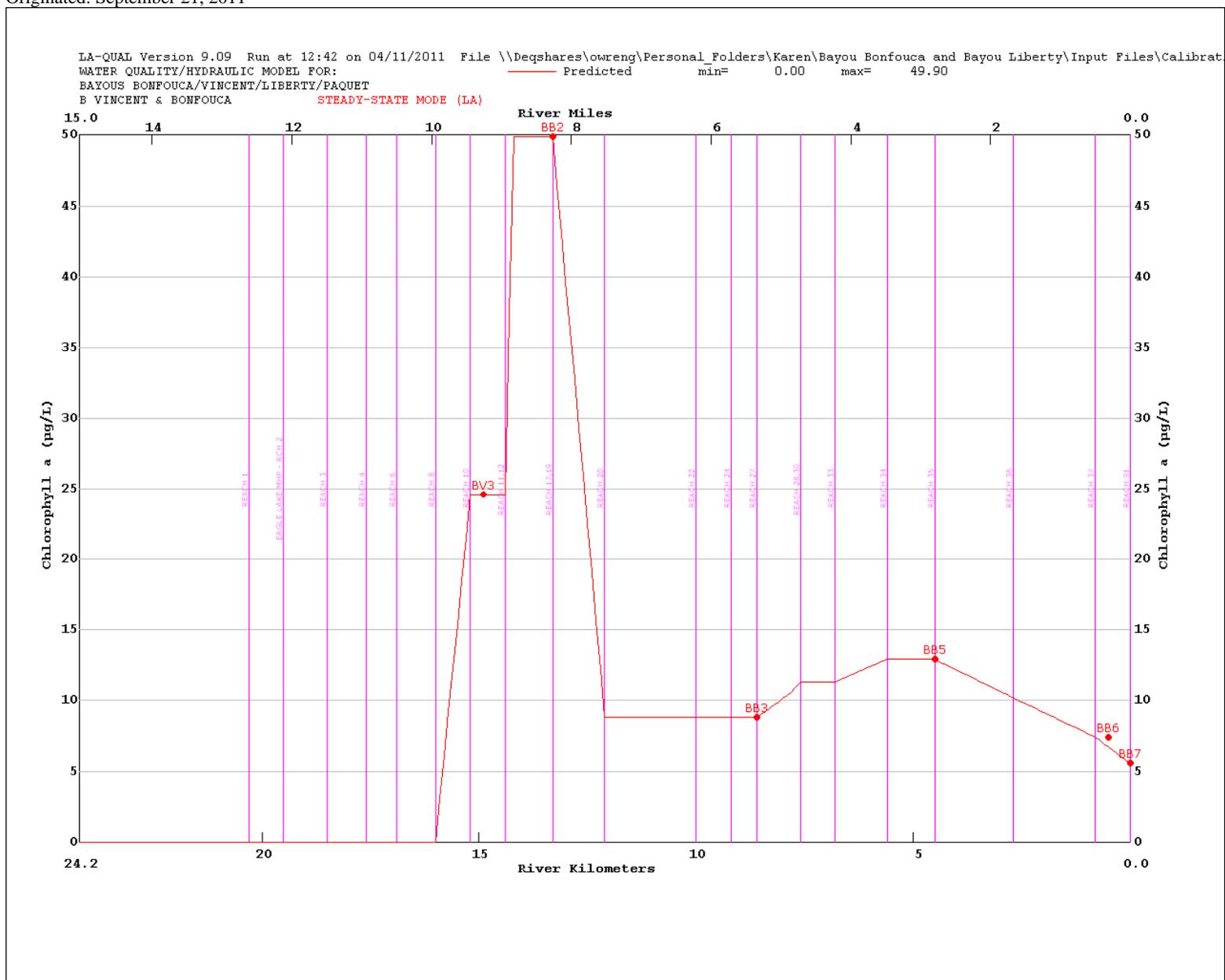
Bayou Bonfouca and Bayou Vincent



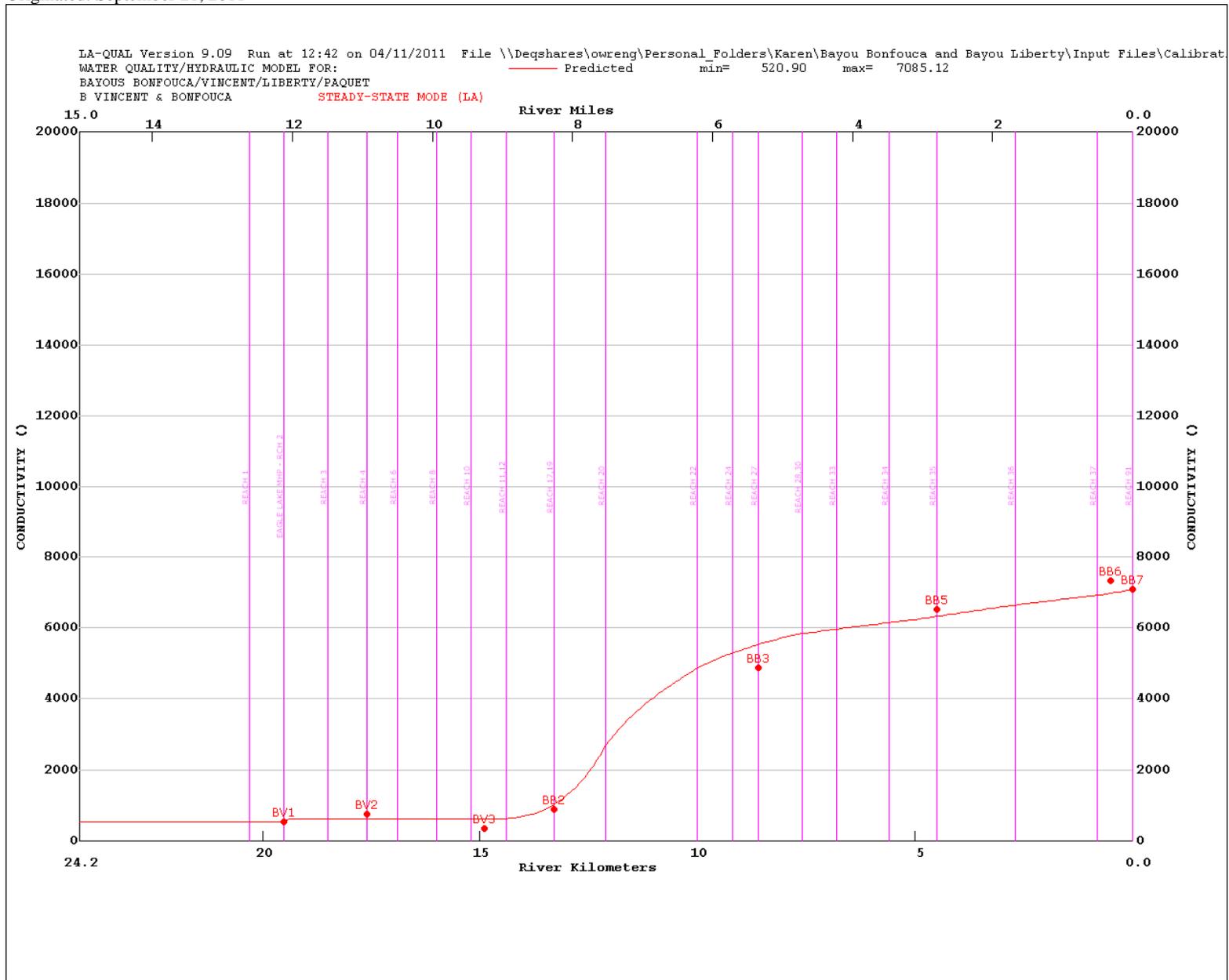
Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011



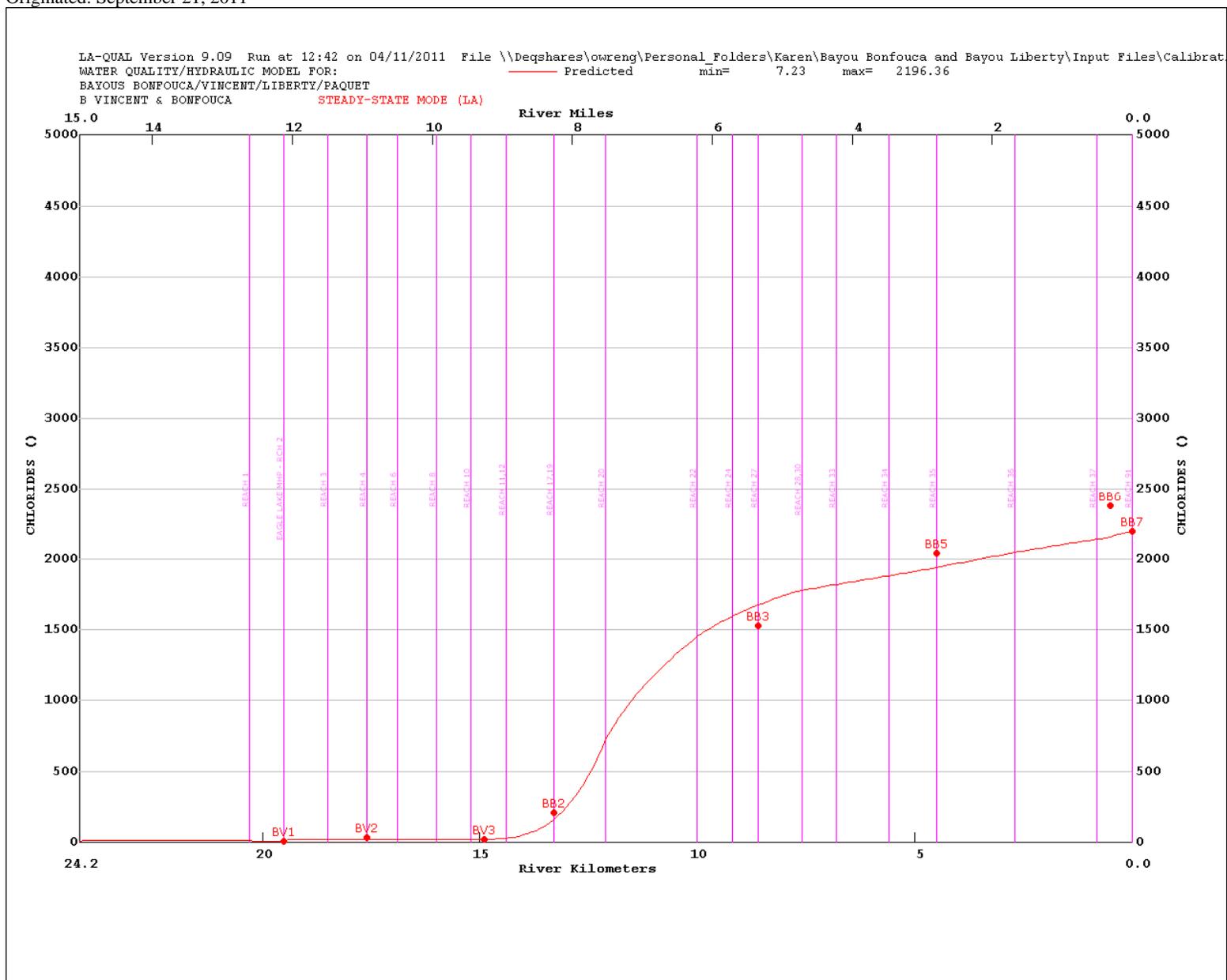




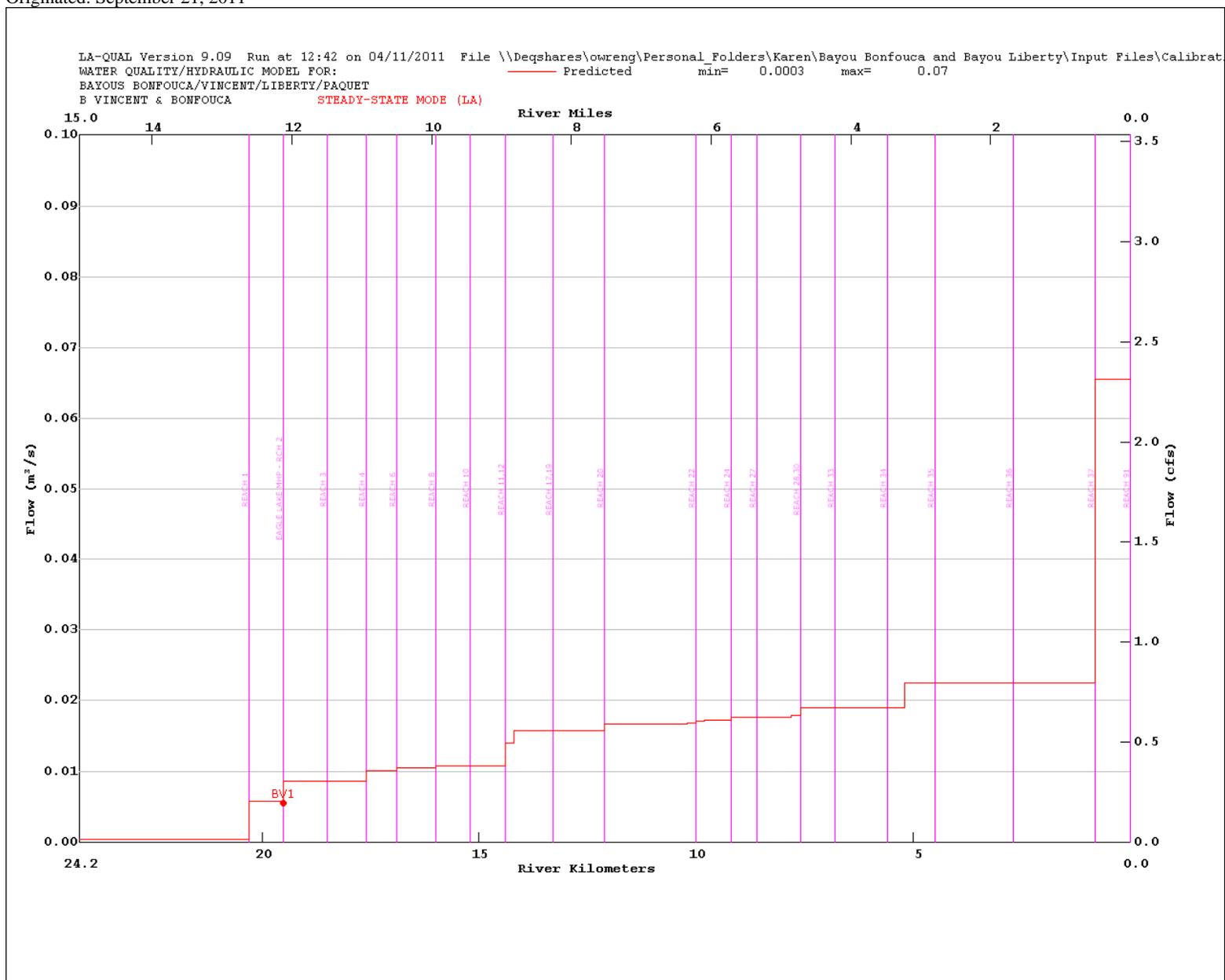
Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011



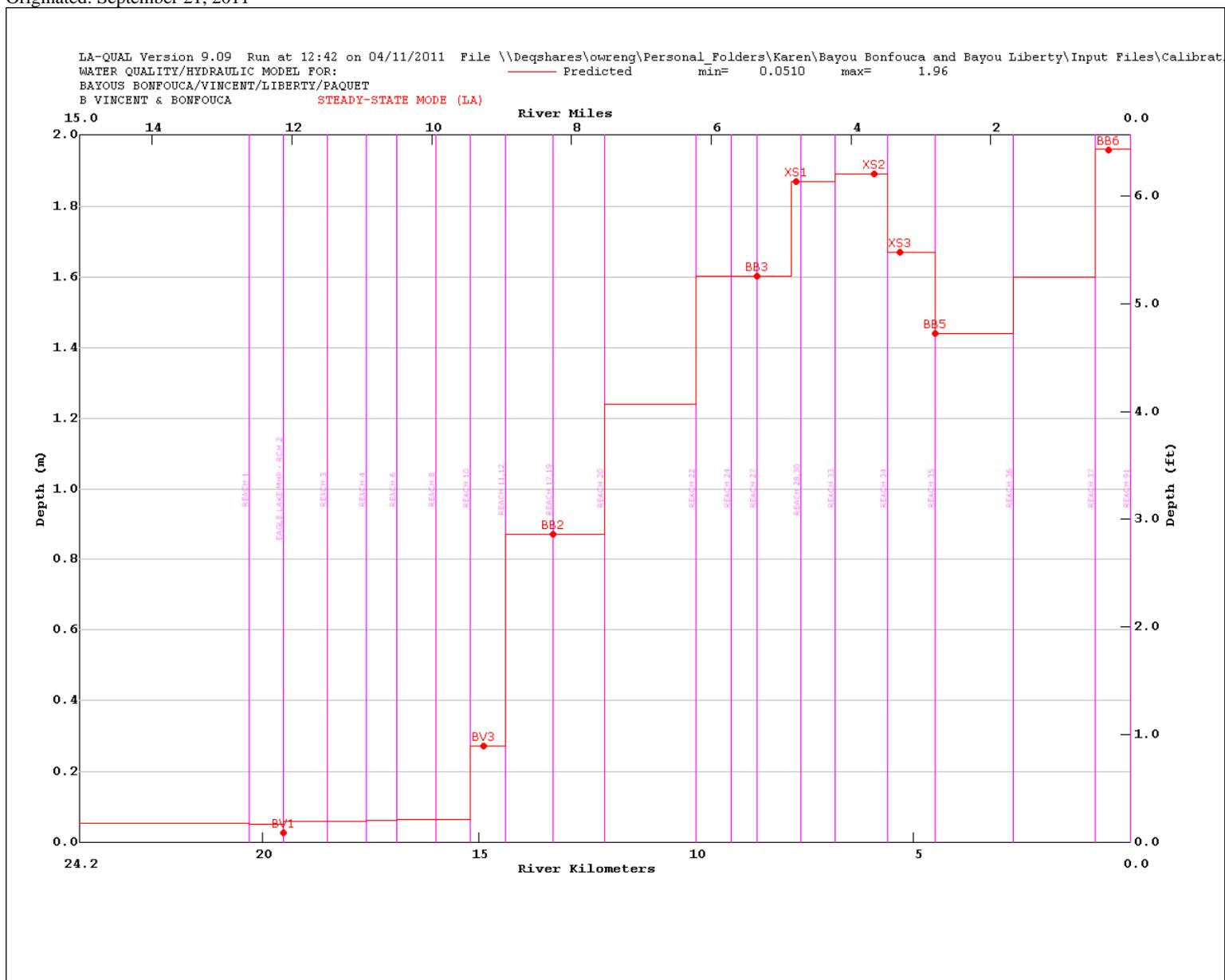
Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011



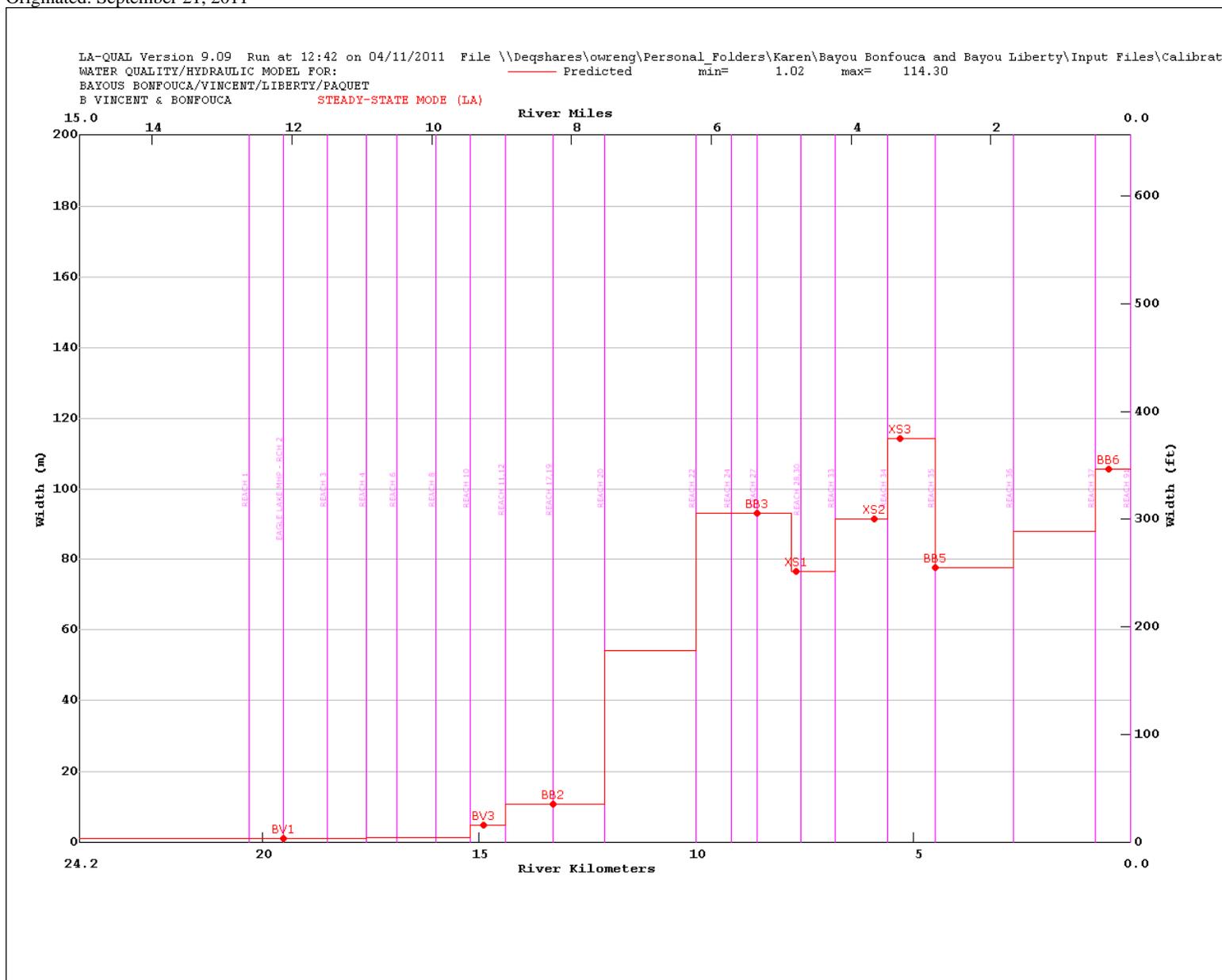
Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

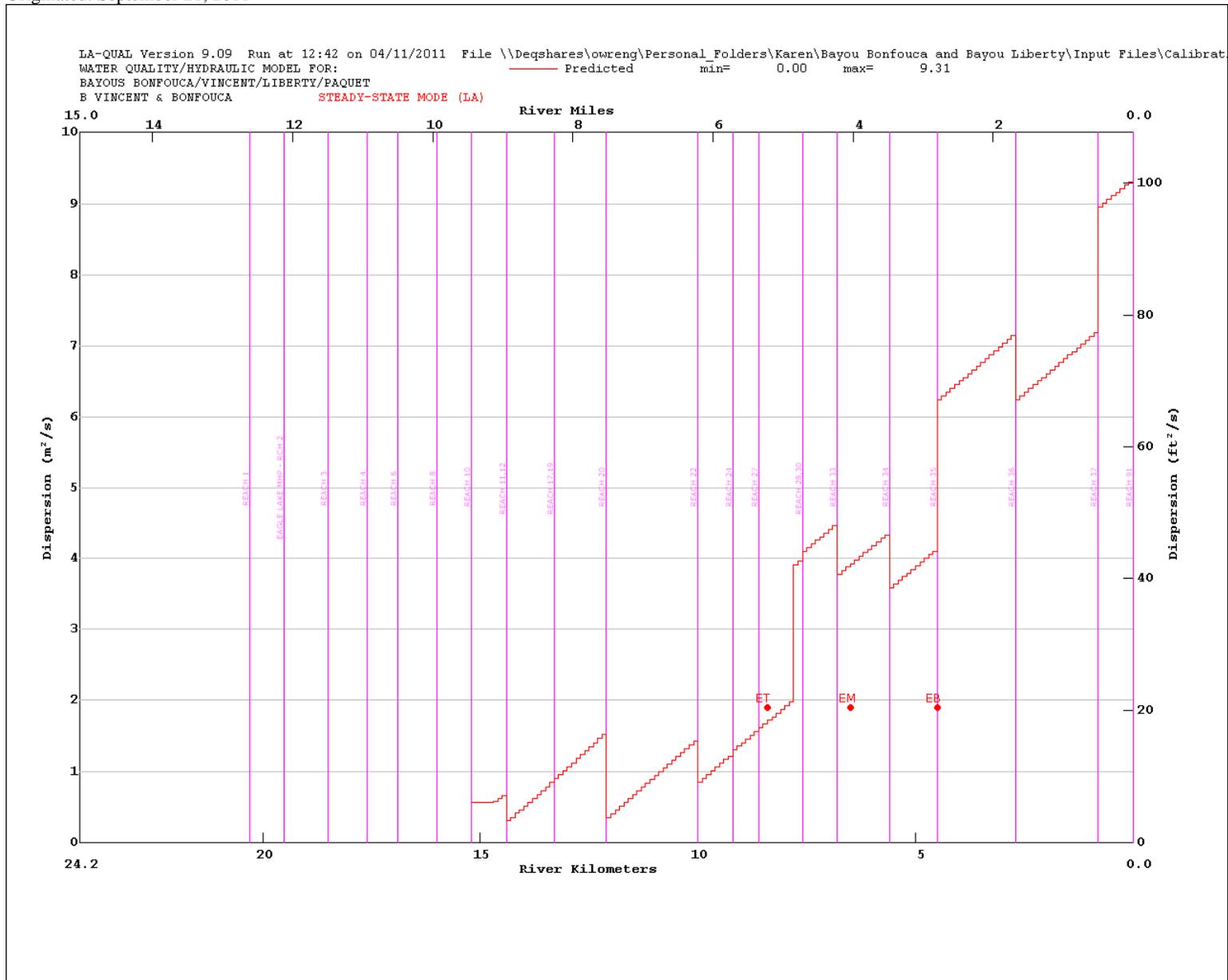


Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011



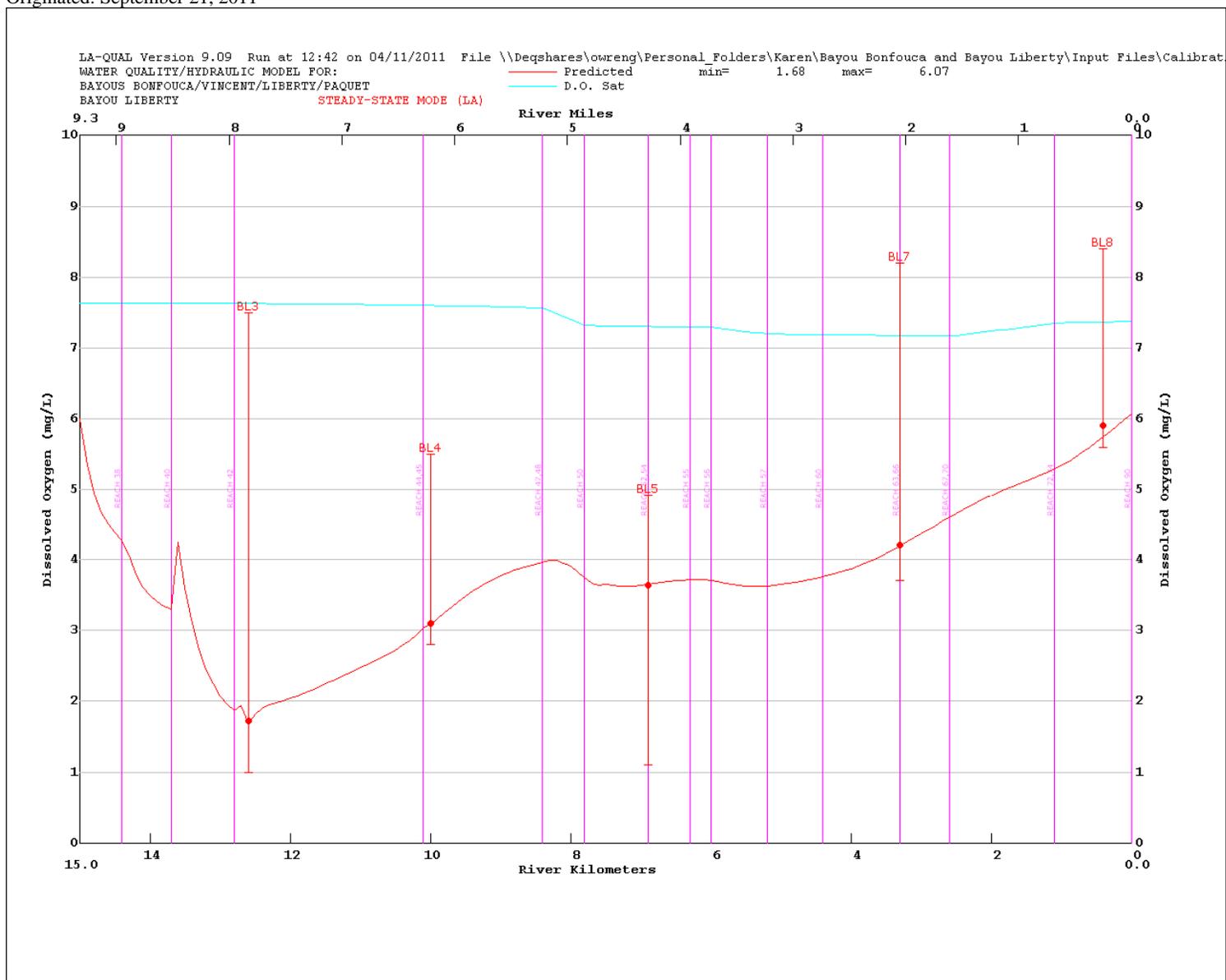
Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011



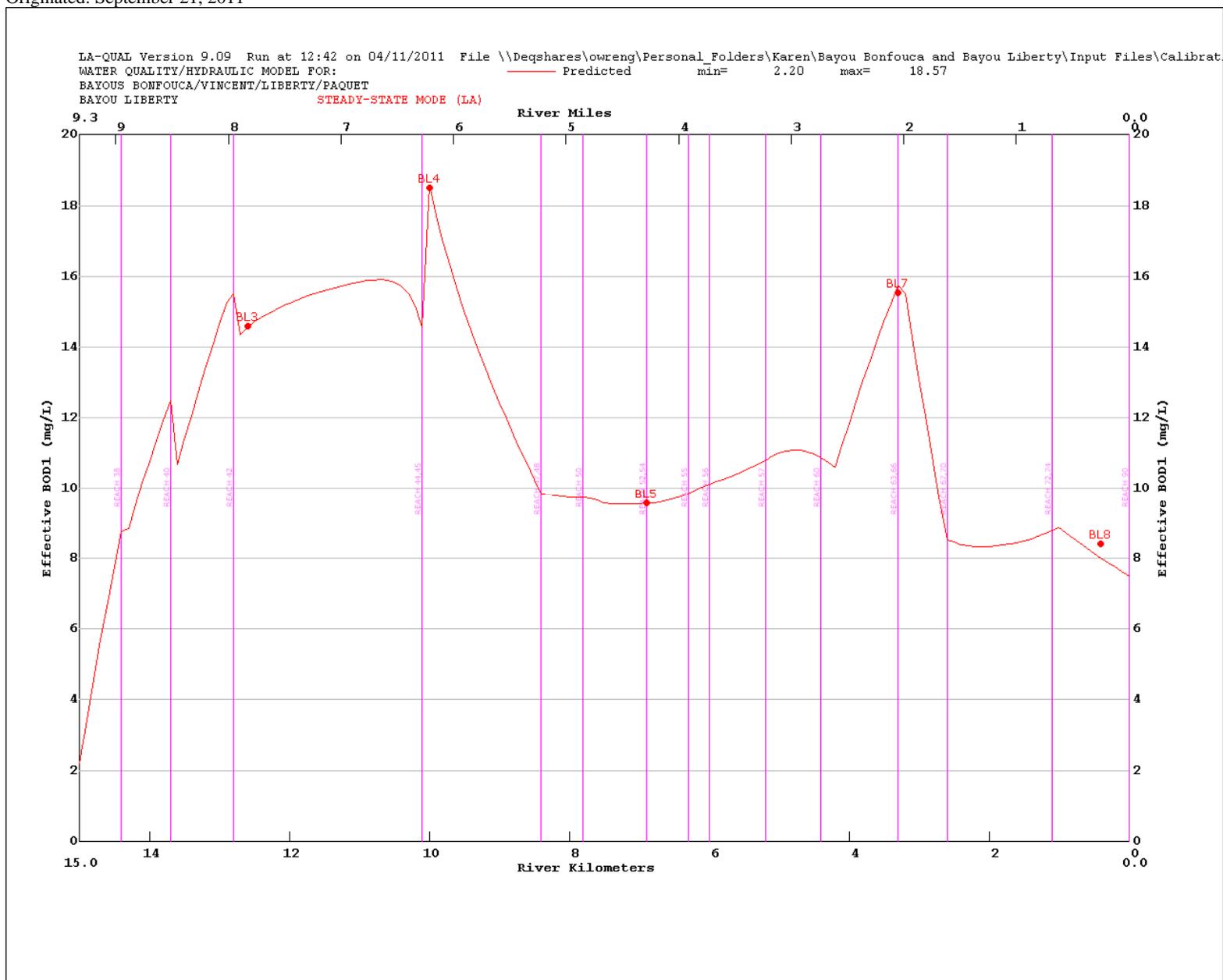


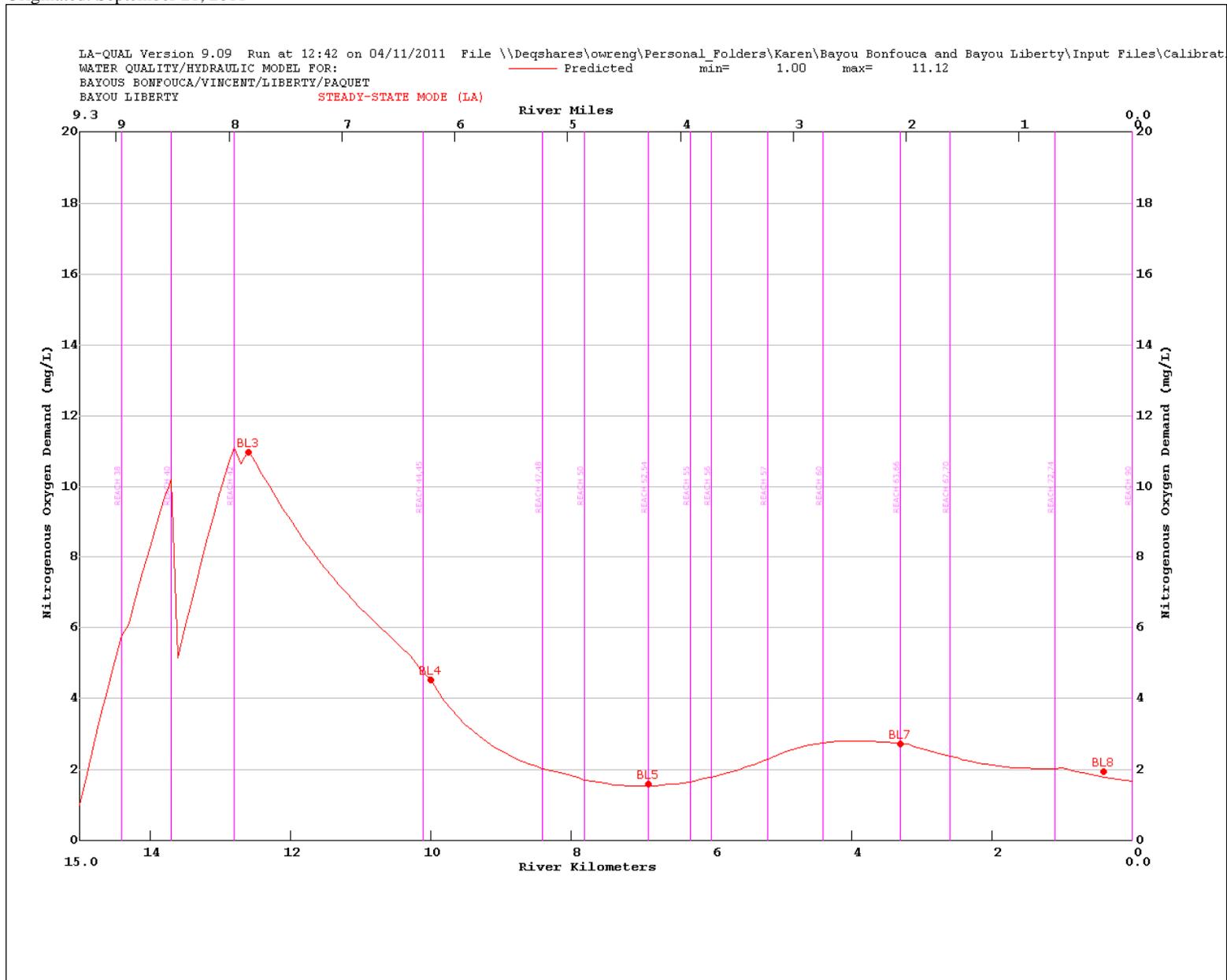
Bayou Liberty Output Graphs

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

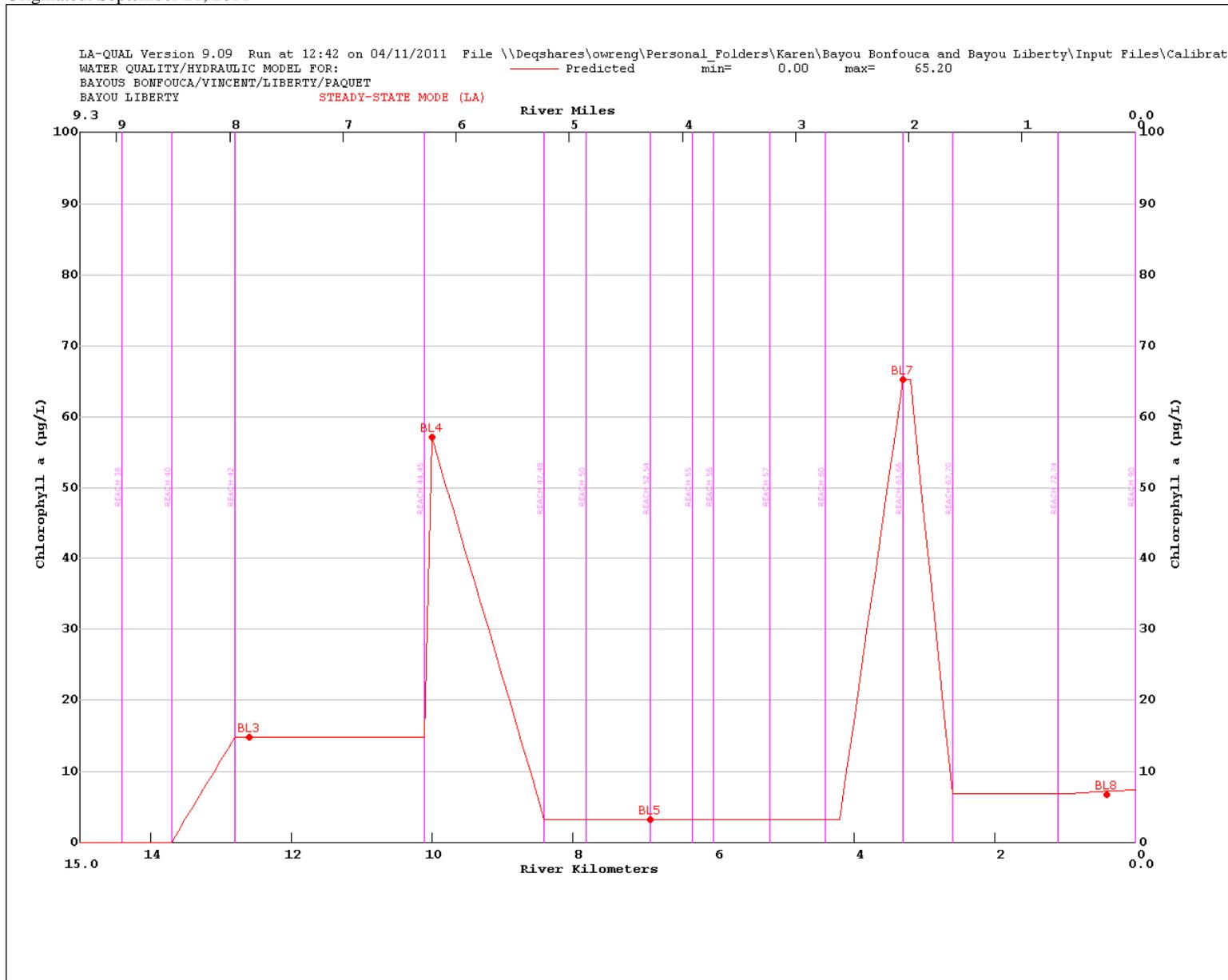


Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

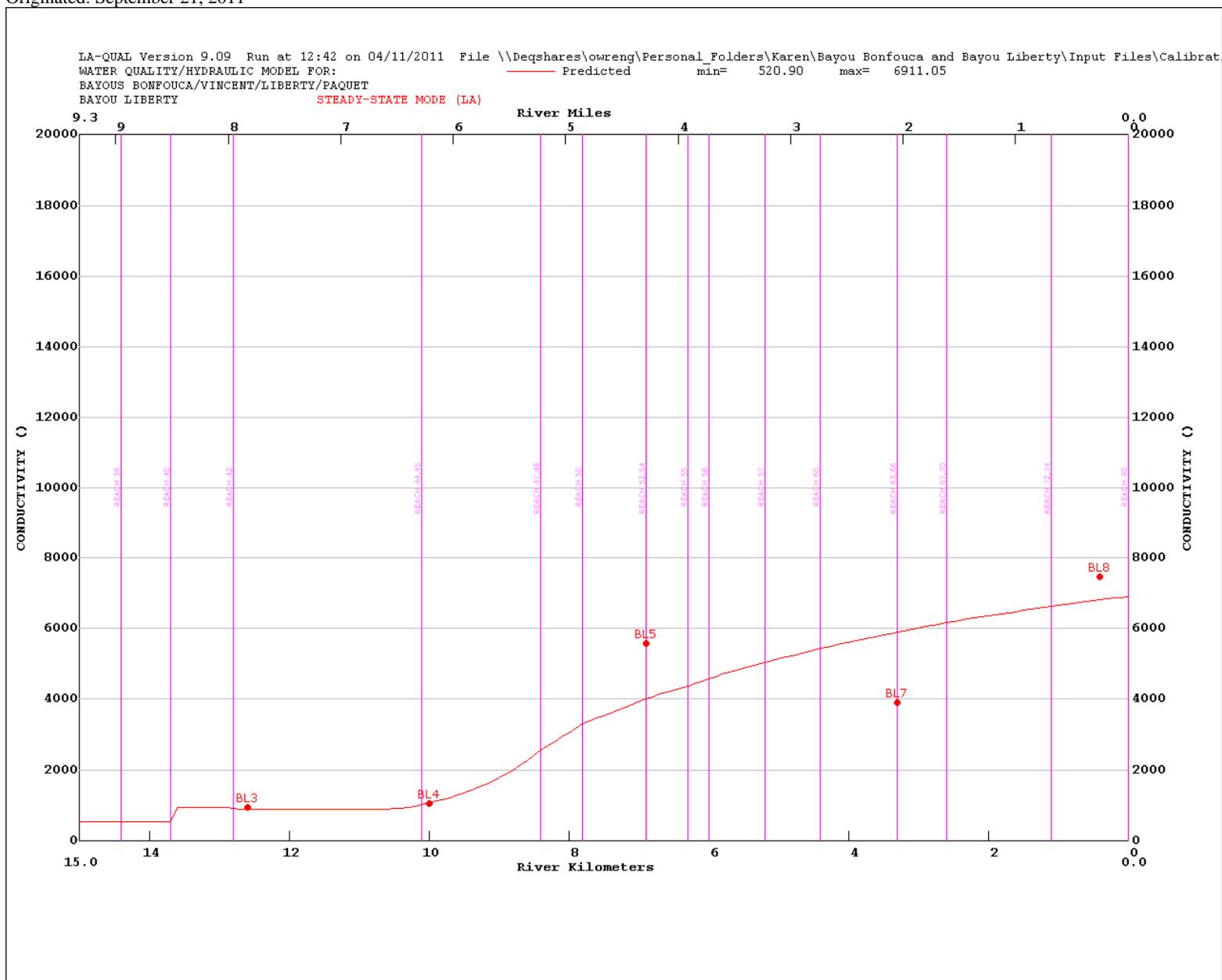




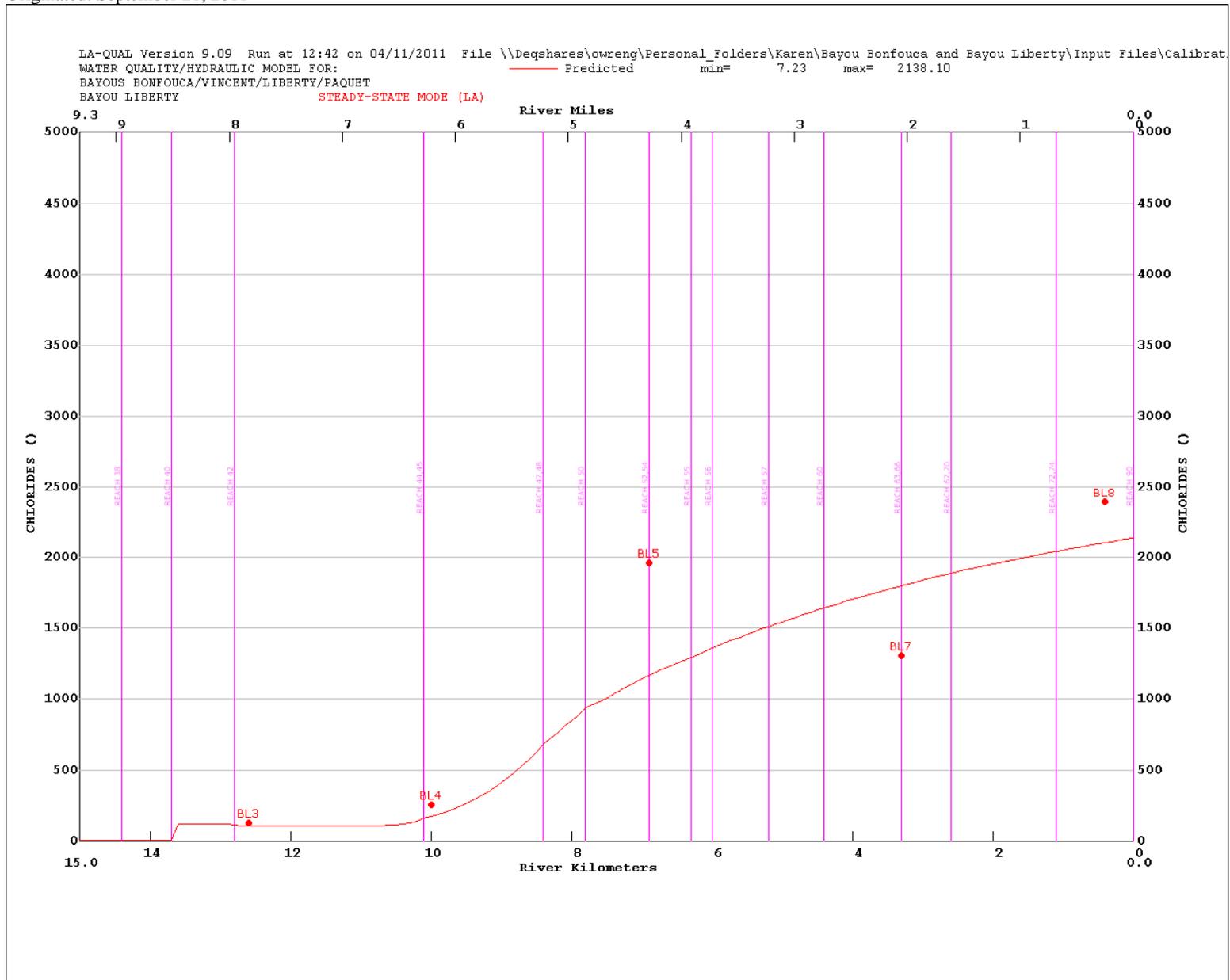
Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011



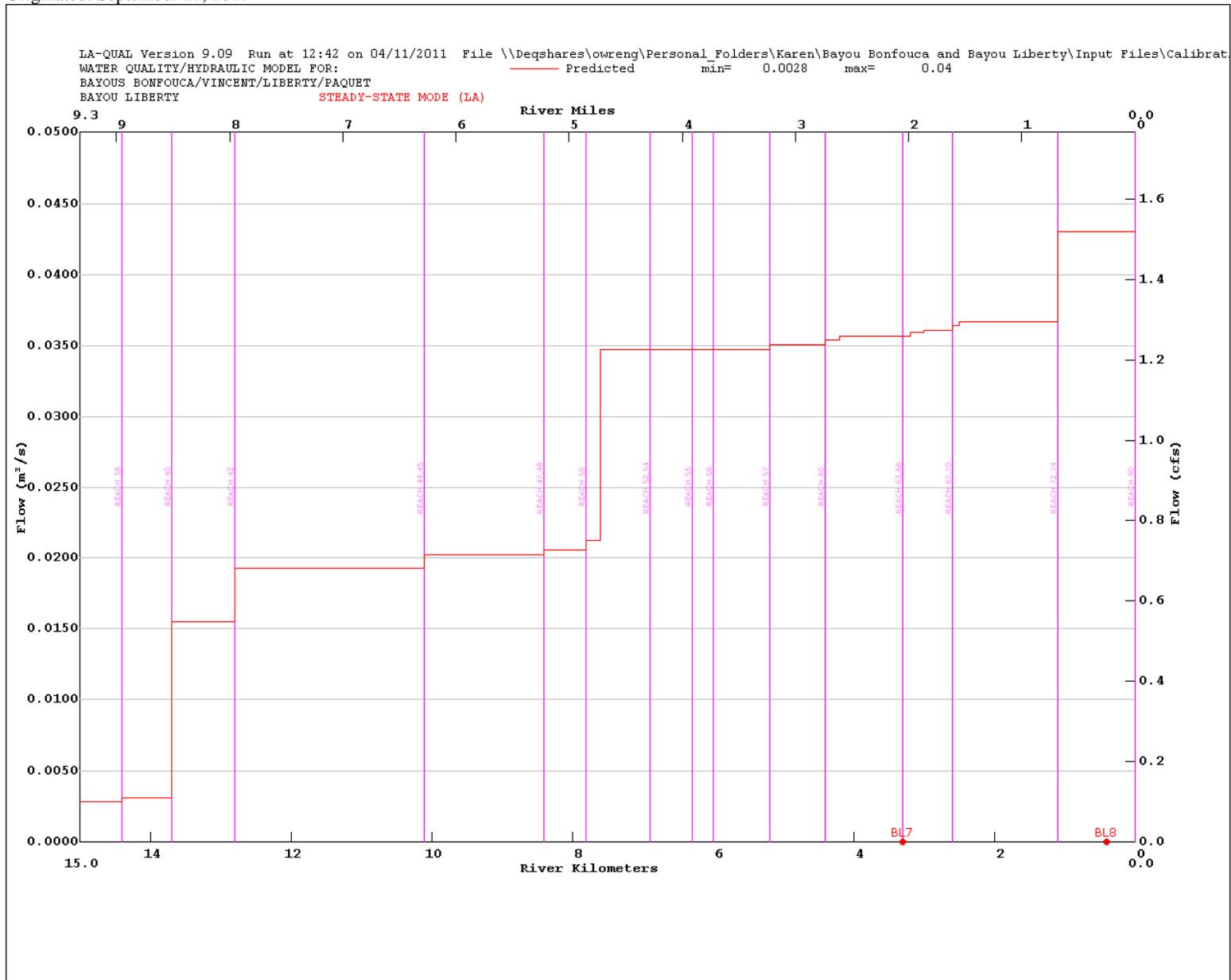
Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011



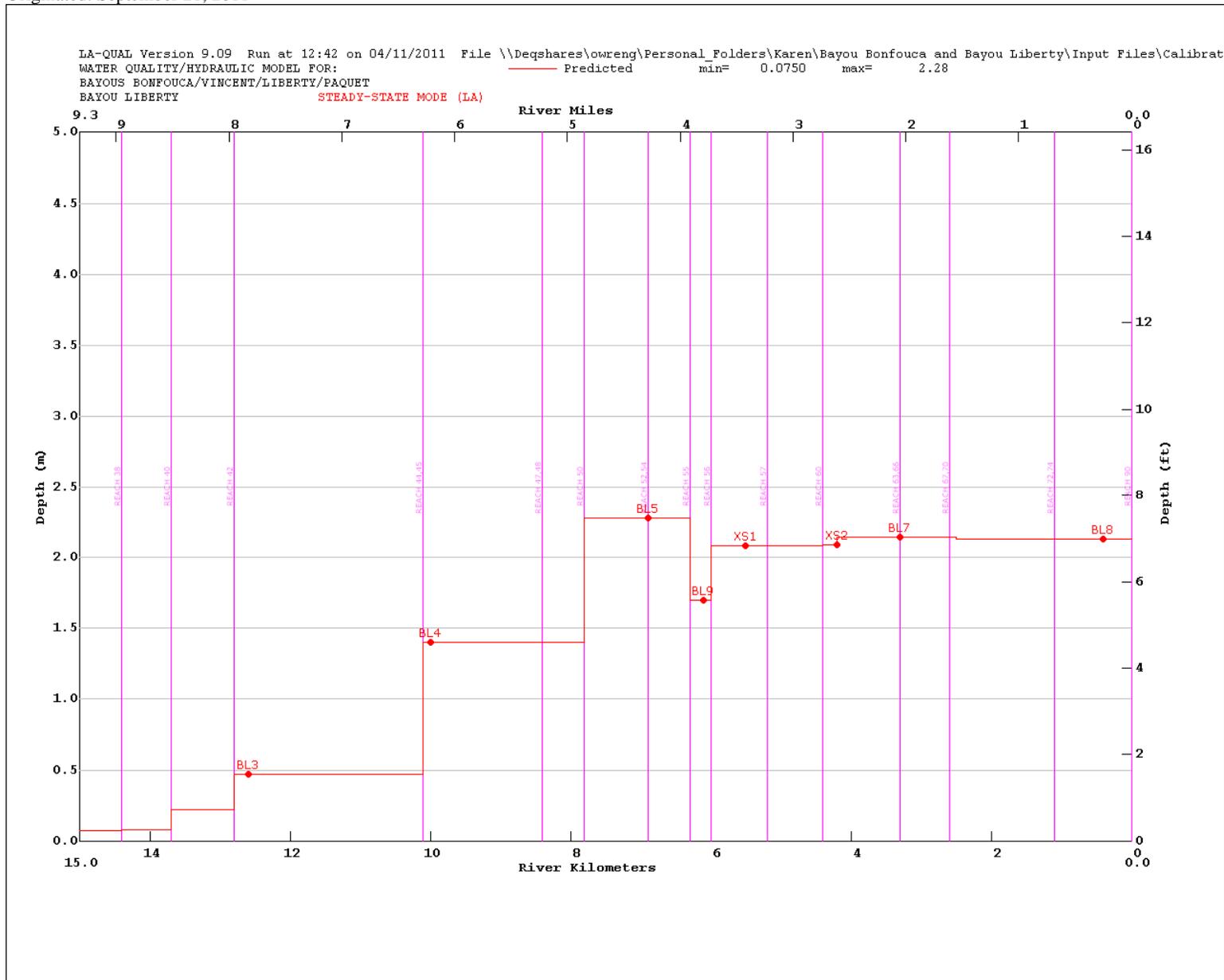
Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011



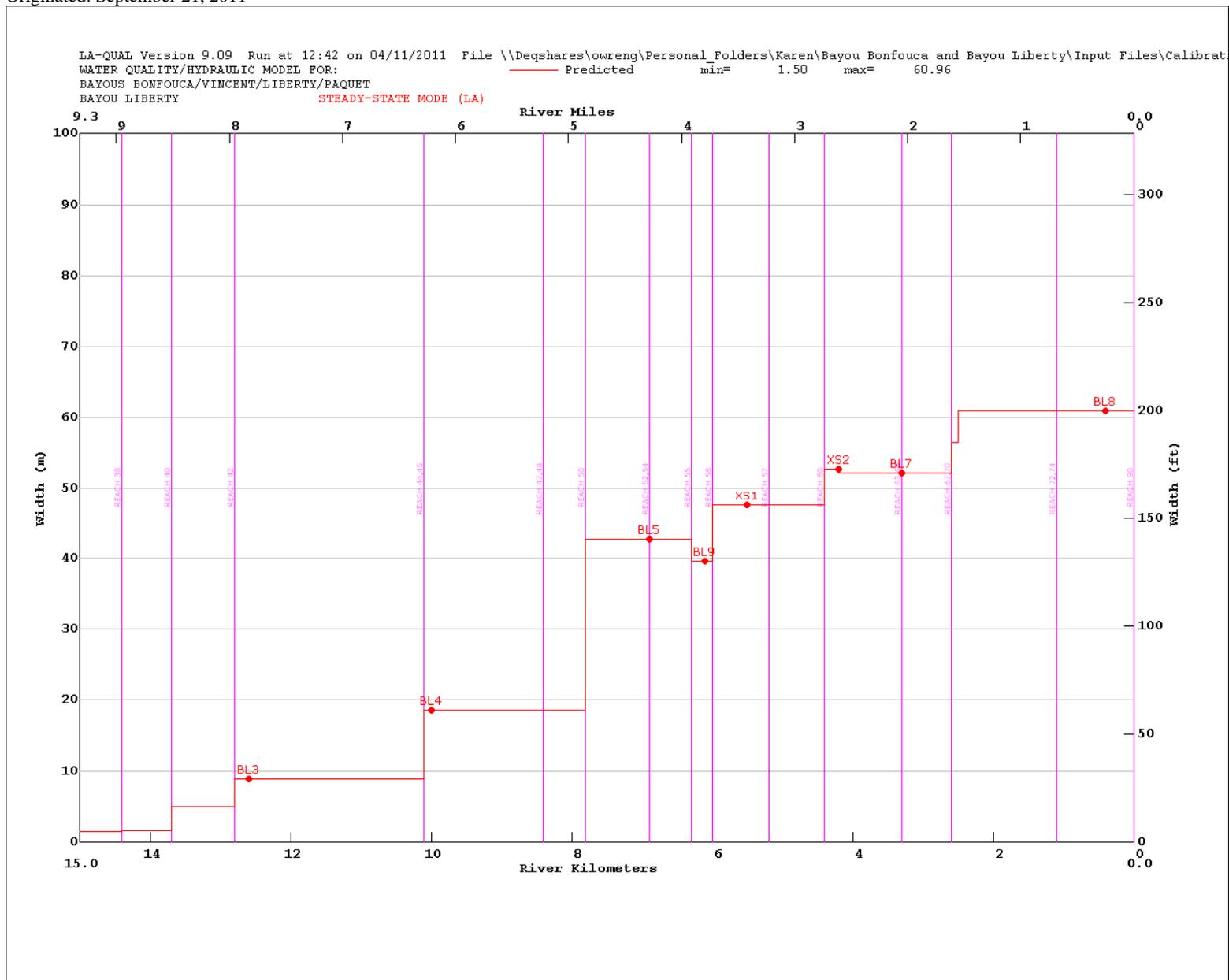
Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

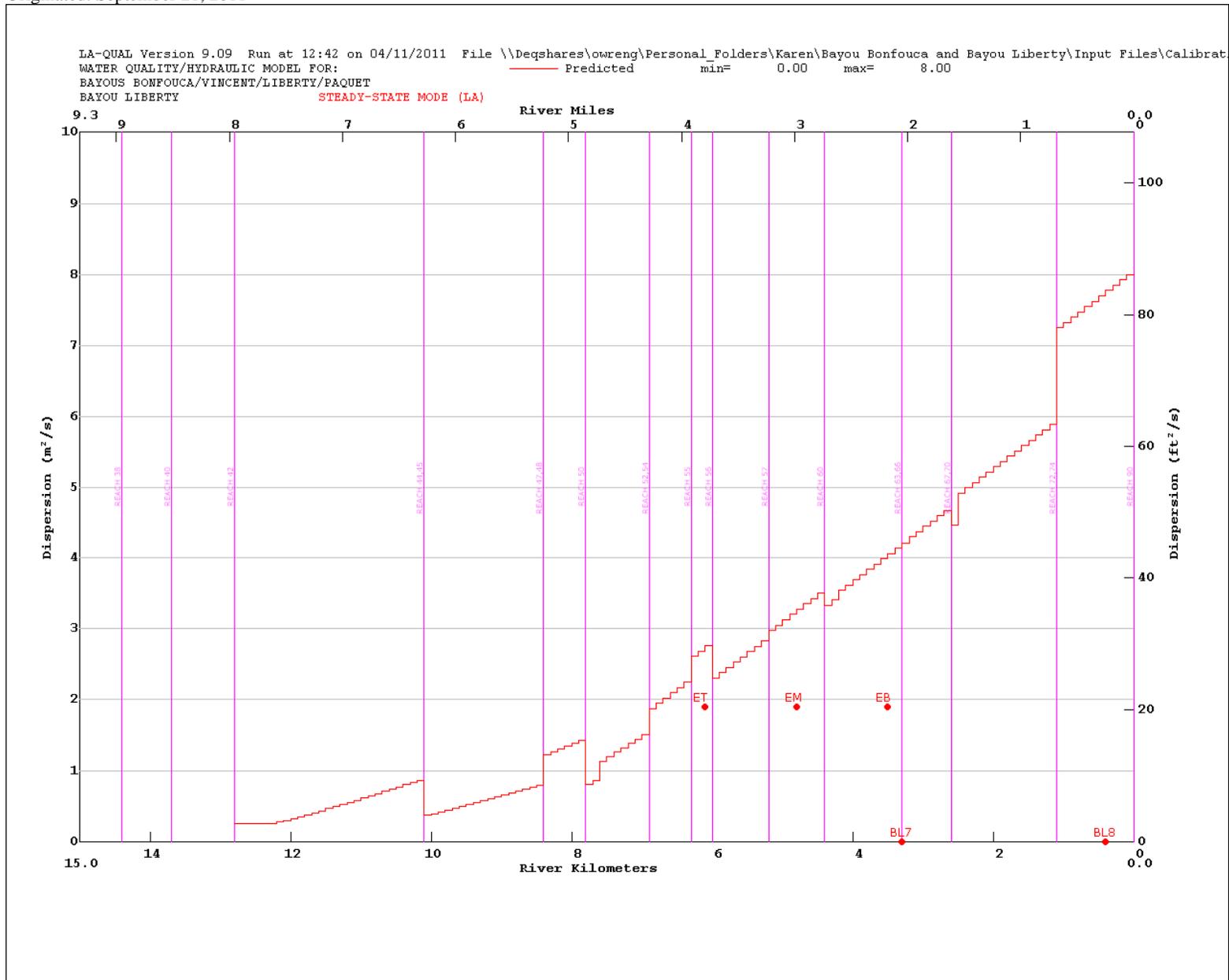


Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

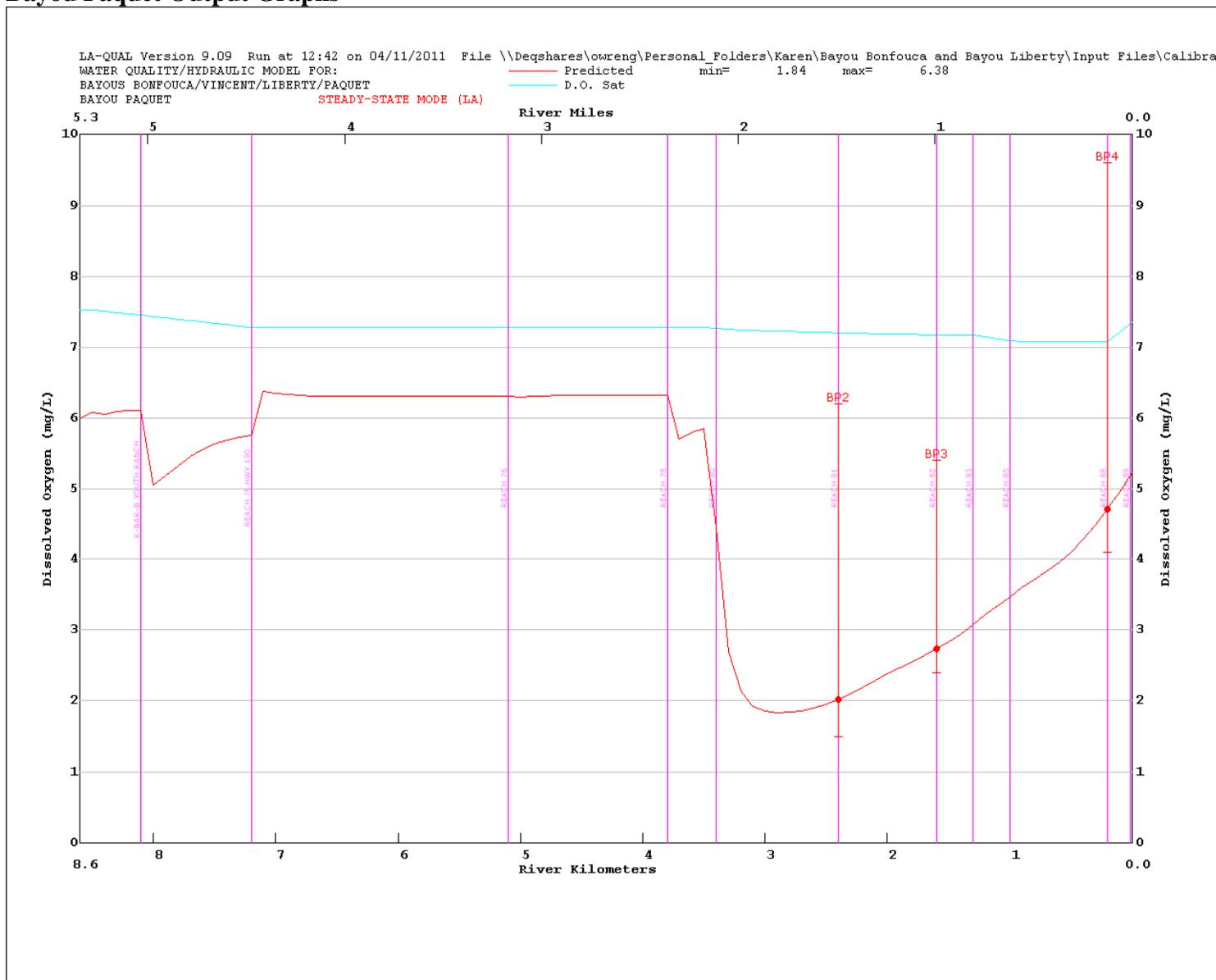


Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

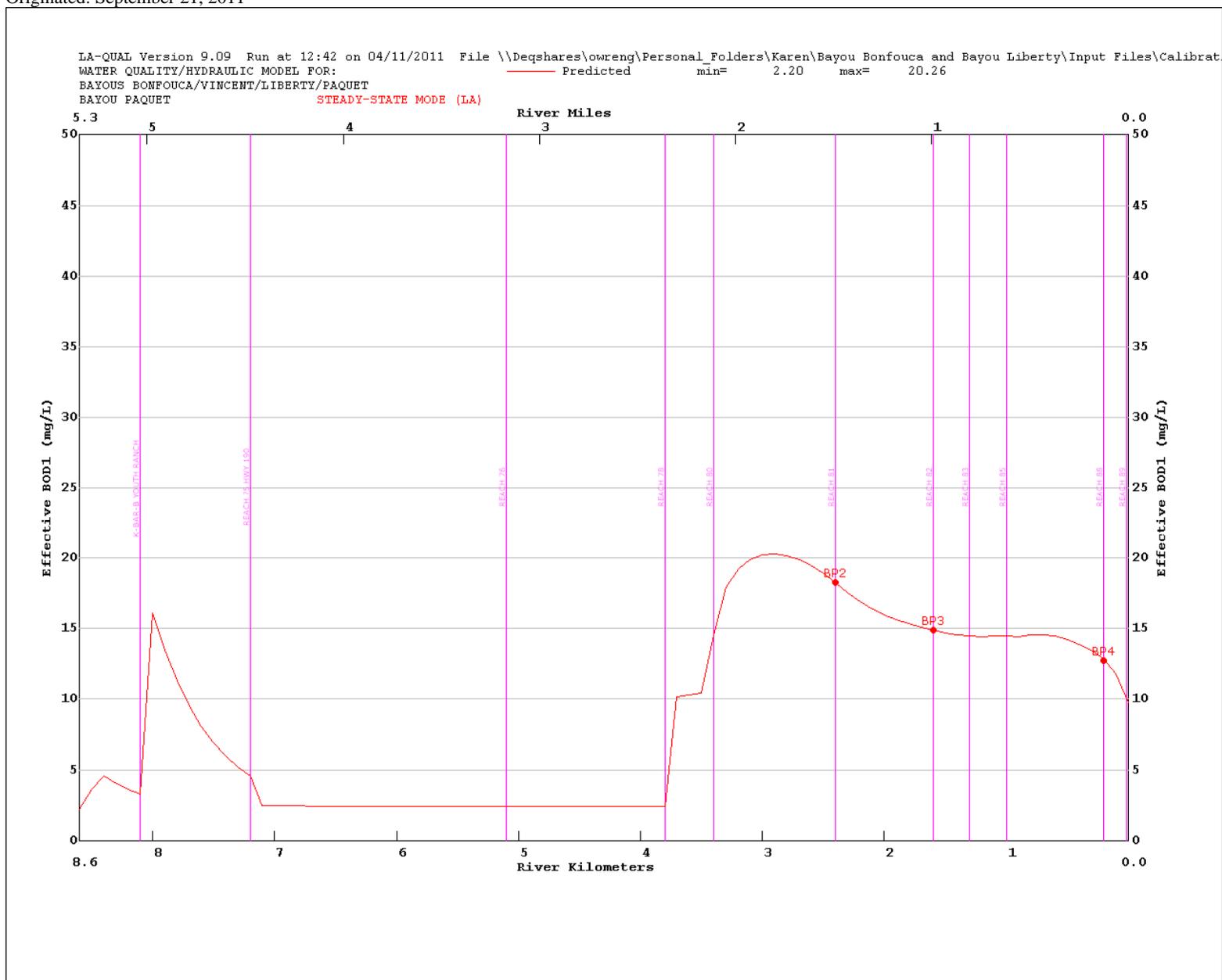




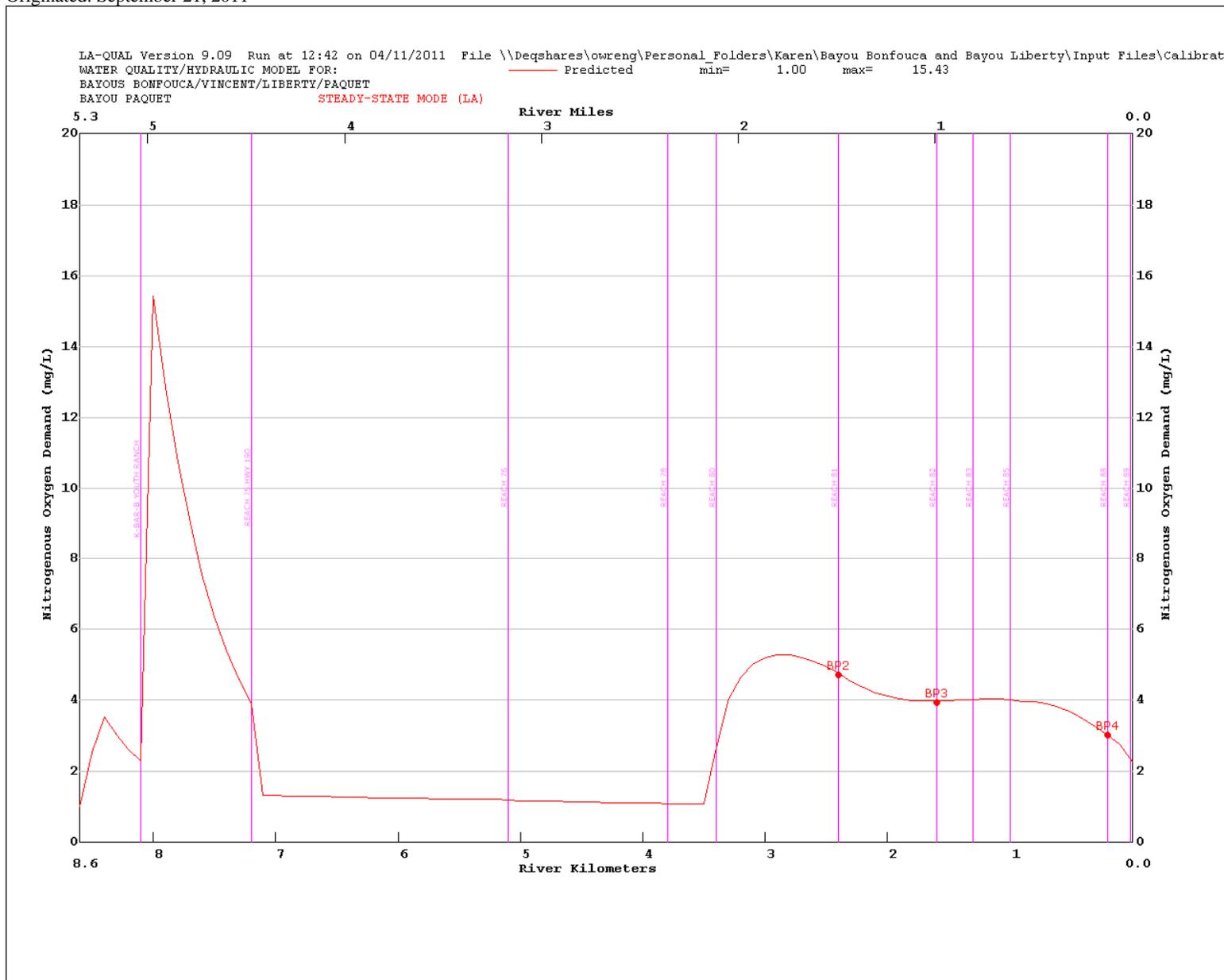
Bayou Paquet Output Graphs



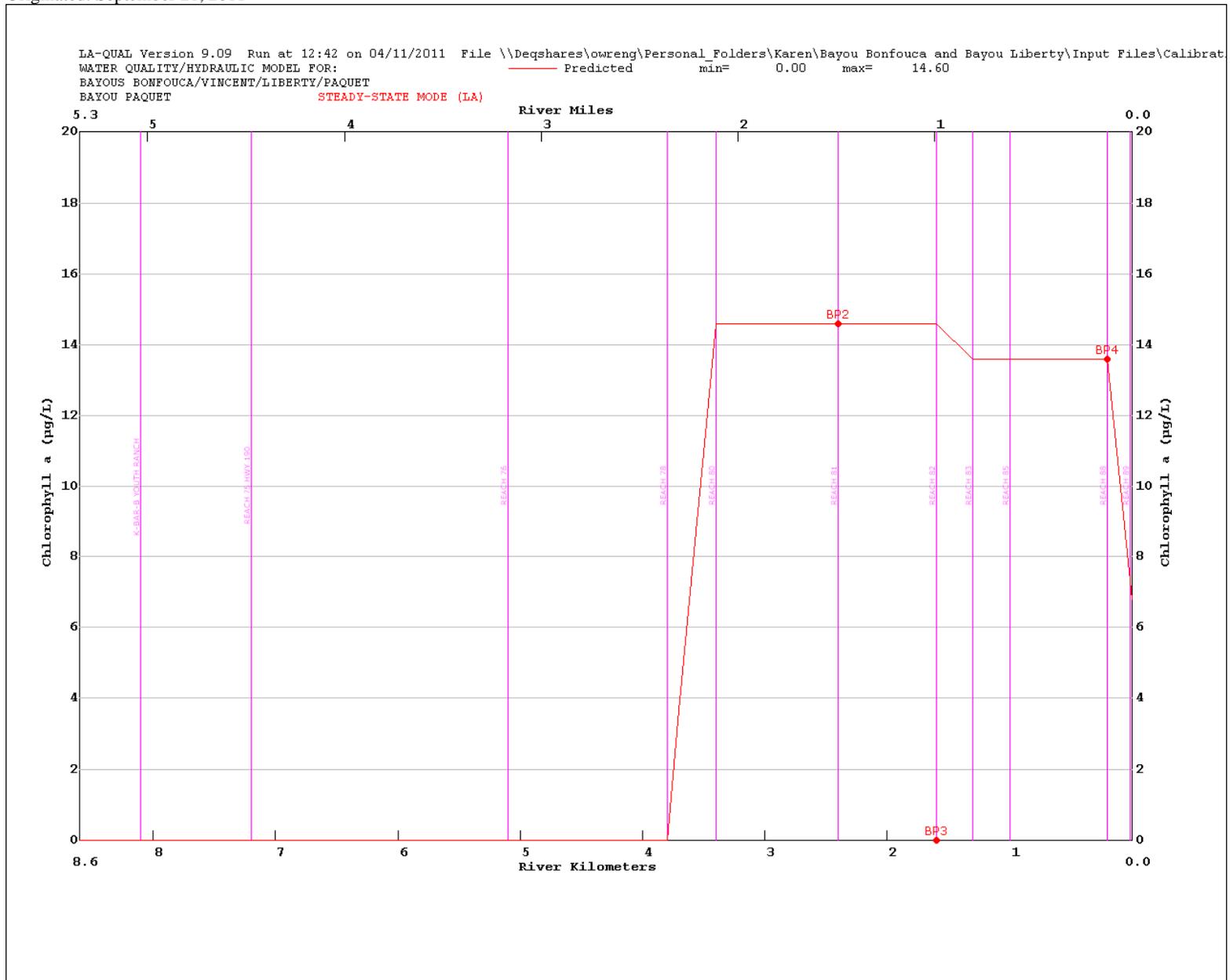
Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011



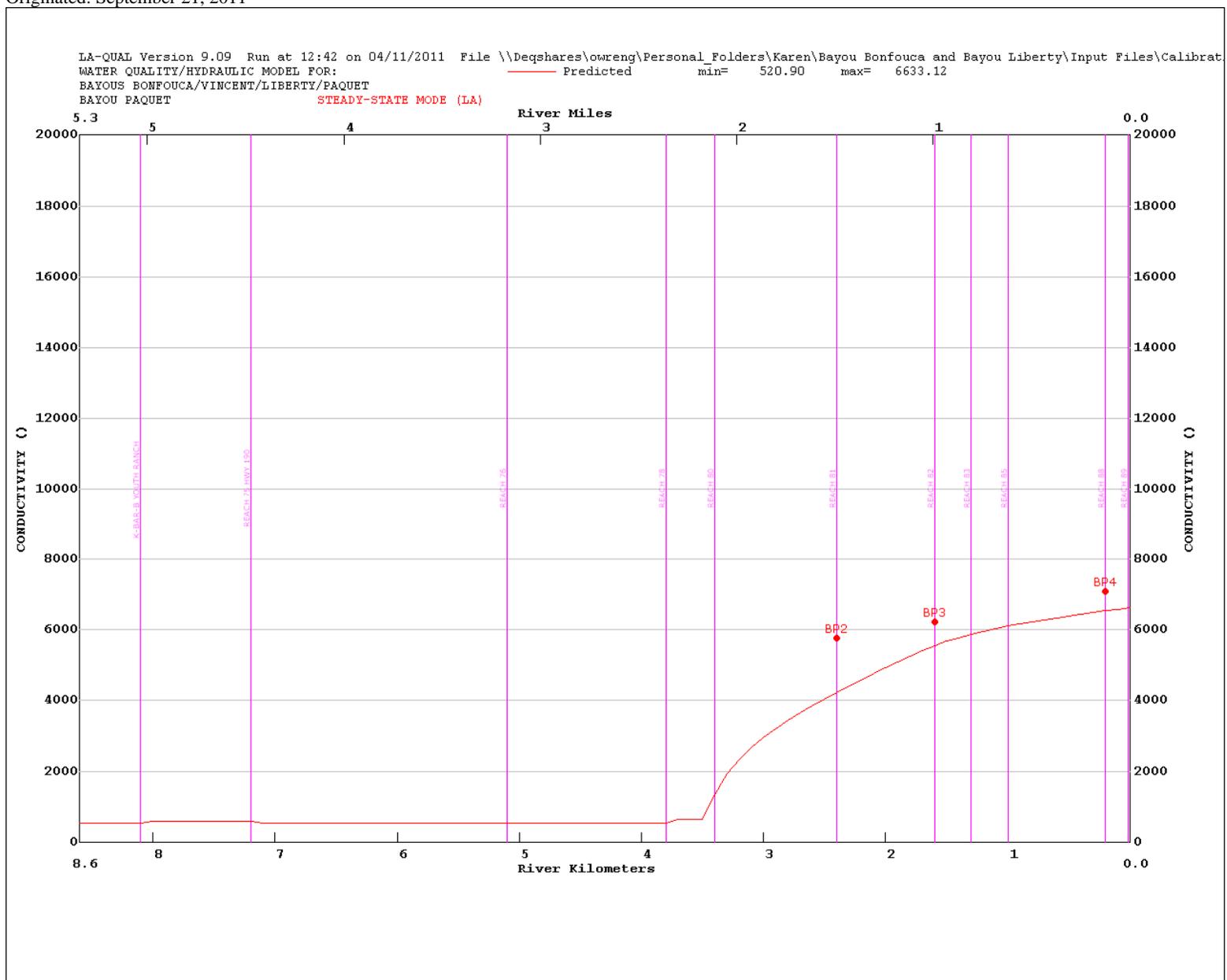
Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011



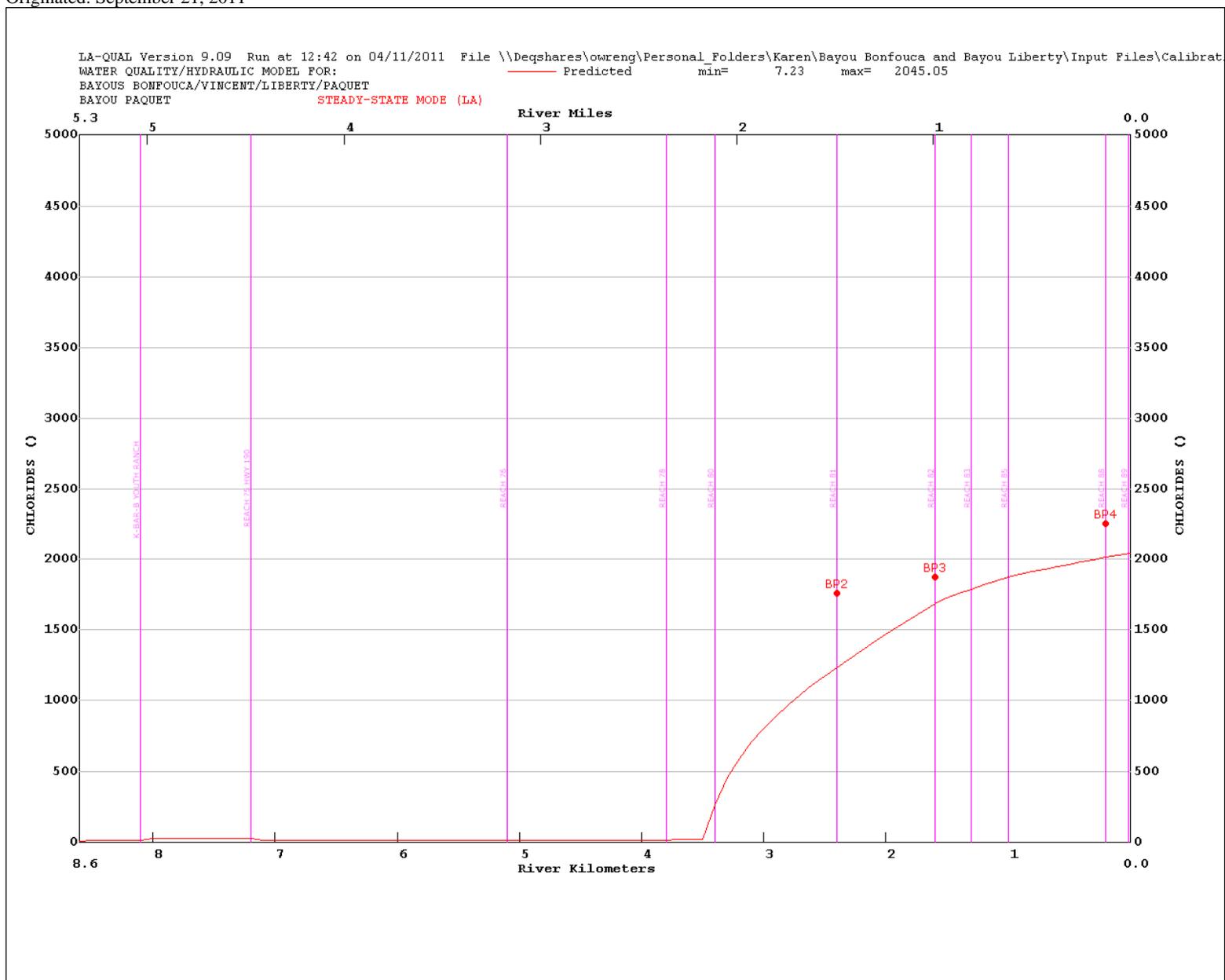
Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011



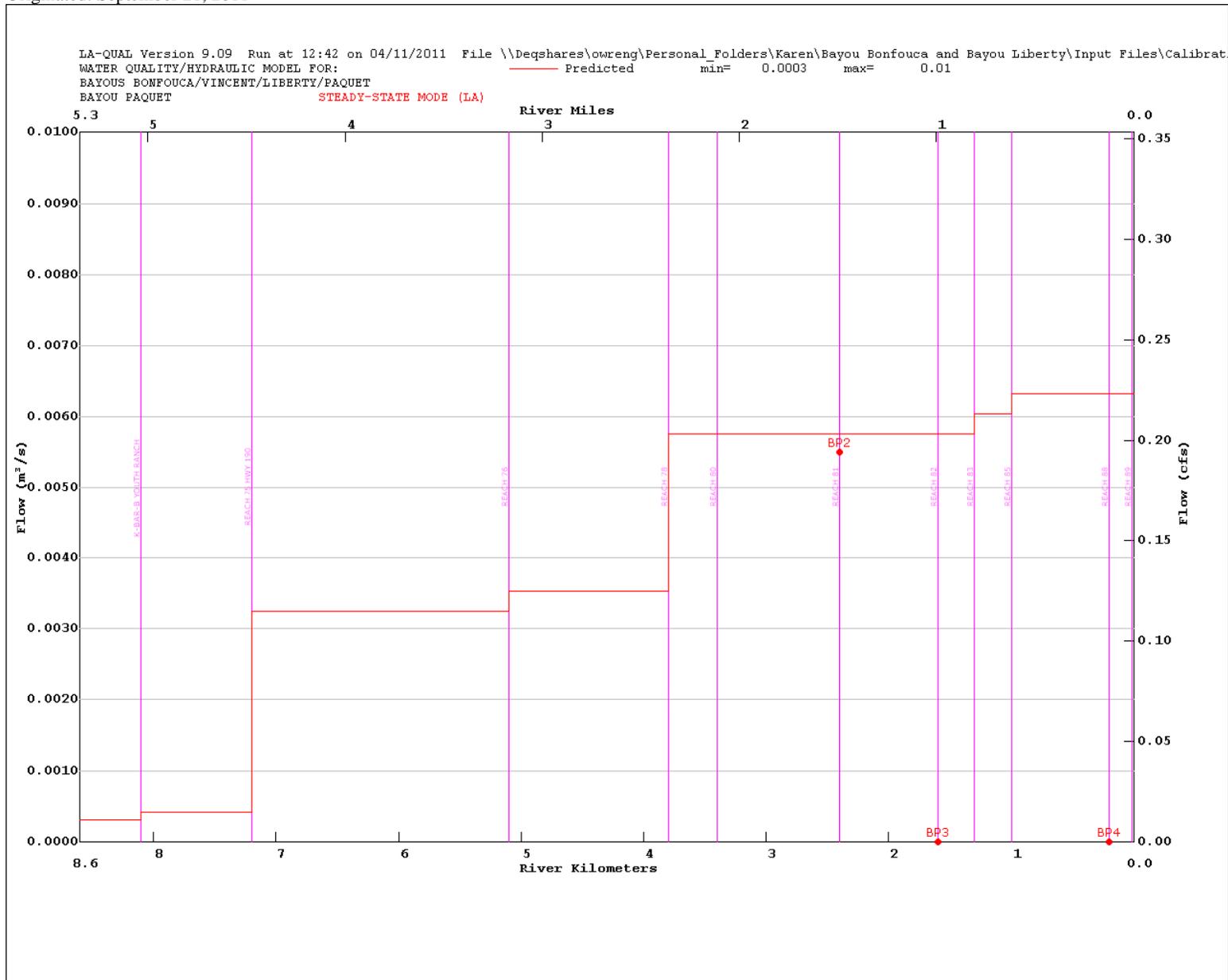
Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

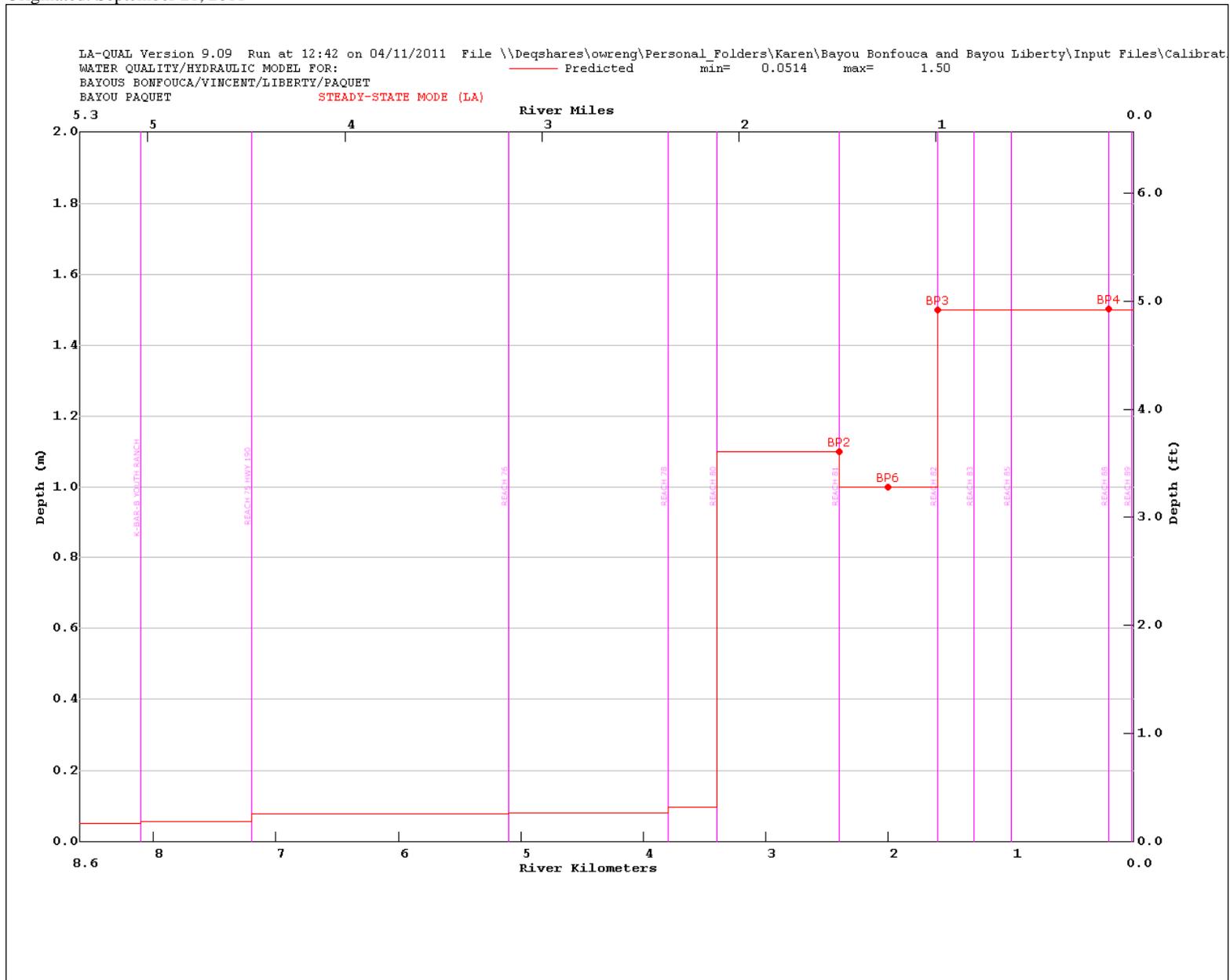


Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

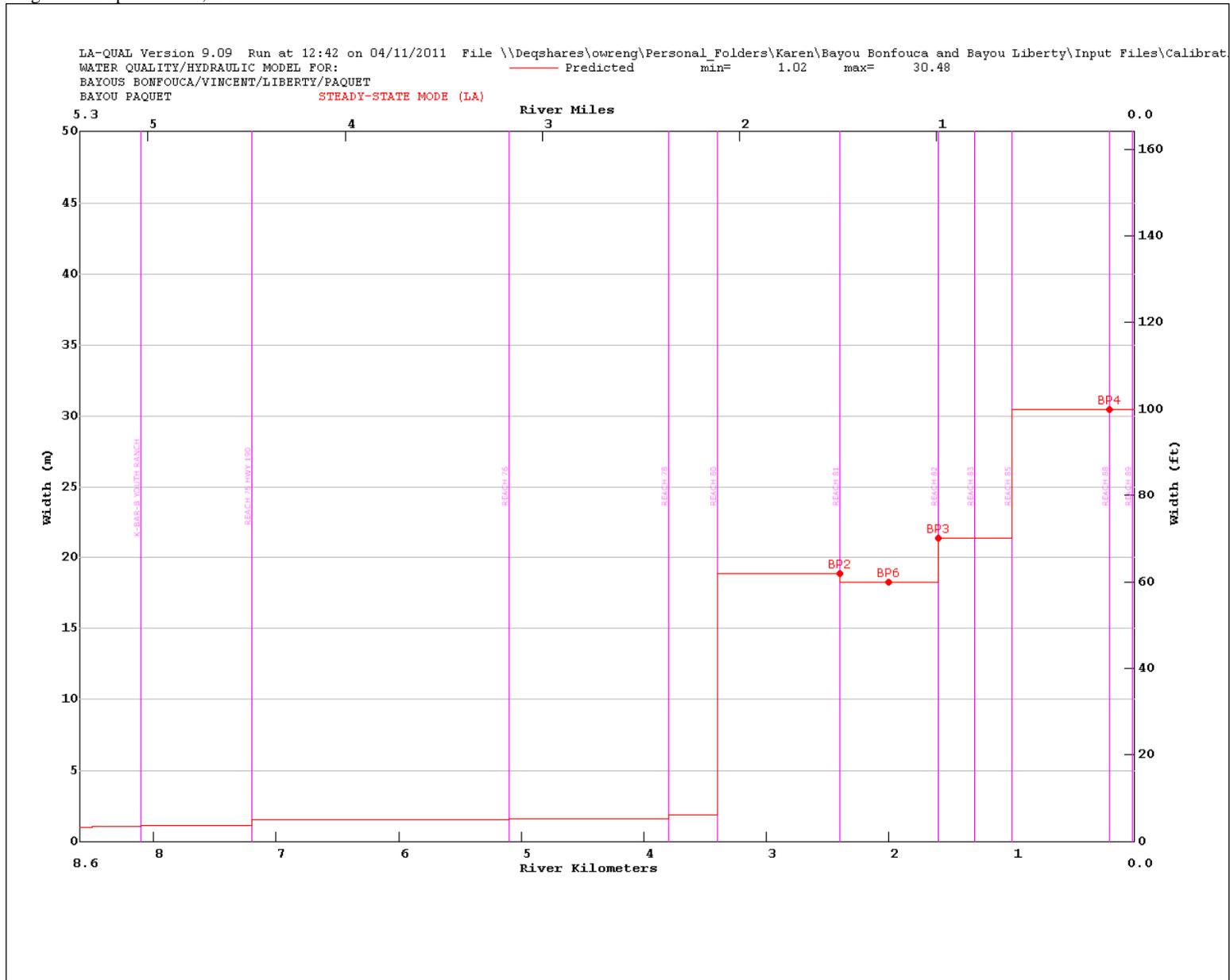


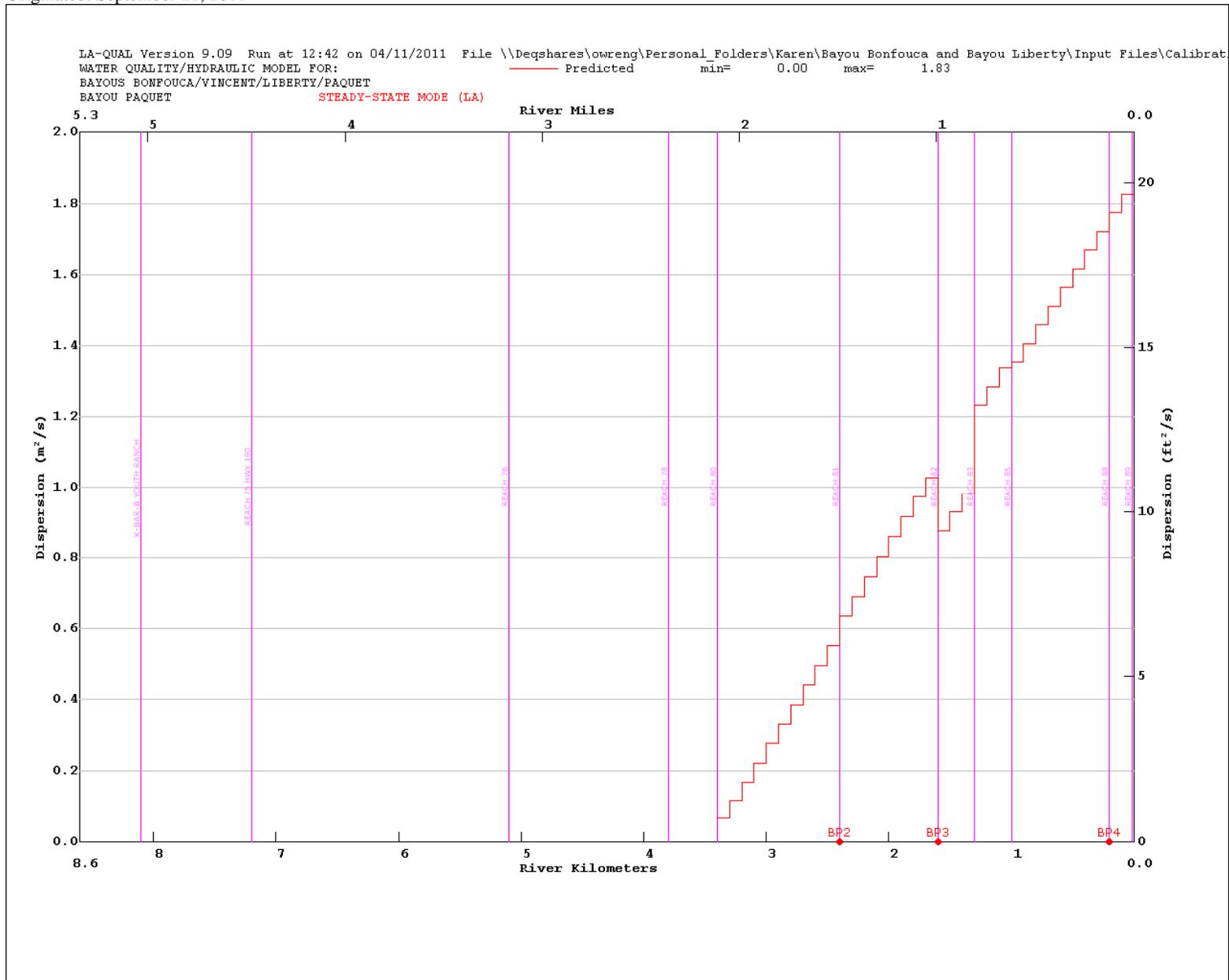
Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011





Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011





Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

BAYOU BONFOUCA AND BAYOU LIBERTY Calibration Input File

```
! DATA TYPE 01 -- TITLES AND CONTROL DATA
TITLE01      WATER QUALITY/HYDRAULIC MODEL FOR:
TITLE02      BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET
CONTROL YES  METRIC UNITS
CONTROL YES  USE EFFECTIVE CONCENTRATIONS
ENDATA01
! DATA TYPE 02 -- Model Options
MODOPT01 NO  TEMPERATURE
MODOPT02 YES SALINITY
MODOPT03 YES CONSERVATIVE MATERIAL I = CONDUCTIVITY           IN      COND
MODOPT04 YES CONSERVATIVE MATERIAL II = CHLORIDES            IN      CL
MODOPT05 YES DISSOLVED OXYGEN
MODOPT06 YES BOD1 BIOCHEMICAL OXYGEN DEMAND
MODOPT07 NO  BOD2 BIOCHEMICAL OXYGEN DEMAND
MODOPT08 YES NBOD
MODOPT09 NO  PHOSPHORUS SERIES
MODOPT10 NO  PHYTOPLANKTON
MODOPT11 NO  PERIPHYTON
MODOPT12 NO  COLIFORM
MODOPT13 NO  NONCONSERVATIVE MATERIAL
ENDATA02
! DATA TYPE 03 -- PROGRAM CONSTANTS
PROGRAM K2 MAXIMUM                = 25
PROGRAM DISPERSION EQUATION       = 3
PROGRAM TIDE HEIGHT                = 0.1
PROGRAM TIDAL PERIOD              = 19.75
PROGRAM PERIOD OF TIDAL RISE       = 10.5
PROGRAM S OXYGEN DEPENDENCE THRESHOLD = 1
PROGRAM SOD MAXIMUM RATE           = 50
PROGRAM PHYTOPLANKTON OXYGEN PROD  = 0
PROGRAM PERIPHYTON OXYGEN PROD     = 0
ENDATA03
! DATA TYPE 04 -- TEMPERATURE CORRECTION CONSTANTS
ENDATA04
! DATA TYPE 05 -- TEMPERATURE DATA
ENDATA05
! DATA TYPE 06 -- ALGAE CONSTANTS
ENDATA06
! DATA TYPE 07 -- MACROPHYTE CONSTANTS
ENDATA07
```

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

! DATA TYPE 08 -- REACH IDENTIFICATION DATA

! - - - -1- - - -2- - - -3- - - -4- - - -5- - - -6- - - -7- - - -8- - - -9- - - -0- - - -1

! 23456789012345678901234567890123456789012345678901234567890123456789012345678901234567890

! *** -- *****-----*****-----

!	R#	ID	SITE NAME	RKM	RKM	LENGTH
REACH ID	1	DD	DRAINAGE DITCH 1	24.2	20.3	0.1
REACH ID	2	BV	VINCENT FROM RKM 20.0 TO BV01	20.3	19.5	0.1
REACH ID	3	BV	VINCENT FROM BV01 RKM 18.5	19.5	18.5	0.1
REACH ID	4	BV	VINCENT FROM RKM 18.5 TO BV02	18.5	17.6	0.1
REACH ID	5	DD	DRAINAGE DITCH 2	2.1	0	0.1
REACH ID	6	BV	VINCENT FROM BV02 TO DD 8	17.6	16.9	0.05
REACH ID	7	DD	DRAINAGE DITCH 8	0.8	0	0.1
REACH ID	8	BV	VINCENT FROM DD 8 TO DD 9	16.9	16	0.1
REACH ID	9	DD	DRAINAGE DITCH 9	2.1	0	0.1
REACH ID	10	BV	VINCENT FROM DD 9 TO RKM 15.2	16	15.2	0.1
REACH ID	11	BV	VINCENT FROM RKM 15.2 TO BV03	15.2	14.9	0.05
REACH ID	12	BV	VINCENT FROM BV03 TO BONFOUCA	14.9	14.4	0.1
REACH ID	13	UB	UB FROM RKM 5.0 TO DD 23	5	2.6	0.1
REACH ID	14	DD	DRAINAGE DITCH 23	1	0	0.1
REACH ID	15	UB	UB FROM DD 23 TO BB01	2.6	1.1	0.1
REACH ID	16	UB	UB FROM BB01 TO BAYOU VINCENT	1.1	0	0.1
REACH ID	17	BB	BONFOUCA FROM BV TO HWY 190	14.4	14.2	0.1
REACH ID	18	DD	HWY 190 (DRAINAGE DITCH 5)	1.8	0	0.1
REACH ID	19	BB	BONFOUCA FROM HWY 190 TO BB02	14.2	13.3	0.1
REACH ID	20	BB	BONFOUCA FROM BB02 TO WD	13.3	12.1	0.1
REACH ID	21	WD	WEST DRAINAGE CANAL	0.3	0	0.1
REACH ID	22	BB	BONFOUCA FROM WD TO DD6	12.1	10	0.1
REACH ID	23	DD	DRAINAGE DITCH 6	0.3	0	0.1
REACH ID	24	BB	BONFOUCA FROM DD 6 TO TRIB 2	10	9.2	0.1
REACH ID	25	DD	DRAINAGE DITCH 7 - UPLAND	1.5	0.5	0.1
REACH ID	26	TR	TRIBUTARY 2 - TIDAL	0.5	0	0.1
REACH ID	27	BB	BONFOUCA FROM TRIB 2 TO BB03	9.2	8.6	0.1
REACH ID	28	BB	BONFOUCA FROM BB03 TO CANAL 26	8.6	7.8	0.1
REACH ID	29	C	CANAL 26	2	0	0.1
REACH ID	30	BB	BONFOUCA FROM CANAL 26 TO TRIB 47.8	47.8	7.6	0.1
REACH ID	31	TR	TRIBUTARY 10 - UPLAND	1.9	0.8	0.1
REACH ID	32	TR	TRIBUTARY 4 - TIDAL	0.8	0	0.1
REACH ID	33	BB	BONFOUCA FROM TRIB 4 TO BB04	7.6	6.8	0.1
REACH ID	34	BB	BONFOUCA FROM BB04 TO RKM 5.6	6.8	5.6	0.1
REACH ID	35	BB	BONFOUCA FROM RKM 5.6 TO BB05	5.6	4.5	0.1
REACH ID	36	BB	BONFOUCA FROM BB05 TO RKM 2.7	4.5	2.7	0.1
REACH ID	37	BB	BONFOUCA FROM RKM 2.7 TO LIBERTY2.7	2.7	0.8	0.1

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

REACH ID	38	BL LIBERTY FROM RKM 15.0 TO TRIB 1	15	14.4	0.1
REACH ID	39	TR TRIBUTARY 1	2.4	0	0.1
REACH ID	40	BL LIBERTY FROM RKM 14.4 TO DD22	14.4	13.7	0.1
REACH ID	41	DD DD22	0.3	0	0.1
REACH ID	42	BL LIBERTY FROM DD22 TO DD20	13.7	12.8	0.1
REACH ID	43	DD DD20	2.7	0	0.1
REACH ID	44	BL LIBERTY FROM DD20 TO BL03	12.8	12.6	0.1
REACH ID	45	BL LIBERTY FROM BL03 TO HWY 190	12.6	10.1	0.1
REACH ID	46	DD HWY 190 (DRAINAGE DITCH 14)	2.3	0	0.1
REACH ID	47	BL LIBERTY FROM HWY 190 TO BL04	10.1	10	0.1
REACH ID	48	BL LIBERTY FROM BL04 TO DD18	10	8.4	0.1
REACH ID	49	DD DD18	0.3	0	0.1
REACH ID	50	BL LIBERTY FROM DD18 TO DD19	8.4	7.8	0.1
REACH ID	51	DD DD19	1.4	0	0.1
REACH ID	52	BL LIBERTY FROM DD19 TO DD04	7.8	7.6	0.1
REACH ID	53	DD DD04	4.2	0	0.1
REACH ID	54	BL LIBERTY FROM DD04 TO BL05	7.6	6.9	0.1
REACH ID	55	BL LIBERTY FROM BL05 TO RKM 6.3	6.9	6.3	0.1
REACH ID	56	BL LIBERTY FROM RKM 6.3 TO RKM 6.0	6.3	6	0.1
REACH ID	57	BL LIBERTY FROM RKM 6.0 TO TRIB 9	6	5.2	0.1
REACH ID	58	DD DRAINAGE DITCH 3 - UPLAND	0.5	0.3	0.1
REACH ID	59	TR TRIBUTARY 9 - TIDAL	0.3	0	0.1
REACH ID	60	BL LIBERTY FROM TRIB 9 TO TRIB 6	5.2	4.4	0.1
REACH ID	61	DD DRAINAGE DITCH 11 - UPLAND	1.6	0.6	0.1
REACH ID	62	TR TRIBUTARY 6 - TIDAL	0.6	0	0.1
REACH ID	63	BL LIBERTY FROM TRIB 6 TO TRIB 10	4.4	4.2	0.1
REACH ID	64	TR TRIBUTARY 10 - UPLAND	0.7	0.2	0.1
REACH ID	65	TR TRIBUTARY 10 - TIDAL	0.2	0	0.1
REACH ID	66	BL LIBERTY FROM TRIB 10 TO BL07	4.2	3.3	0.1
REACH ID	67	BL LIBERTY FROM BL07 TO TRIB 8	3.3	3.2	0.1
REACH ID	68	TR TRIBUTARY 8 - UPLAND	0.6	0.1	0.1
REACH ID	69	TR TRIBUTARY 8 - TIDAL	0.1	0	0.1
REACH ID	70	BL LIBERTY FROM TRIB 8 TO M1	3.2	2.6	0.1
REACH ID	71	M MARINA 1 - TIDAL	0.2	0	0.1
REACH ID	72	BL LIBERTY FROM M1 TO M2	2.6	2.5	0.1
REACH ID	73	M MARINA02 - TIDAL	1.8	0	0.1
REACH ID	74	BL LIBERTY FROM M2 TO B PAQUET	2.5	1.1	0.1
REACH ID	75	DD HWY 190 (DD13-PAQUET HEADWATERS)	8.6	7.2	0.1
REACH ID	76	BP PAQUET FROM HWY 190 TO DD16	7.2	5.1	0.1
REACH ID	77	DD DD16	0.9	0	0.1
REACH ID	78	BP PAQUET FROM RKM 5.1 TO DD17	5.1	3.8	0.1
REACH ID	79	DD DD17	1.7	0	0.1

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

REACH ID	80	BP PAQUET FROM DD17 TO TIDAL REACH	3.8	3.4	0.1
REACH ID	81	BP PAQUET TIDAL REACH TO BP02	3.4	2.4	0.1
REACH ID	82	BP PAQUET FROM BP02 TO BP03	2.4	1.6	0.1
REACH ID	83	BP PAQUET FROM BP03 TO TRIB 24	1.6	1.3	0.1
REACH ID	84	C TRIB 24 FROM TOP TO PAQUET	0.4	0	0.1
REACH ID	85	BP PAQUET FROM TRIB 24 TO TRIB 25	1.3	1	0.1
REACH ID	86	C TRIB 25 FROM TOP TO RKM 0.3	1	0.3	0.1
REACH ID	87	C TRIB 25 FROM RKM 0.3 TO PAQUET	0.3	0	0.1
REACH ID	88	BP PAQUET FROM TRIB 25 TO BP04	1	0.2	0.1
REACH ID	89	BP PAQUET FROM BP04 TO LIBERTY	0.2	0	0.1
REACH ID	90	BL LIBERTY FROM PAQUET TO BONFOUCA	1.1	0	0.1
REACH ID	91	BB BONFOUCA FROM LIBERTY TO BB06	0.8	0	0.1

ENDATA08

! DATA TYPE 09 -- ADVECTIVE HYDRAULIC COEFFICIENTS

! - - - -1- - - - -2- - - - -3- - - - -4- - - - -5- - - - -6- - - - -7- - - - -8- - - - -9- - - - -0- - - - -1

! 234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890

! *** -----*****-----*****-----*****-----*****

!		a	b	c	d	e	f		
!		WIDTH	WIDTH	WIDTH	DEPTH	DEPTH	DEPTH		
!	R#	COEFF	EXP	CONST	COEFF	EXP	CONST	SLOPE	MANNING
HYDR-1	1	11.59770	0.3	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	2	4.765	0.3	0	0.3255	0.36	0	0.00001	0.03
HYDR-1	3	4.765	0.3	0	0.3255	0.36	0	0.00001	0.03
HYDR-1	4	4.765	0.3	0	0.3255	0.36	0	0.00001	0.03
HYDR-1	5	11.59770	0.3	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	6	4.765	0.3	0	0.3255	0.36	0	0.00001	0.03
HYDR-1	7	11.59770	0.3	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	8	4.765	0.3	0	0.3255	0.36	0	0.00001	0.03
HYDR-1	9	11.59770	0.3	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	10	4.765	0.3	0	0.3255	0.36	0	0.00001	0.03
HYDR-1	11	0	0	4.724	0	0	0.271	0.00001	0.03
HYDR-1	12	0	0	4.724	0	0	0.271	0.00001	0.03
HYDR-1	13	5.813	0.3	0	0.413	0.36	0	0.00001	0.03
HYDR-1	14	11.59770	0.3	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	15	5.813	0.3	0	0.413	0.36	0	0.00001	0.03
HYDR-1	16	8.719	0.3	0	0.62	0.36	0	0.00001	0.03
HYDR-1	17	0	0	10.84	0	0	0.87	0.00001	0.03
HYDR-1	18	11.59770	0.3	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	19	0	0	10.84	0	0	0.87	0.00001	0.03
HYDR-1	20	0	0	10.84	0	0	0.87	0.00001	0.03
HYDR-1	21	0	0	3	0	0	0.15	0.00001	0.03
HYDR-1	22	0	0	54.25	0	0	1.24	0.00001	0.03

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

HYDR-1	23	11.59770.3	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	24	0	93.08	0	0	1.603	0.00001	0.03
HYDR-1	25	11.59770.3	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	26	0	12	0	0	0.6	0.00001	0.03
HYDR-1	27	0	93.08	0	0	1.603	0.00001	0.03
HYDR-1	28	0	93.08	0	0	1.603	0.00001	0.03
HYDR-1	29	0	114	0	0	1	0.00001	0.03
HYDR-1	30	0	76.51	0	0	1.87	0.00001	0.03
HYDR-1	31	11.59770.3	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	32	0	18	0	0	0.9	0.00001	0.03
HYDR-1	33	0	76.51	0	0	1.87	0.00001	0.03
HYDR-1	34	0	91.4	0	0	1.89	0.00001	0.03
HYDR-1	35	0	114.3	0	0	1.67	0.00001	0.03
HYDR-1	36	0	77.7	0	0	1.44	0.00001	0.03
HYDR-1	37	0	88	0	0	1.6	0.00001	0.03
HYDR-1	38	8.72 0.3	0	0.62	0.36	0	0.00001	0.03
HYDR-1	39	11.59770.3	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	40	8.72 0.3	0	0.62	0.36	0	0.00001	0.03
HYDR-1	41	11.59770.3	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	42	17.43760.3	0	0.992	0.36	0	0.00001	0.03
HYDR-1	43	11.59770.3	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	44	0	8.84	0	0	0.472	0.00001	0.03
HYDR-1	45	0	8.84	0	0	0.472	0.00001	0.03
HYDR-1	46	11.59770.3	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	47	0	18.6	0	0	1.4	0.00001	0.03
HYDR-1	48	0	18.6	0	0	1.4	0.00001	0.03
HYDR-1	49	11.59770.3	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	50	0	18.6	0	0	1.4	0.00001	0.03
HYDR-1	51	11.59770.3	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	52	0	42.67	0	0	2.28	0.00001	0.03
HYDR-1	53	11.59770.3	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	54	0	42.67	0	0	2.28	0.00001	0.03
HYDR-1	55	0	42.67	0	0	2.28	0.00001	0.03
HYDR-1	56	0	39.69	0	0	1.7	0.00001	0.03
HYDR-1	57	0	47.55	0	0	2.08	0.00001	0.03
HYDR-1	58	11.59770.3	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	59	0	16	0	0	0.8	0.00001	0.03
HYDR-1	60	0	47.55	0	0	2.08	0.00001	0.03
HYDR-1	61	11.59770.3	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	62	0	12	0	0	0.6	0.00001	0.03
HYDR-1	63	0	52.73	0	0	2.09	0.00001	0.03
HYDR-1	64	11.59770.3	0	0.9468	0.36	0	0.00001	0.03

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

HYDR-1	65	0	0	13	0	0	0.65	0.00001	0.03
HYDR-1	66	0	0	52.12	0	0	2.14	0.00001	0.03
HYDR-1	67	0	0	52.12	0	0	2.14	0.00001	0.03
HYDR-1	68	11.59770	.3	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	69	0	0	10	0	0	0.5	0.00001	0.03
HYDR-1	70	0	0	52.12	0	0	2.14	0.00001	0.03
HYDR-1	71	0	0	32	0	0	1.2	0.00001	0.03
HYDR-1	72	0	0	56.54	0	0	2.14	0.00001	0.03
HYDR-1	73	0	0	32	0	0	1.2	0.00001	0.03
HYDR-1	74	0	0	60.96	0	0	2.13	0.00001	0.03
HYDR-1	75	11.59770	.3	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	76	8.72	0.3	0	0.62	0.36	0	0.00001	0.03
HYDR-1	77	11.59770	.3	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	78	8.72	0.3	0	0.62	0.36	0	0.00001	0.03
HYDR-1	79	11.59770	.3	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	80	8.72	0.3	0	0.62	0.36	0	0.00001	0.03
HYDR-1	81	0	0	18.9	0	0	1.1	0.00001	0.03
HYDR-1	82	0	0	18.29	0	0	1	0.00001	0.03
HYDR-1	83	0	0	21.34	0	0	1.5	0.00001	0.03
HYDR-1	84	0	0	20.1	0	0	0.74	0.00001	0.03
HYDR-1	85	0	0	21.34	0	0	1.5	0.00001	0.03
HYDR-1	86	0	0	16.46	0	0	0.94	0.00001	0.03
HYDR-1	87	0	0	32	0	0	0.77	0.00001	0.03
HYDR-1	88	0	0	30.48	0	0	1.5	0.00001	0.03
HYDR-1	89	0	0	30.48	0	0	1.5	0.00001	0.03
HYDR-1	90	0	0	60.96	0	0	2.13	0.00001	0.03
HYDR-1	91	0	0	105.59	0	0	1.96	0.00001	0.03

ENDATA09

! DATA TYPE 10 -- DISPERSIVE HYDRAULIC COEFFICIENTS

! - - - -1- - - - -2- - - - -3- - - - -4- - - - -5- - - - -6- - - - -7- - - - -8- - - - -9- - - - -0- - - - -1

! 234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890

! *** -----*****-----*****-----

!	TIDAL					
!	R#	RANGE	a	b	c	d
HYDR-2	1	0 0	0.833	0	1	
HYDR-2	2	0 0	0.833	0	1	
HYDR-2	3	0 0	0.833	0	1	
HYDR-2	4	0 0	0.833	0	1	
HYDR-2	5	0 0	0.833	0	1	
HYDR-2	6	0 0	0.833	0	1	
HYDR-2	7	0 0	0.833	0	1	
HYDR-2	8	0 0	0.833	0	1	

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

HYDR-2	9	0	0	0.833	0	1
HYDR-2	10	0	0	0.833	0	1
HYDR-2	11	1	200	0.833	0	1
HYDR-2	12	1	200	0.833	0	1
HYDR-2	13	0	0	0.833	0	1
HYDR-2	14	0	0	0.833	0	1
HYDR-2	15	0	0	0.833	0	1
HYDR-2	16	0	0	0.833	0	1
HYDR-2	17	1	200	0.833	0	1
HYDR-2	18	0	0	0.833	0	1
HYDR-2	19	1	200	0.833	0	1
HYDR-2	20	1	200	0.833	0	1
HYDR-2	21	1	200	0.833	0	1
HYDR-2	22	1	200	0.833	0	1
HYDR-2	23	0	0	0.833	0	1
HYDR-2	24	1	200	0.833	0	1
HYDR-2	25	0	0	0.833	0	1
HYDR-2	26	1	200	0.833	0	1
HYDR-2	27	1	200	0.833	0	1
HYDR-2	28	1	200	0.833	0	1
HYDR-2	29	1	200	0.833	0	1
HYDR-2	30	1	200	0.833	0	1
HYDR-2	31	0	0	0.833	0	1
HYDR-2	32	1	200	0.833	0	1
HYDR-2	33	1	200	0.833	0	1
HYDR-2	34	1	200	0.833	0	1
HYDR-2	35	1	200	0.833	0	1
HYDR-2	36	1	200	0.833	0	1
HYDR-2	37	1	200	0.833	0	1
HYDR-2	38	0	0	0.833	0	1
HYDR-2	39	0	0	0.833	0	1
HYDR-2	40	0	0	0.833	0	1
HYDR-2	41	0	0	0.833	0	1
HYDR-2	42	0	0	0.833	0	1
HYDR-2	43	0	0	0.833	0	1
HYDR-2	44	1	100	0.833	0	1
HYDR-2	45	1	100	0.833	0	1
HYDR-2	46	0	0	0.833	0	1
HYDR-2	47	1	100	0.833	0	1
HYDR-2	48	1	100	0.833	0	1
HYDR-2	49	0	0	0.833	0	1
HYDR-2	50	1	150	0.833	0	1

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

HYDR-2	51	0	0	0.833	0	1
HYDR-2	52	1	200	0.833	0	1
HYDR-2	53	0	0	0.833	0	1
HYDR-2	54	1	250	0.833	0	1
HYDR-2	55	1	300	0.833	0	1
HYDR-2	56	1	300	0.833	0	1
HYDR-2	57	1	300	0.833	0	1
HYDR-2	58	0	0	0.833	0	1
HYDR-2	59	1	200	0.833	0	1
HYDR-2	60	1	300	0.833	0	1
HYDR-2	61	0	0	0.833	0	1
HYDR-2	62	1	200	0.833	0	1
HYDR-2	63	1	300	0.833	0	1
HYDR-2	64	0	0	0.833	0	1
HYDR-2	65	1	200	0.833	0	1
HYDR-2	66	1	300	0.833	0	1
HYDR-2	67	1	300	0.833	0	1
HYDR-2	68	0	0	0.833	0	1
HYDR-2	69	1	200	0.833	0	1
HYDR-2	70	1	300	0.833	0	1
HYDR-2	71	1	200	0.833	0	1
HYDR-2	72	1	300	0.833	0	1
HYDR-2	73	1	200	0.833	0	1
HYDR-2	74	1	300	0.833	0	1
HYDR-2	75	0	0	0.833	0	1
HYDR-2	76	0	0	0.833	0	1
HYDR-2	77	0	0	0.833	0	1
HYDR-2	78	0	0	0.833	0	1
HYDR-2	79	0	0	0.833	0	1
HYDR-2	80	0	0	0.833	0	1
HYDR-2	81	1	200	0.833	0	1
HYDR-2	82	1	200	0.833	0	1
HYDR-2	83	1	200	0.833	0	1
HYDR-2	84	1	200	0.833	0	1
HYDR-2	85	1	200	0.833	0	1
HYDR-2	86	1	200	0.833	0	1
HYDR-2	87	1	200	0.833	0	1
HYDR-2	88	1	200	0.833	0	1
HYDR-2	89	1	200	0.833	0	1
HYDR-2	90	1	300	0.833	0	1
HYDR-2	91	1	200	0.833	0	1

ENDATA10

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

! DATA TYPE 11 -- INITIAL CONDITIONS

! - - - -1- - - -2- - - -3- - - -4- - - -5- - - -6- - - -7- - - -8- - - -9- - - -0- - - -1

! 23456789012345678901234567890123456789012345678901234567890123456789012345678901234567890

! *** -----*****-----*****-----*****-----*****

!	R#	TEMP	SALINITY	DO	NH3 N	NIT NIT	I PHOS	CHL A	MACROPHYTES
INITIAL	1	30	0.26	3	0.1	0.1		0	0
INITIAL	2	33.82	0.26	3	0.1	0.1		0	0
INITIAL	3	33.82	0.26	3	0.1	0.1		0	0
INITIAL	4	27.21	0.39	3	0.1	0.1		0	0
INITIAL	5	30	0.3	3	0.1	0.1		0	0
INITIAL	6	27.21	0.39	3	0.1	0.1		0	0
INITIAL	7	30	0.3	3	0.1	0.1		0	0
INITIAL	8	27.21	0.28	3	0.1	0.1		0	0
INITIAL	9	30	0.3	3	0.1	0.1		0	0
INITIAL	10	27.9	0.17	3	0.1	0.1		0	0
INITIAL	11	27.9	0.17	3	0.1	0.1		24.6	0
INITIAL	12	27.9	0.17	3	0.1	0.1		24.6	0
INITIAL	13	30	0.17	3	0.1	0.1		0	0
INITIAL	14	30	0.3	3	0.1	0.1		0	0
INITIAL	15	30	0.17	3	0.1	0.1		0	0
INITIAL	16	30	0.17	3	0.1	0.1		0	0
INITIAL	17	29.6	0.24	3	0.1	0.1		24.6	0
INITIAL	18	30	0.27	3	0.1	0.1		0	0
INITIAL	19	29.6	0.27	3	0.1	0.1		49.9	0
INITIAL	20	29.6	0.45	3	0.1	0.1		49.9	0
INITIAL	21	30	0.3	3	0.1	0.1		0	0
INITIAL	22	29.6	1.15	3	0.1	0.1		8.8	0
INITIAL	23	30	0.3	3	0.1	0.1		0	0
INITIAL	24	31.54	2.1	3	0.1	0.1		8.8	0
INITIAL	25	30	0.3	3	0.1	0.1		0	0
INITIAL	26	30	0.3	3	0.1	0.1		0	0
INITIAL	27	31.54	2.4	3	0.1	0.1		8.8	0
INITIAL	28	31.54	2.68	3	0.1	0.1		8.8	0
INITIAL	29	30	0.3	3	0.1	0.1		0	0
INITIAL	30	31.54	3	3	0.1	0.1		10.6	0
INITIAL	31	30	0.3	3	0.1	0.1		0	0
INITIAL	32	30	0.3	3	0.1	0.1		10.6	0
INITIAL	33	31.29	3.1	3	0.1	0.1		11.3	0
INITIAL	34	31.29	3.3	3	0.1	0.1		11.3	0
INITIAL	35	31.29	3.3	3	0.1	0.1		12.9	0
INITIAL	36	31.29	3.62	3	0.1	0.1		12.9	0
INITIAL	37	31.29	3.82	3	0.1	0.1		10.2	0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

INITIAL	38	29.33	0.3	3	0.1	0.1	0	0
INITIAL	39	30	0.3	3	0.1	0.1	0	0
INITIAL	40	29.33	0.3	3	0.1	0.1	0	0
INITIAL	41	30	0.3	3	0.1	0.1	0	0
INITIAL	42	29.33	0.3	3	0.1	0.1	0	0
INITIAL	43	30	0.3	3	0.1	0.1	0	0
INITIAL	44	29.33	0.48	3	0.1	0.1	14.8	0
INITIAL	45	29.33	0.48	3	0.1	0.1	14.8	0
INITIAL	46	30	0.3	3	0.1	0.1	0	0
INITIAL	47	29.52	0.54	3	0.1	0.1	14.8	0
INITIAL	48	29.52	0.54	3	0.1	0.1	57.1	0
INITIAL	49	30	0.3	3	0.1	0.1	0	0
INITIAL	50	29.52	1.7	3	0.1	0.1	3.2	0
INITIAL	51	30	0.3	3	0.1	0.1	0	0
INITIAL	52	31.31	2.9	3	0.1	0.1	3.2	0
INITIAL	53	30	0.3	3	0.1	0.1	0	0
INITIAL	54	31.31	3.09	3	0.1	0.1	3.2	0
INITIAL	55	31.31	3.09	3	0.1	0.1	3.2	0
INITIAL	56	31.31	3.09	3	0.1	0.1	3.2	0
INITIAL	57	31.31	3.09	3	0.1	0.1	3.2	0
INITIAL	58	30	0.3	3	0.1	0.1	0	0
INITIAL	59	30	0.3	3	0.1	0.1	0	0
INITIAL	60	31.99	2.8	3	0.1	0.1	3.2	0
INITIAL	61	30	0.3	3	0.1	0.1	0	0
INITIAL	62	30	0.3	3	0.1	0.1	0	0
INITIAL	63	31.99	2.4	3	0.1	0.1	3.2	0
INITIAL	64	30	0.3	3	0.1	0.1	0	0
INITIAL	65	30	0.3	3	0.1	0.1	0	0
INITIAL	66	31.99	2.12	3	0.1	0.1	3.2	0
INITIAL	67	31.99	2.12	3	0.1	0.1	65.2	0
INITIAL	68	30	0.3	3	0.1	0.1	0	0
INITIAL	69	30	0.3	3	0.1	0.1	0	0
INITIAL	70	31.99	2.8	3	0.1	0.1	65.2	0
INITIAL	71	30	0.3	3	0.1	0.1	0	0
INITIAL	72	31.99	3.5	3	0.1	0.1	6.8	0
INITIAL	73	30	0.3	3	0.1	0.1	0	0
INITIAL	74	31.99	4.16	3	0.1	0.1	6.8	0
INITIAL	75	30	0.3	3	0.1	0.1	0	0
INITIAL	76	32.08	0.3	3	0.1	0.1	0	0
INITIAL	77	30	0.3	3	0.1	0.1	0	0
INITIAL	78	32.08	0.3	3	0.1	0.1	0	0
INITIAL	79	30	0.3	3	0.1	0.1	0	0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

INITIAL	80	32.08	1.6	3	0.1	0.1	0	0
INITIAL	81	32.08	3.17	3	0.1	0.1	14.6	0
INITIAL	82	32.08	3.32	3	0.1	0.1	14.6	0
INITIAL	83	32.07	3.47	3	0.1	0.1	14.6	0
INITIAL	84	30	0.3	3	0.1	0.1	0	0
INITIAL	85	32.07	3.7	3	0.1	0.1	13.6	0
INITIAL	86	30	0.3	3	0.1	0.1	0	0
INITIAL	87	30	0.3	3	0.1	0.1	0	0
INITIAL	88	32.72	3.94	3	0.1	0.1	13.6	0
INITIAL	89	32.72	3.94	3	0.1	0.1	13.6	0
INITIAL	90	30.44	4.16	3	0.1	0.1	6.8	0
INITIAL	91	30.22	4	3	0.1	0.1	7.4	0

ENDATA11

! DATA TYPE 12 -- REAERATION, SEDIMENT OXYGEN DEMAND AND BOD COEFFICIENTS

!-----1-----2-----3-----4-----5-----6-----7-----8-----9

!234567890123456789012345678901234567890123456789012345678901234567890

! *** -----*****----- *****-----*****-----*****-----*****-----*****

!

! R# REA KL MIN SOD BOD 1 DECA BOD 1 SETT BOD 2 DECA BOD 2 SETT

!	R#	REA	KL	MIN		SOD	BOD 1 DECA	BOD 1 SETT		BOD 2 DECA	BOD 2 SETT		
COEF-1	1	15	0	0	0	0.5	0.08	0.05	1	0	0	0	0
COEF-1	2	15	0	0	0	0.3	0.08	0.05	1	0	0	0	0
COEF-1	3	15	0	0	0	6	0.08	0.05	1	0	0	0	0
COEF-1	4	15	0	0	0	7	0.08	0.05	1	0	0	0	0
COEF-1	5	15	0	0	0	0.5	0.08	0.05	1	0	0	0	0
COEF-1	6	15	0	0	0	7	0.08	0.05	1	0	0	0	0
COEF-1	7	15	0	0	0	0.5	0.08	0.05	1	0	0	0	0
COEF-1	8	15	0	0	0	7	0.08	0.05	1	0	0	0	0
COEF-1	9	15	0	0	0	0.5	0.08	0.05	1	0	0	0	0
COEF-1	10	15	0	0	0	7	0.08	0.05	1	0	0	0	0
COEF-1	11	15	0	0	0	4.2	0.08	0.05	1	0	0	0	0
COEF-1	12	15	0	0	0	4.2	0.08	0.05	1	0	0	0	0
COEF-1	13	15	0	0	0	0.5	0.08	0.05	1	0	0	0	0
COEF-1	14	15	0	0	0	0.5	0.08	0.05	1	0	0	0	0
COEF-1	15	15	0	0	0	0.5	0.08	0.05	1	0	0	0	0
COEF-1	16	15	0	0	0	0.5	0.08	0.05	1	0	0	0	0
COEF-1	17	15	0	0	0	2.8	0.08	0.05	1	0	0	0	0
COEF-1	18	15	0	0	0	0.5	0.08	0.05	1	0	0	0	0
COEF-1	19	15	0	0	0	3.6	0.08	0.05	1	0	0	0	0
COEF-1	20	15	0	0	0	3.6	0.08	0.05	1	0	0	0	0
COEF-1	21	15	0	0	0	0.5	0.08	0.05	1	0	0	0	0
COEF-1	22	11	0	0	0	2.3	0.08	0.05	1	0	0	0	0
COEF-1	23	15	0	0	0	0.5	0.08	0.05	1	0	0	0	0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

COEF-1	24	1	0.504	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	25	15	0	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	26	11	0	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	27	1	0.504	0	0	0.4	0.08	0.05	1	0	0	0	0	0
COEF-1	28	1	0.504	0	0	0.4	0.08	0.05	1	0	0	0	0	0
COEF-1	29	11	0	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	30	1	0.477	0	0	0.4	0.08	0.05	1	0	0	0	0	0
COEF-1	31	15	0	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	32	11	0	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	33	1	0.477	0	0	0.2	0.08	0.05	1	0	0	0	0	0
COEF-1	34	1	0.477	0	0	0	0.08	0.05	1	0	0	0	0	0
COEF-1	35	1	0.542	0	0	0	0.08	0.05	1	0	0	0	0	0
COEF-1	36	1	0.658	0	0	0.05	0.08	0.05	1	0	0	0	0	0
COEF-1	37	1	0.58	0	0	0	0.08	0.05	1	0	0	0	0	0
COEF-1	38	15	0	0	0	2	0.08	0.05	1	0	0	0	0	0
COEF-1	39	15	0	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	40	15	0	0	0	2.5	0.08	0.05	1	0	0	0	0	0
COEF-1	41	15	0	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	42	15	0	0	0	2.7	0.08	0.05	1	0	0	0	0	0
COEF-1	43	15	0	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	44	15	0	0	0	2.5	0.08	0.05	1	0	0	0	0	0
COEF-1	45	15	0	0	0	1.7	0.08	0.05	1	0	0	0	0	0
COEF-1	46	15	0	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	47	11	0	0	0	0.4	0.08	0.05	1	0	0	0	0	0
COEF-1	48	11	0	0	0	0.33	0.08	0.05	1	0	0	0	0	0
COEF-1	49	15	0	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	50	11	0	0	0	0.1	0.08	0.05	1	0	0	0	0	0
COEF-1	51	15	0	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	52	11	0	0	0	0	0.08	0.05	1	0	0	0	0	0
COEF-1	53	15	0	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	54	11	0	0	0	0.04	0.08	0.05	0.4	0	0	0	0	0
COEF-1	55	1	0.355	0	0	0.1	0.08	0.05	0.4	0	0	0	0	0
COEF-1	56	1	0.469	0	0	0.04	0.08	0.05	1	0	0	0	0	0
COEF-1	57	1	0.389	0	0	0	0.08	0.05	1	0	0	0	0	0
COEF-1	58	15	0	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	59	11	0	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	60	1	0.438	0	0	0	0.08	0.05	1	0	0	0	0	0
COEF-1	61	15	0	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	62	11	0	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	63	1	0.426	0	0	0	0.08	0.05	1	0	0	0	0	0
COEF-1	64	15	0	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	65	11	0	0	0	0.5	0.08	0.05	1	0	0	0	0	0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

COEF-1	66	1	0.426	0	0	0.21	0.08	0.05	0.4	0	0	0	0	0
COEF-1	67	1	0.426	0	0	0.22	0.08	0.05	0	0	0	0	0	0
COEF-1	68	15	0	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	69	11	0	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	70	1	0.426	0	0	0.2	0.08	0.05	0	0	0	0	0	0
COEF-1	71	11	0	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	72	1	0.426	0	0	0	0.08	0.05	0	0	0	0	0	0
COEF-1	73	11	0	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	74	1	0.426	0	0	0	0.08	0.05	0	0	0	0	0	0
COEF-1	75	15	0	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	76	15	0	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	77	15	0	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	78	15	0	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	79	15	0	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	80	15	0	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	81	15	0	0	0	0.32	0.08	0.05	1	0	0	0	0	0
COEF-1	82	1	0.801	0	0	0.76	0.08	0.05	1	0	0	0	0	0
COEF-1	83	1	0.606	0	0	0.6	0.08	0.05	1	0	0	0	0	0
COEF-1	84	15	0	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	85	1	0.606	0	0	0.3	0.08	0.05	1	0	0	0	0	0
COEF-1	86	15	0	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	87	15	0	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	88	1	0.606	0	0	0	0.08	0.05	1	0	0	0	0	0
COEF-1	89	1	0.606	0	0	0	0.08	0.05	1	0	0	0	0	0
COEF-1	90	1	0.426	0	0	0	0.08	0.05	0	0	0	0	0	0
COEF-1	91	1	0.503	0	0	0	0.08	0.05	0	0	0	0	0	0

ENDATA12

! DATA TYPE 13 -- NITROGEN AND PHOSPHOURS COEFFICIENTS

! - - - -1- - - - -2- - - - -3- - - - -4- - - - -5- - - - -6- - - - -7- - - - -8- - - - -9- - - - -0- - - - -1

! 234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890

! *** -----*****-----*****-----*****-----

!		NBOD	NBOD							
!	R#	DECAY	SETT							
COEF-2	1	0.03	0.05	0	0	0	0	0	0	0
COEF-2	2	0.03	0.05	0	0	0	0	0	0	0
COEF-2	3	0.03	0.05	0	0	0	0	0	0	0
COEF-2	4	0.03	0.05	0	0	0	0	0	0	0
COEF-2	5	0.03	0.05	0	0	0	0	0	0	0
COEF-2	6	0.03	0.1	0	0	0	0	0	0	0
COEF-2	7	0.03	0.05	0	0	0	0	0	0	0
COEF-2	8	0.03	0.1	0	0	0	0	0	0	0
COEF-2	9	0.03	0.05	0	0	0	0	0	0	0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

COEF-2	10	0.03	0.05	0	0	0	0	0	0
COEF-2	11	0.03	0.15	0	0	0	0	0	0
COEF-2	12	0.03	0.15	0	0	0	0	0	0
COEF-2	13	0.03	0.05	0	0	0	0	0	0
COEF-2	14	0.03	0.05	0	0	0	0	0	0
COEF-2	15	0.03	0.05	0	0	0	0	0	0
COEF-2	16	0.03	0.05	0	0	0	0	0	0
COEF-2	17	0.03	0.15	0	0	0	0	0	0
COEF-2	18	0.03	0.05	0	0	0	0	0	0
COEF-2	19	0.03	0.15	0	0	0	0	0	0
COEF-2	20	0.03	0.05	0	0	0	0	0	0
COEF-2	21	0.03	0.05	0	0	0	0	0	0
COEF-2	22	0.03	0.05	0	0	0	0	0	0
COEF-2	23	0.03	0.05	0	0	0	0	0	0
COEF-2	24	0.03	0.05	0	0	0	0	0	0
COEF-2	25	0.03	0.05	0	0	0	0	0	0
COEF-2	26	0.03	0.05	0	0	0	0	0	0
COEF-2	27	0.03	0.05	0	0	0	0	0	0
COEF-2	28	0.03	0.05	0	0	0	0	0	0
COEF-2	29	0.03	0.05	0	0	0	0	0	0
COEF-2	30	0.03	0.05	0	0	0	0	0	0
COEF-2	31	0.03	0.05	0	0	0	0	0	0
COEF-2	32	0.03	0.05	0	0	0	0	0	0
COEF-2	33	0.03	0.05	0	0	0	0	0	0
COEF-2	34	0.03	0.05	0	0	0	0	0	0
COEF-2	35	0.03	0.05	0	0	0	0	0	0
COEF-2	36	0.03	0.05	0	0	0	0	0	0
COEF-2	37	0.03	0.05	0	0	0	0	0	0
COEF-2	38	0.03	0.05	0	0	0	0	0	0
COEF-2	39	0.03	0.05	0	0	0	0	0	0
COEF-2	40	0.03	0.05	0	0	0	0	0	0
COEF-2	41	0.03	0.05	0	0	0	0	0	0
COEF-2	42	0.03	0.05	0	0	0	0	0	0
COEF-2	43	0.03	0.05	0	0	0	0	0	0
COEF-2	44	0.03	0.05	0	0	0	0	0	0
COEF-2	45	0.03	0.05	0	0	0	0	0	0
COEF-2	46	0.03	0.05	0	0	0	0	0	0
COEF-2	47	0.03	0.05	0	0	0	0	0	0
COEF-2	48	0.03	0.05	0	0	0	0	0	0
COEF-2	49	0.03	0.05	0	0	0	0	0	0
COEF-2	50	0.03	0.05	0	0	0	0	0	0
COEF-2	51	0.03	0.05	0	0	0	0	0	0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

COEF-2	52	0.03	0.05	0	0	0	0	0	0
COEF-2	53	0.03	0.05	0	0	0	0	0	0
COEF-2	54	0.03	0.05	0	0	0	0	0	0
COEF-2	55	0.03	0.05	0	0	0	0	0	0
COEF-2	56	0.03	0.05	0	0	0	0	0	0
COEF-2	57	0.03	0.05	0	0	0	0	0	0
COEF-2	58	0.03	0.05	0	0	0	0	0	0
COEF-2	59	0.03	0.05	0	0	0	0	0	0
COEF-2	60	0.03	0.05	0	0	0	0	0	0
COEF-2	61	0.03	0.05	0	0	0	0	0	0
COEF-2	62	0.03	0.05	0	0	0	0	0	0
COEF-2	63	0.03	0.05	0	0	0	0	0	0
COEF-2	64	0.03	0.05	0	0	0	0	0	0
COEF-2	65	0.03	0.05	0	0	0	0	0	0
COEF-2	66	0.03	0.05	0	0	0	0	0	0
COEF-2	67	0.03	0.05	0	0	0	0	0	0
COEF-2	68	0.03	0.05	0	0	0	0	0	0
COEF-2	69	0.03	0.05	0	0	0	0	0	0
COEF-2	70	0.03	0.05	0	0	0	0	0	0
COEF-2	71	0.03	0.05	0	0	0	0	0	0
COEF-2	72	0.03	0.05	0	0	0	0	0	0
COEF-2	73	0.03	0.05	0	0	0	0	0	0
COEF-2	74	0.03	0.05	0	0	0	0	0	0
COEF-2	75	0.03	0.05	0	0	0	0	0	0
COEF-2	76	0.03	0.05	0	0	0	0	0	0
COEF-2	77	0.03	0.05	0	0	0	0	0	0
COEF-2	78	0.03	0.05	0	0	0	0	0	0
COEF-2	79	0.03	0.05	0	0	0	0	0	0
COEF-2	80	0.03	0.05	0	0	0	0	0	0
COEF-2	81	0.03	0.05	0	0	0	0	0	0
COEF-2	82	0.03	0.05	0	0	0	0	0	0
COEF-2	83	0.03	0.05	0	0	0	0	0	0
COEF-2	84	0.03	0.05	0	0	0	0	0	0
COEF-2	85	0.03	0.05	0	0	0	0	0	0
COEF-2	86	0.03	0.05	0	0	0	0	0	0
COEF-2	87	0.03	0.05	0	0	0	0	0	0
COEF-2	88	0.03	0.05	0	0	0	0	0	0
COEF-2	89	0.03	0.05	0	0	0	0	0	0
COEF-2	90	0.03	0.05	0	0	0	0	0	0
COEF-2	91	0.03	0.05	0	0	0	0	0	0

ENDATA13

! DATA TYPE 14 -- ALGAE AND MACROPHYTE COEFFICIENTS

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

ENDATA14

```
! DATA TYPE 15 -- COLIFORM AND NONCONSERVATIVE COEFFICIENTS
! - - - -1- - - - -2- - - - -3- - - - -4- - - - -5- - - - -6- - - - -7- - - - -8- - - - -9- - - - -0- - - - -1
!234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
!
!          *** -----*****-----*****
!          *** -----*****-----*****
```

ENDATA15

```
! DATA TYPE 16 -- INCREMENTAL DATA FOR FLOW, TEMPERATURE, SALINITY, AND CONSERVATIVES
! - - - -1- - - - -2- - - - -3- - - - -4- - - - -5- - - - -6- - - - -7- - - - -8- - - - -9- - - - -0- - - - -1
!234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
!
!          *** -----*****-----*****-----*****-----*****
!          R#   OUTFLOW   INFLOW   TEMP       SALINITY CHLORIDE   COND
```

ENDATA16

```
! DATA TYPE 17 -- INCREMENTAL DATA FOR DO, BOD, AND NITROGEN
! - - - -1- - - - -2- - - - -3- - - - -4- - - - -5- - - - -6- - - - -7- - - - -8- - - - -9- - - - -0- - - - -1
!234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
!
!          *** -----*****-----*****-----*****-----*****
!          R#       DO       BOD 1       NBOD       NH3 N       NIT NIT       BOD 2
```

ENDATA17

```
! DATA TYPE 18 -- Incremental Data
! - - - -1- - - - -2- - - - -3- - - - -4- - - - -5- - - - -6- - - - -7- - - - -8- - - - -9- - - - -0- - - - -1
!234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
!
!          *** -----*****-----*****-----*****
!          R#   PHOSPH   CHL A   COLIFORM NONCONSERVATIVE
```

ENDATA18

```
! DATA TYPE 19 -- NONPOINT SOURCE DATA
! - - - -1- - - - -2- - - - -3- - - - -4- - - - -5- - - - -6- - - - -7- - - - -8- - - - -9- - - - -0- - - - -1
!234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
!
!          *** -----*****-----*****-----*****-----*****
!          R#       BOD 1       NBOD       COLIFORM NONCONS       DO       BOD 2
```

	R#	BOD 1	NBOD	COLIFORM	NONCONS	DO	BOD 2
NONPOINT	1	0.65	0.27	0	0	0	0
NONPOINT	2	0.13	0.05	0	0	0	0
NONPOINT	3	1.4	0.05	0	0	0	0
NONPOINT	4	1.4	0.05	0	0	0	0
NONPOINT	5	0.3	0.131	0	0	0	0
NONPOINT	6	1.4	0.14	0	0	0	0
NONPOINT	7	0.11	0.05	0	0	0	0
NONPOINT	8	1.7	0.14	0	0	0	0
NONPOINT	9	0.3	0.133	0	0	0	0
NONPOINT	10	0.1	0.05	0	0	0	0
NONPOINT	11	0.8	0.15	0	0	0	0
NONPOINT	12	1.4	0.9	0	0	0	0
NONPOINT	13	0.37	0.16	0	0	0	0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

NONPOINT	14	0.149	0.065	0	0	0	0
NONPOINT	15	0.25	0.102	0	0	0	0
NONPOINT	16	0.28	0.112	0	0	0	0
NONPOINT	17	0.1	0	0	0	0	0
NONPOINT	18	0.262	0.118	0	0	0	0
NONPOINT	19	11.7	3.8	0	0	0	0
NONPOINT	20	22.5	2.1	0	0	0	0
NONPOINT	21	0.17	0.064	0	0	0	0
NONPOINT	22	135	17	0	0	0	0
NONPOINT	23	0.045	0.02	0	0	0	0
NONPOINT	24	160	18	0	0	0	0
NONPOINT	25	0.148	0.065	0	0	0	0
NONPOINT	26	1.85	0.614	0	0	0	0
NONPOINT	27	126	16	0	0	0	0
NONPOINT	28	146	15	0	0	0	0
NONPOINT	29	98	28	0	0	0	0
NONPOINT	30	100	12	0	0	0	0
NONPOINT	31	0.165	0.071	0	0	0	0
NONPOINT	32	5.7	1.72	0	0	0	0
NONPOINT	33	140	15	0	0	0	0
NONPOINT	34	280	30	0	0	0	0
NONPOINT	35	325	40	0	0	0	0
NONPOINT	36	325	5	0	0	0	0
NONPOINT	37	0	0	0	0	0	0
NONPOINT	38	2	1.4	0	0	0	0
NONPOINT	39	0.352	0.154	0	0	0	0
NONPOINT	40	2	1.9	0	0	0	0
NONPOINT	41	0.045	0.019	0	0	0	0
NONPOINT	42	10.8	12	0	0	0	0
NONPOINT	43	0.3975	0.173	0	0	0	0
NONPOINT	44	3.4	4	0	0	0	0
NONPOINT	45	40	3.5	0	0	0	0
NONPOINT	46	0.339	0.148	0	0	0	0
NONPOINT	47	6	2	0	0	0	0
NONPOINT	48	64	5	0	0	0	0
NONPOINT	49	0.0444	0.019	0	0	0	0
NONPOINT	50	25	3	0	0	0	0
NONPOINT	51	0.21	0.093	0	0	0	0
NONPOINT	52	38	3	0	0	0	0
NONPOINT	53	0.635	0.277	0	0	0	0
NONPOINT	54	98	3	0	0	0	0
NONPOINT	55	75	3	0	0	0	0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

NONPOINT	56	40	2	0	0	0	0
NONPOINT	57	120	2	0	0	0	0
NONPOINT	58	0.03	0.013	0	0	0	0
NONPOINT	59	1.8	0.55	0	0	0	0
NONPOINT	60	220	35	0	0	0	0
NONPOINT	61	0.148	0.065	0	0	0	0
NONPOINT	62	2.3	0.74	0	0	0	0
NONPOINT	63	40	12	0	0	0	0
NONPOINT	64	0.074	0.033	0	0	0	0
NONPOINT	65	0.86	0.28	0	0	0	0
NONPOINT	66	220	36	0	0	0	0
NONPOINT	67	0	17	0	0	0	0
NONPOINT	68	0.074	0.033	0	0	0	0
NONPOINT	69	0.29	0.099	0	0	0	0
NONPOINT	70	25	13	0	0	0	0
NONPOINT	71	3.35	0.89	0	0	0	0
NONPOINT	72	50	12	0	0	0	0
NONPOINT	73	29	8	0	0	0	0
NONPOINT	74	150	0	0	0	0	0
NONPOINT	75	0.212	0.097	0	0	0	0
NONPOINT	76	0.6	0.255	0	0	0	0
NONPOINT	77	0.138	0.06	0	0	0	0
NONPOINT	78	0.4	0.14	0	0	0	0
NONPOINT	79	0.26	0.114	0	0	0	0
NONPOINT	80	0.085	0.05	0	0	0	0
NONPOINT	81	83.5	14.5	0	0	0	0
NONPOINT	82	37	4	0	0	0	0
NONPOINT	83	22	4	0	0	0	0
NONPOINT	84	3	0.9	0	0	0	0
NONPOINT	85	35	8.5	0	0	0	0
NONPOINT	86	4.6	1.33	0	0	0	0
NONPOINT	87	3.6	1.1	0	0	0	0
NONPOINT	88	150	35	0	0	0	0
NONPOINT	89	160	30	0	0	0	0
NONPOINT	90	150	0	0	0	0	0
NONPOINT	91	0	0	0	0	0	0

ENDATA19

! DATA TYPE 20 -- HEADWATER DATA FOR FLOW, TEMPERATURE, SAALINITY, AND CONSERVATIVES

! - - - -1- - - -2- - - -3- - - -4- - - -5- - - -6- - - -7- - - -8- - - -9- - - -0- - - -1

! 234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890

! **** ----- *** -----*****-----*****-----

! E# NAME FLOW TEMP SALIN CHLORIDE COND

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

HDWTR-1	1	B VINCENT & BONFOUCA	0.00028333.8	0.26	520.9	7.23
HDWTR-1	67	BROWNS VILL RD (DD2)	0.00028333.8	0.26	520.9	7.23
HDWTR-1	102	DRAINAGE DITCH 8	0.00028333.8	0.26	520.9	7.23
HDWTR-1	119	DRAINAGE DITCH 9	0.00028333.8	0.26	520.9	7.23
HDWTR-1	159	UPPER B BONFOUCA	0.00283233.8	0.26	520.9	7.23
HDWTR-1	183	DRAINAGE DITCH 23	0.00028333.8	0.26	520.9	7.23
HDWTR-1	221	HIGHWAY 190(DD 5)	0.00028333.8	0.26	520.9	7.23
HDWTR-1	260	WEST DRAINAGE CANAL	0.00028333.8	0.26	520.9	7.23
HDWTR-1	284	DRAINAGE DITCH 6	0.00028333.8	0.26	520.9	7.23
HDWTR-1	295	TRIBUTARY 2	0.00028333.8	0.26	520.9	7.23
HDWTR-1	324	CANAL 26	0.00028333.8	0.26	520.9	7.23
HDWTR-1	346	TRIBUTARY 4	0.00028333.8	0.26	520.9	7.23
HDWTR-1	433	BAYOU LIBERTY	0.00283233.8	0.26	520.9	7.23
HDWTR-1	439	TRIBUTARY 1	0.00028333.8	0.26	520.9	7.23
HDWTR-1	470	DRAINAGE DITCH 22	0.00028333.8	0.26	520.9	7.23
HDWTR-1	482	DRAINAGE DITCH 20	0.00028333.8	0.26	520.9	7.23
HDWTR-1	536	HIGHWAY 190	0.00028333.8	0.26	520.9	7.23
HDWTR-1	576	DRAINAGE DITCH 18	0.00028333.8	0.26	520.9	7.23
HDWTR-1	585	DRAINAGE DITCH 19	0.00028333.8	0.26	520.9	7.23
HDWTR-1	601	DRAINAGE DITCH 4	0.00028333.8	0.26	520.9	7.23
HDWTR-1	667	TRIBUTARY 9	0.00028333.8	0.26	520.9	7.23
HDWTR-1	680	TRIBUTARY 6	0.00028333.8	0.26	520.9	7.23
HDWTR-1	698	TRIBUTARY 10	0.00028333.8	0.26	520.9	7.23
HDWTR-1	715	TRIBUTARY 8	0.00028333.8	0.26	520.9	7.23
HDWTR-1	727	MARINA 1	0.00028333.8	0.26	520.9	7.23
HDWTR-1	730	MARINA 2	0.00028333.8	0.26	520.9	7.23
HDWTR-1	762	BAYOU PAQUET	0.00028333.8	0.26	520.9	7.23
HDWTR-1	797	DRAINAGE DITCH 16	0.00028333.8	0.26	520.9	7.23
HDWTR-1	819	DRAINAGE DITCH 17	0.00028333.8	0.26	520.9	7.23
HDWTR-1	861	TRIBUTARY 24	0.00028333.8	0.26	520.9	7.23
HDWTR-1	868	TRIBUTARY 25	0.00028333.8	0.26	520.9	7.23

ENDATA20

! DATA TYPE 21 -- HEADWATER DATA FOR DO, BOD, AND NITROGEN

! - - - -1- - - - -2- - - - -3- - - - -4- - - - -5- - - - -6- - - - -7- - - - -8- - - - -9- - - - -0- - - - -1

!2345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890

! **** -----*****-----*****-----*****

!	E#	DO	BOD 1	NBOD	NH3 N	NIT NIT	BOD 2
HDWTR-2	1	6	2.2	1			
HDWTR-2	67	6	2.2	1			
HDWTR-2	102	6	2.2	1			
HDWTR-2	119	6	2.2	1			
HDWTR-2	159	6	2.2	1			

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

HDWTR-2	183	6	2.2	1
HDWTR-2	221	6	2.2	1
HDWTR-2	260	6	2.2	1
HDWTR-2	284	6	2.2	1
HDWTR-2	295	6	2.2	1
HDWTR-2	324	6	2.2	1
HDWTR-2	346	6	2.2	1
HDWTR-2	433	6	2.2	1
HDWTR-2	439	6	2.2	1
HDWTR-2	470	6	2.2	1
HDWTR-2	482	6	2.2	1
HDWTR-2	536	6	2.2	1
HDWTR-2	576	6	2.2	1
HDWTR-2	585	6	2.2	1
HDWTR-2	601	6	2.2	1
HDWTR-2	667	6	2.2	1
HDWTR-2	680	6	2.2	1
HDWTR-2	698	6	2.2	1
HDWTR-2	715	6	2.2	1
HDWTR-2	727	6	2.2	1
HDWTR-2	730	6	2.2	1
HDWTR-2	762	6	2.2	1
HDWTR-2	797	6	2.2	1
HDWTR-2	819	6	2.2	1
HDWTR-2	861	6	2.2	1
HDWTR-2	868	6	2.2	1

ENDATA21

! DATA TYPE 22 -- HEADWATER DATA FOR PHOSPHORUS, CHLOROPHYLL, COLIFORM, AND NCM

! - - - -1- - - - -2- - - - -3- - - - -4- - - - -5- - - - -6- - - - -7- - - - -8- - - - -9- - - - -0- - - - -1

! 234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890

! **** -----*****-----*****

! E# PHOSPHOR CHL A COLIFORM NCM

HDWTR-3	1			0	0	0
HDWTR-3	67			0	0	0
HDWTR-3	102			0	0	0
HDWTR-3	119			0	0	0
HDWTR-3	159			0	0	0
HDWTR-3	183			0	0	0
HDWTR-3	221			0	0	0
HDWTR-3	260			0	0	0
HDWTR-3	284			0	0	0
HDWTR-3	295			0	0	0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

HDWTR-3	324	0	0	0
HDWTR-3	346	0	0	0
HDWTR-3	433	0	0	0
HDWTR-3	439	0	0	0
HDWTR-3	470	0	0	0
HDWTR-3	482	0	0	0
HDWTR-3	536	0	0	0
HDWTR-3	576	0	0	0
HDWTR-3	585	0	0	0
HDWTR-3	601	0	0	0
HDWTR-3	667	0	0	0
HDWTR-3	680	0	0	0
HDWTR-3	698	0	0	0
HDWTR-3	715	0	0	0
HDWTR-3	727	0	0	0
HDWTR-3	730	0	0	0
HDWTR-3	762	0	0	0
HDWTR-3	797	0	0	0
HDWTR-3	819	0	0	0
HDWTR-3	861	0	0	0
HDWTR-3	868	0	0	0

ENDATA22

! DATA TYPE 23 -- JUNCTION DATA

JUNCTION	88	66	DRAINAGE DITCH	2
JUNCTION	110	101	DRAINAGE DITCH	8
JUNCTION	140	118	DRAINAGE DITCH	9
JUNCTION	193	182	DRAINAGE DITCH	23
JUNCTION	219	158	UPPER BAYOU BONFOUCA	
JUNCTION	239	220	HIGHWAY 190 (DRAINAGE DITCH	5)
JUNCTION	263	259	WEST DRAINAGE CANAL	
JUNCTION	287	283	DRAINAGE DITCH	6
JUNCTION	310	294	TRIBUTARY	2
JUNCTION	344	323	CANAL	26
JUNCTION	365	345	TRIBUTARY	4
JUNCTION	463	438	TRIBUTARY	1
JUNCTION	473	469	DRAINAGE DITCH	22
JUNCTION	509	481	DRAINAGE DITCH	20
JUNCTION	559	535	HIGHWAY 190 (DRAINAGE DITCH	14)
JUNCTION	579	575	DRAINAGE DITCH	18
JUNCTION	599	584	DRAINAGE DITCH	19
JUNCTION	643	600	DRAINAGE DITCH	4
JUNCTION	672	666	TRIBUTARY	9

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

JUNCTION 696 679 TRIBUTARY 6
 JUNCTION 705 697 TRIBUTARY 10
 JUNCTION 721 714 TRIBUTARY 8
 JUNCTION 729 726 MARINA 1
 JUNCTION 748 729 MARINA 2
 JUNCTION 806 796 DRAINAGE DITCH 16
 JUNCTION 836 818 DRAINAGE DITCH 17
 JUNCTION 865 860 CHANNEL 1
 JUNCTION 878 867 CHANNEL 2
 JUNCTION 888 761 BAYOU PAQUET
 JUNCTION 899 432 BAYOU LIBERTY

ENDATA23

! DATA TYPE 24

! - - - -1- - - - -2- - - - -3- - - - -4- - - - -5- - - - -6- - - - -7- - - - -8- - - - -9- - - - -0- - - - -1

! 234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890

! **** -----*****-----*****-----*****

!	E#	NAME	FLOW	TEMP	SALINITY	CHLORIDE	COND
WSTLD-1	1	V H SEAL APARTMENTS	0.000032830		0.39	753.6	63.3
WSTLD-1	40	GROUNDWATER	0.0055	33.8	0.26	520.9	7.23
WSTLD-1	48	EAGLE LAKE MHP	0.002760230		0.4	774	34.4
WSTLD-1	63	J&K MANAGEMENT LLC	0.000007830		0.39	753.6	63.3
WSTLD-1	67	STONES THROW APTS	0.000841230		0.39	753.6	63.3
WSTLD-1	73	GOOD VALUE AUTO SALE	0.000002630		0.39	753.6	63.3
WSTLD-1	74	ADAMS MHP	0.000092030		0.39	753.6	63.3
WSTLD-1	79	WADLEIGH OFFSHORE	0.000035030		0.39	753.6	63.3
WSTLD-1	80	EXXONMOBIL #51367	0.000109530		0.39	753.6	63.3
WSTLD-1	81	LCR-M PLUMBING SUPP	0.000005230		0.39	753.6	63.3
WSTLD-1	83	BAKER-ELLIS-SHAMROCK	0.000018430		0.39	753.6	63.3
WSTLD-1	84	NORTHSHORE CHEMICAL	0.000002430		0.39	753.6	63.3
WSTLD-1	85	MANHEIM AUTO AUCTION	0.000030630		0.39	753.6	63.3
WSTLD-1	87	WADLEIGH FITNESS	0.000013130		0.39	753.6	63.3
WSTLD-1	102	JUBILEE #4815	0.000074430		0.39	753.6	63.3
WSTLD-1	107	JOHNSON-BLDG 2	0.000061330		0.39	753.6	63.3
WSTLD-1	119	CHARTER-JOHN'S AUTO	0.000007030		0.39	753.6	63.3
WSTLD-1	125	I-12 SHELL	0.000007030		0.39	753.6	63.3
WSTLD-1	135	ST TAM PAR SCH MAINT	0.000004330		0.39	753.6	63.3
WSTLD-1	136	J&D-VETS HEALTH/OMNI	0.000033330		0.39	753.6	63.3
WSTLD-1	183	GOOD SHEPHERD CHURCH	0.000048130		0.39	753.6	63.3
WSTLD-1	221	JOLLY APARTMENTS	0.000249730		0.39	753.6	63.3
WSTLD-1	222	PINEY RIDGE MHP	0.000407430		0.39	753.6	63.3
WSTLD-1	223	STARLING PLAZA	0.000125330		0.39	753.6	63.3
WSTLD-1	224	PO FOLKS SEAFOOD	0.000021430		0.39	753.6	63.3

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

WSTLD-1	227	SOUTH SEAS RSTRNT	0.000085430	0.39	753.6	63.3
WSTLD-1	228	SHADY PINES MHP	0.000460030	0.39	753.6	63.3
WSTLD-1	230	1421HWY190-ARMACOAT	0.000028030	0.39	753.6	63.3
WSTLD-1	231	FACDIR-STTAMBRACKETAG	0.000035330	0.39	753.6	63.3
WSTLD-1	232	NEW LIFE MINISTRIES	0.000021430	0.39	753.6	63.3
WSTLD-1	233	PEACE LUTH CHURCH	0.000103830	0.39	753.6	63.3
WSTLD-1	234	ERNEST WALDER	0.000015730	0.39	753.6	63.3
WSTLD-1	235	STOR N LOCK-TYMELESS	0.000006130	0.39	753.6	63.3
WSTLD-1	260	BONFOUCA SUPFND SITE	0.000630930	0.22	437.3	23.5
WSTLD-1	281	DOTD BNFCA BRIDGE	0.000000830	0.39	753.6	63.3
WSTLD-1	282	SLIDELL MARINE	0.000162130	0.39	753.6	63.3
WSTLD-1	284	ARC MECH CONTRACTORS	0.000004330	0.39	753.6	200
WSTLD-1	289	PEARL RIVER NAV	0.000153330	0.39	753.6	63.3
WSTLD-1	295	STP CONST BUILDING	0.000035030	0.39	753.6	63.3
WSTLD-1	346	ACADIAN GRDNS CONDOS	0.000328530	0.39	753.6	63.3
WSTLD-1	351	OAKWOOD ESTATES	0.000543230	0.39	753.6	63.3
WSTLD-1	389	COIN DU LESTIN SUB	0.003505030	0.32	628.1	54.3
WSTLD-1	439	NORTHSHORE SQUADRON	0.000001130	0.39	753.6	63.3
WSTLD-1	442	ANDY KNIGHT	0.000001730	0.39	753.6	63.3
WSTLD-1	470	THE MEADOWS SUB	0.012092230	0.55	1053	150
WSTLD-1	482	ROYAL GOLF CLUB	0.000190130	0.39	753.6	63.3
WSTLD-1	494	NATFINANCE-TEXTRON	0.000175230	0.39	753.6	63.3
WSTLD-1	495	GUARDIAN ANGELS	0.000040730	0.39	753.6	63.3
WSTLD-1	498	OAKMONT SUBDIVISIO	0.003093130	0.32	619.5	47
WSTLD-1	536	ASSUNTA'S RESTAURANT	0.000127030	0.39	753.6	63.3
WSTLD-1	544	INDIAN HILLS RV PARK	0.000345030	0.39	753.6	63.3
WSTLD-1	546	J&J AUTO BROKERS	0.000001730	0.39	753.6	63.3
WSTLD-1	548	7THDAY & DOLLAR GEN	0.000060030	0.39	753.6	63.3
WSTLD-1	550	OMNI STORAGE VI	0.000013130	0.39	753.6	63.3
WSTLD-1	551	ABC SUPPLY CO	0.000006130	0.39	753.6	63.3
WSTLD-1	552	LION CONSULTING	0.000001730	0.39	753.6	63.3
WSTLD-1	553	CHILL RITE	0.000009630	0.39	753.6	63.3
WSTLD-1	555	HERRON-2315/17/19	0.000024930	0.39	753.6	63.3
WSTLD-1	556	THOMGROC-ST POL JURY	0.000004330	0.39	753.6	63.3
WSTLD-1	557	PITSTOP3-REFLECTMIR	0.000061330	0.39	753.6	63.3
WSTLD-1	576	ALL AM ELKS LODGE	0.000070130	0.39	753.6	63.3
WSTLD-1	585	LAKE CASTLE SCHOOL	0.000381130	0.39	753.6	63.3
WSTLD-1	601	BLUEBELL-NULITE	0.000037630	0.39	753.6	63.3
WSTLD-1	602	ALBERS AC & HEATING	0.000005230	0.39	753.6	63.3
WSTLD-1	611	BAKER SALES WRHSE	0.000001730	0.39	753.6	63.3
WSTLD-1	614	CLECO SERVICE CENTER	0.000008730	0.39	753.6	63.3
WSTLD-1	615	G&S-UNITED MEDICAL	0.000015730	0.39	753.6	63.3

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

WSTLD-1	616	AIRGAS-HANNA-SUNBELT0.000692230	0.39	753.6	63.3
WSTLD-1	617	RJD CONTRACTORS 0.000000830	0.39	753.6	63.3
WSTLD-1	619	M&R-WAGNERSHOPCTR 0.000087230	0.39	753.6	63.3
WSTLD-1	620	CALWES CENTER 0.000181630	0.39	753.6	63.3
WSTLD-1	621	BEAU'S-LA LUMBER 0.000023630	0.39	753.6	63.3
WSTLD-1	625	ADVANCE AUTO 0.000004330	0.39	753.6	63.3
WSTLD-1	633	HUNTWYCK VILLAGE 0.012179930	0.3	582.3	52.5
WSTLD-1	667	B LIBERTY WATER ASSN0.000007830	0.39	753.6	63.3
WSTLD-1	680	THOMPSON RD BAPTIST 0.000035030	0.39	753.6	63.3
WSTLD-1	698	LIBERTY FOOD STORE 0.000024930	0.39	753.6	63.3
WSTLD-1	715	A-1 REMODELING & BLD0.000008730	0.39	753.6	63.3
WSTLD-1	723	ST GENEVIEVE CATH CH0.000131430	0.39	753.6	63.3
WSTLD-1	728	BAYOU LIBERTY MARINA0.000000830	0.39	753.6	63.3
WSTLD-1	746	A BONFOUCA MARINA 0.000037630	0.39	753.6	63.3
WSTLD-1	762	WASTE MGMT OF LA 0.000021930	0.39	753.6	63.3
WSTLD-1	763	ACALIGN-ALLAM-CT-M&D0.000007830	0.39	753.6	63.3
WSTLD-1	767	K-BAR-B YOUTH RANCH 0.000100730	0.39	753.6	63.3
WSTLD-1	776	BAYOU PAQUET HEADWAT0.002832 33.8	0.26	520.9	7.23
WSTLD-1	797	ACTS 1 TAX SERVICE 0.000002630	0.39	753.6	63.3
WSTLD-1	819	TIMBER RIDGE SUB 0.001945230	0.45	864.7	41.6

ENDATA24

! DATA TYPE 25

! - - - -1- - - - -2- - - - -3- - - - -4- - - - -5- - - - -6- - - - -7- - - - -8- - - - -9- - - - -0- - - - -1

! 234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890

! ***** -----*****-----*****-----*****-----*****

! E# DO BOD 1 NBOD NH3 N NIT NIT BOD 2

WSTLD-2	1	2	69	0	69			
WSTLD-2	40	6.53	2.16	0	0.95			
WSTLD-2	48	6.4	6.81	0	2.41			
WSTLD-2	63	2	69	0	69			
WSTLD-2	67	2	11.5	0	11.5			
WSTLD-2	73	2	13.8	0	13.8			
WSTLD-2	74	2	18.4	0	18.4			
WSTLD-2	79	2	23	0	23			
WSTLD-2	80	2	25.3	0	25.3			
WSTLD-2	81	2	16.1	0	16.1			
WSTLD-2	83	2	25.07	0	25.07			
WSTLD-2	84	2	69	0	69			
WSTLD-2	85	2	69	0	69			
WSTLD-2	87	2	69	0	69			
WSTLD-2	102	2	23	0	23			
WSTLD-2	107	2	40.25	0	40.25			

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

WSTLD-2	119	2	77.05	0	77.05
WSTLD-2	125	2	18.4	0	18.4
WSTLD-2	135	2	16.1	0	16.1
WSTLD-2	136	2	69	0	69
WSTLD-2	183	2	69	0	69
WSTLD-2	221	2	25.3	0	25.3
WSTLD-2	222	2	6.9	0	6.9
WSTLD-2	223	2	69	0	69
WSTLD-2	224	2	69	0	69
WSTLD-2	227	2	621	0	621
WSTLD-2	228	2	69	0	69
WSTLD-2	230	2	69	0	69
WSTLD-2	231	2	69	0	69
WSTLD-2	232	2	69	0	69
WSTLD-2	233	2	92	0	92
WSTLD-2	234	2	25.3	0	25.3
WSTLD-2	235	2	55.2	0	55.2
WSTLD-2	260	7.1	1.33	0	1.74
WSTLD-2	281	2	69	0	69
WSTLD-2	282	2	18.4	0	18.4
WSTLD-2	284	2	69	0	69
WSTLD-2	289	2	69	0	69
WSTLD-2	295	2	69	0	69
WSTLD-2	346	2	34.5	0	34.5
WSTLD-2	351	2	2.3	0	2.3
WSTLD-2	389	3.6	3.1	0	2.41
WSTLD-2	439	2	69	0	69
WSTLD-2	442	2	69	0	69
WSTLD-2	470	4.97	10.17	0	3.01
WSTLD-2	482	2	69	0	69
WSTLD-2	494	2	69	0	69
WSTLD-2	495	2	69	0	69
WSTLD-2	498	7.4	6.2	0	2.8
WSTLD-2	536	2	69	0	69
WSTLD-2	544	2	39.1	0	39.1
WSTLD-2	546	2	69	0	69
WSTLD-2	548	2	56.93	0	56.93
WSTLD-2	550	2	69	0	69
WSTLD-2	551	2	69	0	69
WSTLD-2	552	2	69	0	69
WSTLD-2	553	2	69	0	69
WSTLD-2	555	2	57.39	0	57.39

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

WSTLD-2	556	2	69	0	69
WSTLD-2	557	2	69	0	69
WSTLD-2	576	2	69	0	69
WSTLD-2	585	2	46	0	46
WSTLD-2	601	2	145.48	0	145.48
WSTLD-2	602	2	20.7	0	20.7
WSTLD-2	611	2	69	0	69
WSTLD-2	614	2	57.5	0	57.5
WSTLD-2	615	2	21.85	0	21.85
WSTLD-2	616	2	36.57	0	36.57
WSTLD-2	617	2	69	0	69
WSTLD-2	619	2	11.5	0	11.5
WSTLD-2	620	2	16.1	0	16.1
WSTLD-2	621	2	69	0	69
WSTLD-2	625	2	69	0	69
WSTLD-2	633	7.1	4.68	0	3.01
WSTLD-2	667	2	46	0	46
WSTLD-2	680	2	32.2	0	32.2
WSTLD-2	698	2	69	0	69
WSTLD-2	715	2	25.3	0	25.3
WSTLD-2	723	2	69	0	69
WSTLD-2	728	2	69	0	69
WSTLD-2	746	2	128.8	0	128.8
WSTLD-2	762	2	27.6	0	27.6
WSTLD-2	763	2	69	0	69
WSTLD-2	767	2	69	0	69
WSTLD-2	776	6.53	2.16	0	0.95
WSTLD-2	797	2	6.9	0	6.9
WSTLD-2	819	5	85	0	2.41

ENDATA25

! DATA TYPE 26 -- WASTELOAD DATA FOR PHOSPHORUS, CHLOROPHYLL, COLIFORM, AND NCM

! - - - -1- - - -2- - - -3- - - -4- - - -5- - - -6- - - -7- - - -8- - - -9- - - -0- - - -1

! 234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890

! **** -----*****-----*****

! E# PHOSPHOR CHL A COLIFORM NONCONSERVATIVE

WSTLD-3	1
WSTLD-3	40
WSTLD-3	48
WSTLD-3	63
WSTLD-3	67
WSTLD-3	73
WSTLD-3	74

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

WSTLD-3 79
WSTLD-3 80
WSTLD-3 81
WSTLD-3 83
WSTLD-3 84
WSTLD-3 85
WSTLD-3 87
WSTLD-3 102
WSTLD-3 107
WSTLD-3 119
WSTLD-3 125
WSTLD-3 135
WSTLD-3 136
WSTLD-3 183
WSTLD-3 221
WSTLD-3 222
WSTLD-3 223
WSTLD-3 224
WSTLD-3 227
WSTLD-3 228
WSTLD-3 230
WSTLD-3 231
WSTLD-3 232
WSTLD-3 233
WSTLD-3 234
WSTLD-3 235
WSTLD-3 260
WSTLD-3 281
WSTLD-3 282
WSTLD-3 284
WSTLD-3 289
WSTLD-3 295
WSTLD-3 346
WSTLD-3 351
WSTLD-3 389
WSTLD-3 439
WSTLD-3 442
WSTLD-3 470
WSTLD-3 482
WSTLD-3 494
WSTLD-3 495
WSTLD-3 498

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

WSTLD-3 536
WSTLD-3 544
WSTLD-3 546
WSTLD-3 548
WSTLD-3 550
WSTLD-3 551
WSTLD-3 552
WSTLD-3 553
WSTLD-3 555
WSTLD-3 556
WSTLD-3 557
WSTLD-3 576
WSTLD-3 585
WSTLD-3 601
WSTLD-3 602
WSTLD-3 611
WSTLD-3 614
WSTLD-3 615
WSTLD-3 616
WSTLD-3 617
WSTLD-3 619
WSTLD-3 620
WSTLD-3 621
WSTLD-3 625
WSTLD-3 633
WSTLD-3 667
WSTLD-3 680
WSTLD-3 698
WSTLD-3 715
WSTLD-3 723
WSTLD-3 728
WSTLD-3 746
WSTLD-3 762
WSTLD-3 763
WSTLD-3 767
WSTLD-3 776
WSTLD-3 797
WSTLD-3 819
ENDATA26

! DATA TYPE 27 -- Lower Boundary Conditions
LOWER BC TEMPERATURE = 29.98
LOWER BC SALINITY = 3.94

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

! DATA TYPE 31 -- Overlay Plot Data

!

! - - - -1- - - - -2- - - - -3- - - - -4- - - - -5- - - - -6- - - - -7- - - - -8- - - - -9- - - - -0- - - - -1

!234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890

OVERLAY1 VINCENT-BONFOUCA.OVL

OVERLAY2 UPPER_BONFOUCA.OVL

OVERLAY3 LIBERTY.OVL

OVERLAY4 PAQUET.OVL

OVERLAY5 MEADOWS.OVL

OVERLAY6 OAKMONT.OVL

OVERLAY7 HWY 190 E - LIBERTY.OVL

OVERLAY8 TIMBER_RIDGE.OVL

OVERLAY9 BROWNS_VILLAGE.OVL

ENDATA31

VINCENT BONFOUCA CALIBRATION OVERLAY DATA SET

!-----1-----2-----3-----4-----5-----6-----7-----8-----9

!23456789012345678901234567890123456789012345678901234567890123456789012345678901234567890

STATION BV1 KILOMETER 19.50

1	33.8	TEMPERATURE
2	0.26	SALINITY
3	520.9	CONDUCTIVITY
4	7.23	CHLORIDES
5	6.53	DISSOLVED OXYGEN
6	2.16	EFFECTIVE BOD1
18	0.95	UNBOD
61	0.005498	FLOW
63	0.0254	DEPTH
64	1.000	WIDTH

STATION BV2 17.60

1	27.21	TEMPERATURE
2	0.39	SALINITY
3	760.9	CONDUCTIVITY
4	30.8	CHLORIDES
5	1.25	DISSOLVED OXYGEN
6	130.68	EFFECTIVE BOD1
18	27.15	NBOD

STATION BV3 14.90

1	27.90	TEMPERATURE
2	0.17	SALINITY

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

3	338.3		CONDUCTIVITY
4	18.1		CHLORIDES
5	0.20	6.20	DISSOLVED OXYGEN
6	10.71		EFFECTIVE BOD1
13	24.6		CHLOROPHYLL A
18	1.59		NBOD
63	0.271		DEPTH
64	4.72		WIDTH
STATION BB2			
		13.30	
1	29.60		TEMPERATURE
2	0.45		SALINITY
3	870.1		CONDUCTIVITY
4	205		CHLORIDES
5	0.70	2.40	DISSOLVED OXYGEN
6	15.76		EFFECTIVE BOD1
13	49.9		CHLOROPHYLL A
18	2.62		NBOD
63	0.872		DEPTH
64	10.84		WIDTH
STATION BB3			
		8.60	
1	31.54		TEMPERATURE
2	2.68		SALINITY
3	4888.0		CONDUCTIVITY
4	1530		CHLORIDES
5	3.80	7.00	DISSOLVED OXYGEN
6	8.38		EFFECTIVE BOD1
13	8.81		CHLOROPHYLL A
18	1.57		NBOD
63	1.603		DEPTH
64	93.08		WIDTH
STATION ET			
		8.40	
62	1.9		DISPERSION
STATION XS1			
		7.70	
63	1.87		DEPTH
64	76.5		WIDTH
STATION EM			
		6.50	
62	1.9		DISPERSION
STATION XS2			
		5.90	
63	1.89		DEPTH
64	91.4		WIDTH
STATION XS3			
		5.30	
63	1.67		DEPTH

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

64	114.3		WIDTH
STATION EB		4.50	
62	1.9		DISPERSION
STATION BB5		4.50	
1	31.29		TEMPERATURE
2	3.62		SALINITY
3	6530.0		CONDUCTIVITY
4	2040		CHLORIDES
5	4.90	5.21	7.70
6		9.07	
13		12.9	
18		1.29	
63		1.44	
64		77.7	
STATION BB6		0.50	
1	30.22		TEMPERATURE
2	4.08		SALINITY
3	7325.0		CONDUCTIVITY
4	2380		CHLORIDES
5	6.25	6.45	8.10
6		7.24	
13		7.42	
18		1.42	
63		1.957	
64		105.59	
STATION BB7		0.00	
1	29.98		TEMPERATURE
2	3.94		SALINITY
3	7096.0		CONDUCTIVITY
4	2200		CHLORIDES
5	6.80		DISSOLVED OXYGEN
6	7.82		EFFECTIVE BOD1
13	5.55		CHLOROPHYLL A
18	1.80		NBOD
MRK 20.30	REACH 1		
MRK 19.50	EAGLE LAKE MHP - RCH 2		
MRK 18.50	REACH 3		
MRK 17.60	REACH 4		
MRK 16.90	REACH 6		
MRK 16.00	REACH 8		
MRK 15.20	REACH 10		
MRK 14.40	REACH 11,12		

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

MRK 13.30 REACH 17,19
 MRK 12.10 REACH 20
 MRK 10.00 REACH 22
 MRK 9.20 REACH 24
 MRK 8.60 REACH 27
 MRK 7.60 REACH 28,30
 MRK 6.80 REACH 33
 MRK 5.60 REACH 34
 MRK 4.50 REACH 35
 MRK 2.70 REACH 36
 MRK 0.80 REACH 37
 MRK 0.00 REACH 91
 END

BAYOU LIBERTY OVERLAY FILE

```

!-----1-----2-----3-----4-----5-----6-----7-----8-----9
!234567890123456789012345678901234567890123456789012345678901234567890
STATION BL3 KILOMETER 12.60
1 29.33 TEMPERATURE
2 0.48 SALINITY
3 925.5 CONDUCTIVITY
4 125.0 CHLORIDES
5 1.00 1.72 7.50 DISSOLVED OXYGEN
6 14.59 EFFECTIVE BOD1
13 14.8 CHLOROPHYLL A
18 10.98 NBOD
63 0.473 DEPTH
64 8.839 WIDTH
STATION BL4 10.00
1 29.52 TEMPERATURE
2 0.54 SALINITY
3 1042.0 CONDUCTIVITY
4 252.0 CHLORIDES
5 2.80 3.10 5.50 DISSOLVED OXYGEN
6 18.51 EFFECTIVE BOD1
13 57.1 CHLOROPHYLL A
18 4.52 NBOD
63 1.40 DEPTH
64 18.60 WIDTH
STATION BL5 6.90
1 31.31 TEMPERATURE
    
```

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

2		3.09		SALINITY
3		5583.0		CONDUCTIVITY
4		1960		CHLORIDES
5	1.10	3.64	4.92	DISSOLVED OXYGEN
6		9.58		EFFECTIVE BOD1
13		3.23		CHLOROPHYLL A
18		1.58		NBOD
63		2.28		DEPTH
64		42.67		WIDTH
STATION ET			6.10	
62		1.9		
STATION XS1			5.50	
63		2.08		DEPTH
64		47.6		WIDTH
STATION EM			4.80	
62		1.9		
STATION XS2			4.20	
63		2.09		DEPTH
64		52.7		WIDTH
STATION EB			3.50	
62		1.9		
STATION BL7			3.30	
1		31.99		TEMPERATURE
2		2.12		SALINITY
3		3906.0		CONDUCTIVITY
4		1310.0		CHLORIDES
5	3.70	4.20	8.20	DISSOLVED OXYGEN
6		15.54		EFFECTIVE BOD1
13		65.2		CHLOROPHYLL A
18		2.72		NBOD
61				FLOW
62				DISPERSION
63		2.14		DEPTH
64		52.12		WIDTH
STATION BL8			0.40	
1		30.44		TEMPERATURE
2		4.16		SALINITY
3		7468.0		CONDUCTIVITY
4		2390.0		CHLORIDES
5	5.60	5.91	8.40	DISSOLVED OXYGEN
6		8.42		EFFECTIVE BOD1
13		6.77		CHLOROPHYLL A

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

18	1.93		NBOD
61			FLOW
62			DISPERSION
63	2.13		DEPTH
64	60.96		WIDTH
STATION BL9 6.10			
!COMPOSITE OF BL9 (MAIN CHANNEL) AND BL10 (LOOP)			
63	1.70		DEPTH
64	39.69		WIDTH
MRK	14.40	REACH	38
MRK	13.70	REACH	40
MRK	12.80	REACH	42
MRK	10.10	REACH	44,45
MRK	8.40	REACH	47,48
MRK	7.80	REACH	50
MRK	6.90	REACH	52,54
MRK	6.30	REACH	55
MRK	6.00	REACH	56
MRK	5.20	REACH	57
MRK	4.40	REACH	60
MRK	3.30	REACH	63,66
MRK	2.60	REACH	67,70
MRK	1.10	REACH	72,74
MRK	0.00	REACH	90
END			

BAYOU PAQUET OVERLAY FILE

```

!-----1-----2-----3-----4-----5-----6-----7-----8-----9
!234567890123456789012345678901234567890123456789012345678901234567890
STATION BP2 KILOMETER 2.40
1 32.08 TEMPERATURE
2 3.17 SALINITY
3 5780.0 CONDUCTIVITY
4 1760 CHLORIDES
5 1.50 2.02 6.20 DISSOLVED OXYGEN
6 18.24 EFFECTIVE BOD1
13 14.6 CHLOROPHYLL A
18 4.72 NBOD
61 0.005498 FLOW
62 DISPERSION
63 1.10 DEPTH
    
```

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

64	18.90		WIDTH
STATION BP6		2.00	
63	1.00		DEPTH
64	18.29		WIDTH
STATION BP3		1.60	
1	32.07		TEMPERATURE
2	3.47		SALINITY
3	6238.0		CONDUCTIVITY
4	1870		CHLORIDES
5	2.40	2.73	5.40
6	14.90		DISSOLVED OXYGEN
13			EFFECTIVE BOD1
18	3.92		CHLOROPHYLL A
61			NBOD
62			FLOW
63	1.50		DISPERSION
64	21.34		DEPTH
STATION BP4		0.20	WIDTH
1	32.72		TEMPERATURE
2	3.94		SALINITY
3	7093.0		CONDUCTIVITY
4	2250		CHLORIDES
5	4.10	4.71	9.60
6	12.76		DISSOLVED OXYGEN
13	13.6		EFFECTIVE BOD1
18	3.02		CHLOROPHYLL A
61			NBOD
62			FLOW
63	1.501		DISPERSION
64	30.48		DEPTH
MRK	8.10	K-BAR-B YOUTH RANCH	
MRK	7.20	REACH 75 HWY 190	
MRK	5.10	REACH 76	
MRK	3.80	REACH 78	
MRK	3.40	REACH 80	
MRK	2.40	REACH 81	
MRK	1.60	REACH 82	
MRK	1.30	REACH 83	
MRK	1.00	REACH 85	
MRK	0.20	REACH 88	
MRK	0.01	REACH 89	
END			

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

BAYOU BONFOUCA AND BAYOU LIBERTY CALIBRATION OUTPUT DATA SET

LA-QUAL Version 9.09
Louisiana Department of Environmental Quality

Input file is \\Degshares\owreng\Personal_Folders\Karen\Bayou Bonfouca and Bayou Liberty\Input Files\Calibration\Bayou_Bonfouca_18.in
Running in steady-state mode using LA defaults
Output produced at 13:20 on 04/11/2011

\$\$\$ DATA TYPE 1 (TITLES AND CONTROL CARDS) \$\$\$

CARD TYPE	CONTROL TITLES
TITLE01	WATER QUALITY/HYDRAULIC MODEL FOR:
TITLE02	BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET
CONTROL YES	METRIC UNITS
CONTROL YES	USE EFFECTIVE CONCENTRATION
ENDATA01	

\$\$\$ DATA TYPE 2 (MODEL OPTIONS) \$\$\$

CARD TYPE	MODEL OPTION
MODOPT01	NO TEMPERATURE
MODOPT02	YES SALINITY
MODOPT03	YES CONSERVATIVE MATERIAL I = CONDUCTIVITY IN COND
MODOPT04	YES CONSERVATIVE MATERIAL II = CHLORIDES IN CL
MODOPT05	YES DISSOLVED OXYGEN
MODOPT06	YES BOD1 BIOCHEMICAL OXYGEN DEMAND
MODOPT07	NO BOD2 BIOCHEMICAL OXYGEN DEMAND
MODOPT08	YES NBOD
MODOPT09	NO PHOSPHORUS SERIES
MODOPT10	NO PHYTOPLANKTON
MODOPT11	NO PERIPHYTON
MODOPT12	NO COLIFORM
MODOPT13	NO NONCONSERVATIVE MATERIAL
ENDATA02	

\$\$\$ DATA TYPE 3 (PROGRAM CONSTANTS) \$\$\$

CARD TYPE	DESCRIPTION OF CONSTANT	VALUE
PROGRAM	K2 MAXIMUM	= 25.00000 per day
PROGRAM	DISPERSION EQUATION	= 3.00000 (values entered as a function of D,Q,Vmean)
PROGRAM	TIDE HEIGHT	= 0.10000 meters
PROGRAM	TIDAL PERIOD	= 19.75000 hours
PROGRAM	PERIOD OF TIDAL RISE	= 10.50000 hours
PROGRAM	S OXYGEN DEPENDENCE THRESHOLD	= 1.00000 mg/L
PROGRAM	SOD MAXIMUM RATE	= 50.00000 gm/sq m/day
PROGRAM	PHYTOPLANKTON OXYGEN PROD	= 0.00000 mg O/ug chl a/day
PROGRAM	PERIPHYTON OXYGEN PROD	= 0.00000 mg O/mg periphyton/day
ENDATA03		

\$\$\$ DATA TYPE 4 (TEMPERATURE CORRECTION CONSTANTS FOR RATE COEFFICIENTS) \$\$\$

CARD TYPE	RATE CODE	THETA VALUE
ENDATA04		

\$\$\$ CONSTANTS TYPE 5 (TEMPERATURE DATA) \$\$\$

CARD TYPE	DESCRIPTION OF CONSTANT	VALUE
ENDATA05		

\$\$\$ DATA TYPE 6 (PHYTOPLANKTON CONSTANTS) \$\$\$

CARD TYPE	DESCRIPTION OF CONSTANT	VALUE
-----------	-------------------------	-------

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011
 ENDDATA06

\$\$\$ DATA TYPE 7 (PERIPHYTON CONSTANTS) \$\$\$

CARD TYPE	DESCRIPTION OF CONSTANT	VALUE
-----------	-------------------------	-------

ENDDATA07

\$\$\$ DATA TYPE 8 (REACH IDENTIFICATION DATA) \$\$\$

CARD TYPE	REACH	ID	NAME	BEGIN REACH km	END REACH km	ELEM LENGTH km	REACH LENGTH km	ELEMS PER RCH	BEGIN ELEM NUM	END ELEM NUM
REACH ID	1	DD	DRAINAGE DITCH 1	24.20	TO 20.30	0.1000	3.90	39	1	39
REACH ID	2	BV	VINCENT FROM RKM 20.0 TO BV01	20.30	TO 19.50	0.1000	0.80	8	40	47
REACH ID	3	BV	VINCENT FROM BV01 RKM 18.5	19.50	TO 18.50	0.1000	1.00	10	48	57
REACH ID	4	BV	VINCENT FROM RKM 18.5 TO BV02	18.50	TO 17.60	0.1000	0.90	9	58	66
REACH ID	5	DD	DRAINAGE DITCH 2	2.10	TO 0.00	0.1000	2.10	21	67	87
REACH ID	6	BV	VINCENT FROM BV02 TO DD 8	17.60	TO 16.90	0.0500	0.70	14	88	101
REACH ID	7	DD	DRAINAGE DITCH 8	0.80	TO 0.00	0.1000	0.80	8	102	109
REACH ID	8	BV	VINCENT FROM DD 8 TO DD 9	16.90	TO 16.00	0.1000	0.90	9	110	118
REACH ID	9	DD	DRAINAGE DITCH 9	2.10	TO 0.00	0.1000	2.10	21	119	139
REACH ID	10	BV	VINCENT FROM DD 9 TO RKM 15.2	16.00	TO 15.20	0.1000	0.80	8	140	147
REACH ID	11	BV	VINCENT FROM RKM 15.2 TO BV03	15.20	TO 14.90	0.0500	0.30	6	148	153
REACH ID	12	BV	VINCENT FROM BV03 TO BONFOUCA	14.90	TO 14.40	0.1000	0.50	5	154	158
REACH ID	13	UB	UB FROM RKM 5.0 TO DD 23	5.00	TO 2.60	0.1000	2.40	24	159	182
REACH ID	14	DD	DRAINAGE DITCH 23	1.00	TO 0.00	0.1000	1.00	10	183	192
REACH ID	15	UB	UB FROM DD 23 TO BB01	2.60	TO 1.10	0.1000	1.50	15	193	207
REACH ID	16	UB	UB FROM BB01 TO BAYOU VINCENT	1.10	TO 0.00	0.1000	1.10	11	208	218
REACH ID	17	BB	BONFOUCA FROM BV TO HWY 190	14.40	TO 14.20	0.1000	0.20	2	219	220
REACH ID	18	DD	HWY 190 (DRAINAGE DITCH 5)	1.80	TO 0.00	0.1000	1.80	18	221	238
REACH ID	19	BB	BONFOUCA FROM HWY 190 TO BB02	14.20	TO 13.30	0.1000	0.90	9	239	247
REACH ID	20	BB	BONFOUCA FROM BB02 TO WD	13.30	TO 12.10	0.1000	1.20	12	248	259
REACH ID	21	WD	WEST DRAINAGE CANAL	0.30	TO 0.00	0.1000	0.30	3	260	262
REACH ID	22	BB	BONFOUCA FROM WD TO DD6	12.10	TO 10.00	0.1000	2.10	21	263	283
REACH ID	23	DD	DRAINAGE DITCH 6	0.30	TO 0.00	0.1000	0.30	3	284	286
REACH ID	24	BB	BONFOUCA FROM DD 6 TO TRIB 2	10.00	TO 9.20	0.1000	0.80	8	287	294
REACH ID	25	DD	DRAINAGE DITCH 7 - UPLAND	1.50	TO 0.50	0.1000	1.00	10	295	304
REACH ID	26	TR	TRIBUTARY 2 - TIDAL	0.50	TO 0.00	0.1000	0.50	5	305	309
REACH ID	27	BB	BONFOUCA FROM TRIB 2 TO BB03	9.20	TO 8.60	0.1000	0.60	6	310	315
REACH ID	28	BB	BONFOUCA FROM BB03 TO CANAL 26	8.60	TO 7.80	0.1000	0.80	8	316	323
REACH ID	29	C	CANAL 26	2.00	TO 0.00	0.1000	2.00	20	324	343
REACH ID	30	BB	BONFOUCA FROM CANAL 26 TO TRIB 4	7.80	TO 7.60	0.1000	0.20	2	344	345
REACH ID	31	TR	TRIBUTARY 10 - UPLAND	1.90	TO 0.80	0.1000	1.10	11	346	356
REACH ID	32	TR	TRIBUTARY 4 - TIDAL	0.80	TO 0.00	0.1000	0.80	8	357	364
REACH ID	33	BB	BONFOUCA FROM TRIB 4 TO BB04	7.60	TO 6.80	0.1000	0.80	8	365	372
REACH ID	34	BB	BONFOUCA FROM BB04 TO RKM 5.6	6.80	TO 5.60	0.1000	1.20	12	373	384
REACH ID	35	BB	BONFOUCA FROM RKM 5.6 TO BB05	5.60	TO 4.50	0.1000	1.10	11	385	395
REACH ID	36	BB	BONFOUCA FROM BB05 TO RKM 2.7	4.50	TO 2.70	0.1000	1.80	18	396	413
REACH ID	37	BB	BONFOUCA FROM RKM 2.7 TO LIBERTY	2.70	TO 0.80	0.1000	1.90	19	414	432
REACH ID	38	BL	LIBERTY FROM RKM 15.0 TO TRIB 1	15.00	TO 14.40	0.1000	0.60	6	433	438
REACH ID	39	TR	TRIBUTARY 1	2.40	TO 0.00	0.1000	2.40	24	439	462
REACH ID	40	BL	LIBERTY FROM RKM 14.4 TO DD22	14.40	TO 13.70	0.1000	0.70	7	463	469
REACH ID	41	DD	DD22	0.30	TO 0.00	0.1000	0.30	3	470	472
REACH ID	42	BL	LIBERTY FROM DD22 TO DD20	13.70	TO 12.80	0.1000	0.90	9	473	481
REACH ID	43	DD	DD20	2.70	TO 0.00	0.1000	2.70	27	482	508
REACH ID	44	BL	LIBERTY FROM DD20 TO BL03	12.80	TO 12.60	0.1000	0.20	2	509	510
REACH ID	45	BL	LIBERTY FROM BL03 TO HWY 190	12.60	TO 10.10	0.1000	2.50	25	511	535
REACH ID	46	DD	HWY 190 (DRAINAGE DITCH 14)	2.30	TO 0.00	0.1000	2.30	23	536	558
REACH ID	47	BL	LIBERTY FROM HWY 190 TO BL04	10.10	TO 10.00	0.1000	0.10	1	559	559
REACH ID	48	BL	LIBERTY FROM BL04 TO DD18	10.00	TO 8.40	0.1000	1.60	16	560	575
REACH ID	49	DD	DD18	0.30	TO 0.00	0.1000	0.30	3	576	578
REACH ID	50	BL	LIBERTY FROM DD18 TO DD19	8.40	TO 7.80	0.1000	0.60	6	579	584
REACH ID	51	DD	DD19	1.40	TO 0.00	0.1000	1.40	14	585	598
REACH ID	52	BL	LIBERTY FROM DD19 TO DD04	7.80	TO 7.60	0.1000	0.20	2	599	600
REACH ID	53	DD	DD04	4.20	TO 0.00	0.1000	4.20	42	601	642
REACH ID	54	BL	LIBERTY FROM DD04 TO BL05	7.60	TO 6.90	0.1000	0.70	7	643	649
REACH ID	55	BL	LIBERTY FROM BL05 TO RKM 6.3	6.90	TO 6.30	0.1000	0.60	6	650	655
REACH ID	56	BL	LIBERTY FROM RKM 6.3 TO RKM 6.0	6.30	TO 6.00	0.1000	0.30	3	656	658
REACH ID	57	BL	LIBERTY FROM RKM 6.0 TO TRIB 9	6.00	TO 5.20	0.1000	0.80	8	659	666

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

REACH ID	DD	TR	BL	M	BB	UB	WD	TO	0.50	0.30	0.1000	0.20	2	667	668
REACH ID 58	DD							TO	0.50	0.30	0.1000	0.20	2	667	668
REACH ID 59	TR							TO	0.30	0.00	0.1000	0.30	3	669	671
REACH ID 60	BL							TO	5.20	4.40	0.1000	0.80	8	672	679
REACH ID 61	DD							TO	1.60	0.60	0.1000	1.00	10	680	689
REACH ID 62	TR							TO	0.60	0.00	0.1000	0.60	6	690	695
REACH ID 63	BL							TO	4.40	4.20	0.1000	0.20	2	696	697
REACH ID 64	TR							TO	0.70	0.20	0.1000	0.50	5	698	702
REACH ID 65	TR							TO	0.20	0.00	0.1000	0.20	2	703	704
REACH ID 66	BL							TO	4.20	3.30	0.1000	0.90	9	705	713
REACH ID 67	BL							TO	3.20	3.20	0.1000	0.10	1	714	714
REACH ID 68	TR							TO	0.60	0.10	0.1000	0.50	5	715	719
REACH ID 69	TR							TO	0.10	0.00	0.1000	0.10	1	720	720
REACH ID 70	BL							TO	3.20	2.60	0.1000	0.60	6	721	726
REACH ID 71	M							TO	0.20	0.00	0.1000	0.20	2	727	728
REACH ID 72	BL							TO	2.60	2.50	0.1000	0.10	1	729	729
REACH ID 73	M							TO	1.80	0.00	0.1000	1.80	18	730	747
REACH ID 74	BL							TO	2.50	1.10	0.1000	1.40	14	748	761
REACH ID 75	DD							TO	8.60	7.20	0.1000	1.40	14	762	775
REACH ID 76	BP							TO	7.20	5.10	0.1000	2.10	21	776	796
REACH ID 77	DD							TO	0.90	0.00	0.1000	0.90	9	797	805
REACH ID 78	BP							TO	5.10	3.80	0.1000	1.30	13	806	818
REACH ID 79	DD							TO	1.70	0.00	0.1000	1.70	17	819	835
REACH ID 80	BP							TO	3.80	3.40	0.1000	0.40	4	836	839
REACH ID 81	BP							TO	3.40	2.40	0.1000	1.00	10	840	849
REACH ID 82	BP							TO	2.40	1.60	0.1000	0.80	8	850	857
REACH ID 83	BP							TO	1.60	1.30	0.1000	0.30	3	858	860
REACH ID 84	C							TO	0.40	0.00	0.1000	0.40	4	861	864
REACH ID 85	BP							TO	1.30	1.00	0.1000	0.30	3	865	867
REACH ID 86	C							TO	1.00	0.30	0.1000	0.70	7	868	874
REACH ID 87	C							TO	0.30	0.00	0.1000	0.30	3	875	877
REACH ID 88	BP							TO	1.00	0.20	0.1000	0.80	8	878	885
REACH ID 89	BP							TO	0.20	0.00	0.1000	0.20	2	886	887
REACH ID 90	BL							TO	1.10	0.00	0.1000	1.10	11	888	898
REACH ID 91	BB							TO	0.80	0.00	0.1000	0.80	8	899	906

ENDATA08

\$\$\$ DATA TYPE 9 (ADVECTIVE HYDRAULIC COEFFICIENTS) \$\$\$

CARD	TYPE	REACH	ID	WIDTH "A"	WIDTH "B"	WIDTH "C"	DEPTH "D"	DEPTH "E"	DEPTH "F"	SLOPE	MANNINGS "N"
HYDR-1	1	DD		11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	2	BV		4.765	0.300	0.000	0.326	0.360	0.000	0.00001	0.030
HYDR-1	3	BV		4.765	0.300	0.000	0.326	0.360	0.000	0.00001	0.030
HYDR-1	4	BV		4.765	0.300	0.000	0.326	0.360	0.000	0.00001	0.030
HYDR-1	5	DD		11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	6	BV		4.765	0.300	0.000	0.326	0.360	0.000	0.00001	0.030
HYDR-1	7	DD		11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	8	BV		4.765	0.300	0.000	0.326	0.360	0.000	0.00001	0.030
HYDR-1	9	DD		11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	10	BV		4.765	0.300	0.000	0.326	0.360	0.000	0.00001	0.030
HYDR-1	11	BV		0.000	0.000	4.724	0.000	0.000	0.271	0.00001	0.030
HYDR-1	12	BV		0.000	0.000	4.724	0.000	0.000	0.271	0.00001	0.030
HYDR-1	13	UB		5.813	0.300	0.000	0.413	0.360	0.000	0.00001	0.030
HYDR-1	14	DD		11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	15	UB		5.813	0.300	0.000	0.413	0.360	0.000	0.00001	0.030
HYDR-1	16	UB		8.719	0.300	0.000	0.620	0.360	0.000	0.00001	0.030
HYDR-1	17	BB		0.000	0.000	10.840	0.000	0.000	0.870	0.00001	0.030
HYDR-1	18	DD		11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	19	BB		0.000	0.000	10.840	0.000	0.000	0.870	0.00001	0.030
HYDR-1	20	BB		0.000	0.000	10.840	0.000	0.000	0.870	0.00001	0.030
HYDR-1	21	WD		0.000	0.000	3.000	0.000	0.000	0.150	0.00001	0.030
HYDR-1	22	BB		0.000	0.000	54.250	0.000	0.000	1.240	0.00001	0.030
HYDR-1	23	DD		11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	24	BB		0.000	0.000	93.080	0.000	0.000	1.603	0.00001	0.030
HYDR-1	25	DD		11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	26	TR		0.000	0.000	12.000	0.000	0.000	0.600	0.00001	0.030
HYDR-1	27	BB		0.000	0.000	93.080	0.000	0.000	1.603	0.00001	0.030
HYDR-1	28	BB		0.000	0.000	93.080	0.000	0.000	1.603	0.00001	0.030
HYDR-1	29	C		0.000	0.000	114.000	0.000	0.000	1.000	0.00001	0.030

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

HYDR-1	30	BB	0.000	0.000	76.510	0.000	0.000	1.870	0.00001	0.030
HYDR-1	31	TR	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	32	TR	0.000	0.000	18.000	0.000	0.000	0.900	0.00001	0.030
HYDR-1	33	BB	0.000	0.000	76.510	0.000	0.000	1.870	0.00001	0.030
HYDR-1	34	BB	0.000	0.000	91.400	0.000	0.000	1.890	0.00001	0.030
HYDR-1	35	BB	0.000	0.000	114.300	0.000	0.000	1.670	0.00001	0.030
HYDR-1	36	BB	0.000	0.000	77.700	0.000	0.000	1.440	0.00001	0.030
HYDR-1	37	BB	0.000	0.000	88.000	0.000	0.000	1.600	0.00001	0.030
HYDR-1	38	BL	8.720	0.300	0.000	0.620	0.360	0.000	0.00001	0.030
HYDR-1	39	TR	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	40	BL	8.720	0.300	0.000	0.620	0.360	0.000	0.00001	0.030
HYDR-1	41	DD	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	42	BL	17.438	0.300	0.000	0.992	0.360	0.000	0.00001	0.030
HYDR-1	43	DD	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	44	BL	0.000	0.000	8.840	0.000	0.000	0.472	0.00001	0.030
HYDR-1	45	BL	0.000	0.000	8.840	0.000	0.000	0.472	0.00001	0.030
HYDR-1	46	DD	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	47	BL	0.000	0.000	18.600	0.000	0.000	1.400	0.00001	0.030
HYDR-1	48	BL	0.000	0.000	18.600	0.000	0.000	1.400	0.00001	0.030
HYDR-1	49	DD	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	50	BL	0.000	0.000	18.600	0.000	0.000	1.400	0.00001	0.030
HYDR-1	51	DD	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	52	BL	0.000	0.000	42.670	0.000	0.000	2.280	0.00001	0.030
HYDR-1	53	DD	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	54	BL	0.000	0.000	42.670	0.000	0.000	2.280	0.00001	0.030
HYDR-1	55	BL	0.000	0.000	42.670	0.000	0.000	2.280	0.00001	0.030
HYDR-1	56	BL	0.000	0.000	39.690	0.000	0.000	1.700	0.00001	0.030
HYDR-1	57	BL	0.000	0.000	47.550	0.000	0.000	2.080	0.00001	0.030
HYDR-1	58	DD	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	59	TR	0.000	0.000	16.000	0.000	0.000	0.800	0.00001	0.030
HYDR-1	60	BL	0.000	0.000	47.550	0.000	0.000	2.080	0.00001	0.030
HYDR-1	61	DD	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	62	TR	0.000	0.000	12.000	0.000	0.000	0.600	0.00001	0.030
HYDR-1	63	BL	0.000	0.000	52.730	0.000	0.000	2.090	0.00001	0.030
HYDR-1	64	TR	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	65	TR	0.000	0.000	13.000	0.000	0.000	0.650	0.00001	0.030
HYDR-1	66	BL	0.000	0.000	52.120	0.000	0.000	2.140	0.00001	0.030
HYDR-1	67	BL	0.000	0.000	52.120	0.000	0.000	2.140	0.00001	0.030
HYDR-1	68	TR	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	69	TR	0.000	0.000	10.000	0.000	0.000	0.500	0.00001	0.030
HYDR-1	70	BL	0.000	0.000	52.120	0.000	0.000	2.140	0.00001	0.030
HYDR-1	71	M	0.000	0.000	32.000	0.000	0.000	1.200	0.00001	0.030
HYDR-1	72	BL	0.000	0.000	56.540	0.000	0.000	2.140	0.00001	0.030
HYDR-1	73	M	0.000	0.000	32.000	0.000	0.000	1.200	0.00001	0.030
HYDR-1	74	BL	0.000	0.000	60.960	0.000	0.000	2.130	0.00001	0.030
HYDR-1	75	DD	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	76	BP	8.720	0.300	0.000	0.620	0.360	0.000	0.00001	0.030
HYDR-1	77	DD	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	78	BP	8.720	0.300	0.000	0.620	0.360	0.000	0.00001	0.030
HYDR-1	79	DD	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	80	BP	8.720	0.300	0.000	0.620	0.360	0.000	0.00001	0.030
HYDR-1	81	BP	0.000	0.000	18.900	0.000	0.000	1.100	0.00001	0.030
HYDR-1	82	BP	0.000	0.000	18.290	0.000	0.000	1.000	0.00001	0.030
HYDR-1	83	BP	0.000	0.000	21.340	0.000	0.000	1.500	0.00001	0.030
HYDR-1	84	C	0.000	0.000	20.100	0.000	0.000	0.740	0.00001	0.030
HYDR-1	85	BP	0.000	0.000	21.340	0.000	0.000	1.500	0.00001	0.030
HYDR-1	86	C	0.000	0.000	16.460	0.000	0.000	0.940	0.00001	0.030
HYDR-1	87	C	0.000	0.000	32.000	0.000	0.000	0.770	0.00001	0.030
HYDR-1	88	BP	0.000	0.000	30.480	0.000	0.000	1.500	0.00001	0.030
HYDR-1	89	BP	0.000	0.000	30.480	0.000	0.000	1.500	0.00001	0.030
HYDR-1	90	BL	0.000	0.000	60.960	0.000	0.000	2.130	0.00001	0.030
HYDR-1	91	BB	0.000	0.000	105.590	0.000	0.000	1.960	0.00001	0.030

ENDATA09
 \$\$\$ DATA TYPE 10 (DISPERSIVE HYDRAULIC COEFFICIENTS) \$\$\$

CARD	TYPE	REACH	ID	TIDAL RANGE	DISPERSION "A"	DISPERSION "B"	DISPERSION "C"	DISPERSION "D"
HYDR		1	DD	0.00	0.000	0.833	0.000	1.000

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

HYDR	2	BV	0.00	0.000	0.833	0.000	1.000
HYDR	3	BV	0.00	0.000	0.833	0.000	1.000
HYDR	4	BV	0.00	0.000	0.833	0.000	1.000
HYDR	5	DD	0.00	0.000	0.833	0.000	1.000
HYDR	6	BV	0.00	0.000	0.833	0.000	1.000
HYDR	7	DD	0.00	0.000	0.833	0.000	1.000
HYDR	8	BV	0.00	0.000	0.833	0.000	1.000
HYDR	9	DD	0.00	0.000	0.833	0.000	1.000
HYDR	10	BV	0.00	0.000	0.833	0.000	1.000
HYDR	11	BV	1.00	200.000	0.833	0.000	1.000
HYDR	12	BV	1.00	200.000	0.833	0.000	1.000
HYDR	13	UB	0.00	0.000	0.833	0.000	1.000
HYDR	14	DD	0.00	0.000	0.833	0.000	1.000
HYDR	15	UB	0.00	0.000	0.833	0.000	1.000
HYDR	16	UB	0.00	0.000	0.833	0.000	1.000
HYDR	17	BB	1.00	200.000	0.833	0.000	1.000
HYDR	18	DD	0.00	0.000	0.833	0.000	1.000
HYDR	19	BB	1.00	200.000	0.833	0.000	1.000
HYDR	20	BB	1.00	200.000	0.833	0.000	1.000
HYDR	21	WD	1.00	200.000	0.833	0.000	1.000
HYDR	22	BB	1.00	200.000	0.833	0.000	1.000
HYDR	23	DD	0.00	0.000	0.833	0.000	1.000
HYDR	24	BB	1.00	200.000	0.833	0.000	1.000
HYDR	25	DD	0.00	0.000	0.833	0.000	1.000
HYDR	26	TR	1.00	200.000	0.833	0.000	1.000
HYDR	27	BB	1.00	200.000	0.833	0.000	1.000
HYDR	28	BB	1.00	200.000	0.833	0.000	1.000
HYDR	29	C	1.00	200.000	0.833	0.000	1.000
HYDR	30	BB	1.00	200.000	0.833	0.000	1.000
HYDR	31	TR	0.00	0.000	0.833	0.000	1.000
HYDR	32	TR	1.00	200.000	0.833	0.000	1.000
HYDR	33	BB	1.00	200.000	0.833	0.000	1.000
HYDR	34	BB	1.00	200.000	0.833	0.000	1.000
HYDR	35	BB	1.00	200.000	0.833	0.000	1.000
HYDR	36	BB	1.00	200.000	0.833	0.000	1.000
HYDR	37	BB	1.00	200.000	0.833	0.000	1.000
HYDR	38	BL	0.00	0.000	0.833	0.000	1.000
HYDR	39	TR	0.00	0.000	0.833	0.000	1.000
HYDR	40	BL	0.00	0.000	0.833	0.000	1.000
HYDR	41	DD	0.00	0.000	0.833	0.000	1.000
HYDR	42	BL	0.00	0.000	0.833	0.000	1.000
HYDR	43	DD	0.00	0.000	0.833	0.000	1.000
HYDR	44	BL	1.00	100.000	0.833	0.000	1.000
HYDR	45	BL	1.00	100.000	0.833	0.000	1.000
HYDR	46	DD	0.00	0.000	0.833	0.000	1.000
HYDR	47	BL	1.00	100.000	0.833	0.000	1.000
HYDR	48	BL	1.00	100.000	0.833	0.000	1.000
HYDR	49	DD	0.00	0.000	0.833	0.000	1.000
HYDR	50	BL	1.00	150.000	0.833	0.000	1.000
HYDR	51	DD	0.00	0.000	0.833	0.000	1.000
HYDR	52	BL	1.00	200.000	0.833	0.000	1.000
HYDR	53	DD	0.00	0.000	0.833	0.000	1.000
HYDR	54	BL	1.00	250.000	0.833	0.000	1.000
HYDR	55	BL	1.00	300.000	0.833	0.000	1.000
HYDR	56	BL	1.00	300.000	0.833	0.000	1.000
HYDR	57	BL	1.00	300.000	0.833	0.000	1.000
HYDR	58	DD	0.00	0.000	0.833	0.000	1.000
HYDR	59	TR	1.00	200.000	0.833	0.000	1.000
HYDR	60	BL	1.00	300.000	0.833	0.000	1.000
HYDR	61	DD	0.00	0.000	0.833	0.000	1.000
HYDR	62	TR	1.00	200.000	0.833	0.000	1.000
HYDR	63	BL	1.00	300.000	0.833	0.000	1.000
HYDR	64	TR	0.00	0.000	0.833	0.000	1.000
HYDR	65	TR	1.00	200.000	0.833	0.000	1.000
HYDR	66	BL	1.00	300.000	0.833	0.000	1.000
HYDR	67	BL	1.00	300.000	0.833	0.000	1.000
HYDR	68	TR	0.00	0.000	0.833	0.000	1.000
HYDR	69	TR	1.00	200.000	0.833	0.000	1.000
HYDR	70	BL	1.00	300.000	0.833	0.000	1.000
HYDR	71	M	1.00	200.000	0.833	0.000	1.000

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

HYDR	72	BL	1.00	300.000	0.833	0.000	1.000
HYDR	73	M	1.00	200.000	0.833	0.000	1.000
HYDR	74	BL	1.00	300.000	0.833	0.000	1.000
HYDR	75	DD	0.00	0.000	0.833	0.000	1.000
HYDR	76	BP	0.00	0.000	0.833	0.000	1.000
HYDR	77	DD	0.00	0.000	0.833	0.000	1.000
HYDR	78	BP	0.00	0.000	0.833	0.000	1.000
HYDR	79	DD	0.00	0.000	0.833	0.000	1.000
HYDR	80	BP	0.00	0.000	0.833	0.000	1.000
HYDR	81	BP	1.00	200.000	0.833	0.000	1.000
HYDR	82	BP	1.00	200.000	0.833	0.000	1.000
HYDR	83	BP	1.00	200.000	0.833	0.000	1.000
HYDR	84	C	1.00	200.000	0.833	0.000	1.000
HYDR	85	BP	1.00	200.000	0.833	0.000	1.000
HYDR	86	C	1.00	200.000	0.833	0.000	1.000
HYDR	87	C	1.00	200.000	0.833	0.000	1.000
HYDR	88	BP	1.00	200.000	0.833	0.000	1.000
HYDR	89	BP	1.00	200.000	0.833	0.000	1.000
HYDR	90	BL	1.00	300.000	0.833	0.000	1.000
HYDR	91	BB	1.00	200.000	0.833	0.000	1.000
ENDATA10							

\$\$\$ DATA TYPE 11 (INITIAL CONDITIONS) \$\$\$

CARD	TYPE	REACH	ID	TEMP deg C	SALIN ppt	DO mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	PERIP g/m ²	BOD1 mg/L	BOD2 mg/L	ORG-N mg/L	ORG-P mg/L	COLI #/100mL	NCM	COND	CL
INITIAL		1	DD	30.00	0.26	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL		2	BV	33.82	0.26	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL		3	BV	33.82	0.26	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL		4	BV	27.21	0.39	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL		5	DD	30.00	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL		6	BV	27.21	0.39	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL		7	DD	30.00	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL		8	BV	27.21	0.28	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL		9	DD	30.00	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL		10	BV	27.90	0.17	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL		11	BV	27.90	0.17	3.00	0.10	0.10	0.00	24.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL		12	BV	27.90	0.17	3.00	0.10	0.10	0.00	24.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL		13	UB	30.00	0.17	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL		14	DD	30.00	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL		15	UB	30.00	0.17	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL		16	UB	30.00	0.17	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL		17	BB	29.60	0.24	3.00	0.10	0.10	0.00	24.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL		18	DD	30.00	0.27	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL		19	BB	29.60	0.27	3.00	0.10	0.10	0.00	49.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL		20	BB	29.60	0.45	3.00	0.10	0.10	0.00	49.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL		21	WD	30.00	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL		22	BB	29.60	1.15	3.00	0.10	0.10	0.00	8.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL		23	DD	30.00	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL		24	BB	31.54	2.10	3.00	0.10	0.10	0.00	8.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL		25	DD	30.00	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL		26	TR	30.00	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL		27	BB	31.54	2.40	3.00	0.10	0.10	0.00	8.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL		28	BB	31.54	2.68	3.00	0.10	0.10	0.00	8.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL		29	C	30.00	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL		30	BB	31.54	3.00	3.00	0.10	0.10	0.00	10.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL		31	TR	30.00	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL		32	TR	30.00	0.30	3.00	0.10	0.10	0.00	10.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL		33	BB	31.29	3.10	3.00	0.10	0.10	0.00	11.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL		34	BB	31.29	3.30	3.00	0.10	0.10	0.00	11.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL		35	BB	31.29	3.30	3.00	0.10	0.10	0.00	12.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL		36	BB	31.29	3.62	3.00	0.10	0.10	0.00	12.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL		37	BB	31.29	3.82	3.00	0.10	0.10	0.00	10.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL		38	BL	29.33	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL		39	TR	30.00	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL		40	BL	29.33	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL		41	DD	30.00	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL		42	BL	29.33	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL		43	DD	30.00	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

INITIAL	44	BL	29.33	0.48	3.00	0.10	0.10	0.00	14.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	45	BL	29.33	0.48	3.00	0.10	0.10	0.00	14.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	46	DD	30.00	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	47	BL	29.52	0.54	3.00	0.10	0.10	0.00	14.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	48	BL	29.52	0.54	3.00	0.10	0.10	0.00	57.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	49	DD	30.00	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	50	BL	29.52	1.70	3.00	0.10	0.10	0.00	3.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	51	DD	30.00	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	52	BL	31.31	2.90	3.00	0.10	0.10	0.00	3.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	53	DD	30.00	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	54	BL	31.31	3.09	3.00	0.10	0.10	0.00	3.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	55	BL	31.31	3.09	3.00	0.10	0.10	0.00	3.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	56	BL	31.31	3.09	3.00	0.10	0.10	0.00	3.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	57	BL	31.31	3.09	3.00	0.10	0.10	0.00	3.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	58	DD	30.00	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	59	TR	30.00	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	60	BL	31.99	2.80	3.00	0.10	0.10	0.00	3.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	61	DD	30.00	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	62	TR	30.00	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	63	BL	31.99	2.40	3.00	0.10	0.10	0.00	3.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	64	TR	30.00	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	65	TR	30.00	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	66	BL	31.99	2.12	3.00	0.10	0.10	0.00	3.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	67	BL	31.99	2.12	3.00	0.10	0.10	0.00	65.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	68	TR	30.00	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	69	TR	30.00	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	70	BL	31.99	2.80	3.00	0.10	0.10	0.00	65.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	71	M	30.00	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	72	BL	31.99	3.50	3.00	0.10	0.10	0.00	6.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	73	M	30.00	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	74	BL	31.99	4.16	3.00	0.10	0.10	0.00	6.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	75	DD	30.00	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	76	BP	32.08	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	77	DD	30.00	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	78	BP	32.08	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	79	DD	30.00	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	80	BP	32.08	1.60	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	81	BP	32.08	3.17	3.00	0.10	0.10	0.00	14.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	82	BP	32.08	3.32	3.00	0.10	0.10	0.00	14.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	83	BP	32.07	3.47	3.00	0.10	0.10	0.00	14.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	84	C	30.00	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	85	BP	32.07	3.70	3.00	0.10	0.10	0.00	13.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	86	C	30.00	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	87	C	30.00	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	88	BP	32.72	3.94	3.00	0.10	0.10	0.00	13.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	89	BP	32.72	3.94	3.00	0.10	0.10	0.00	13.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	90	BL	30.44	4.16	3.00	0.10	0.10	0.00	6.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	91	BB	30.22	4.00	3.00	0.10	0.10	0.00	7.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

ENDATA11

\$\$\$ DATA TYPE 12 (REAERATION, SEDIMENT OXYGEN DEMAND, BOD COEFFICIENTS) \$\$\$

CARD	RCH	RCH	K2	K2	K2	BKGRND	AEROB		BOD	SETTL	SETTLD	ANAER	AEROB	BOD2	BOD2	SETT	ANAER	BOD2
							SOD	DECAY										
TYPE	NUM	ID	OPT	"A"	"B"	"C"	g/m ² /d	per day	m/d	frac	per day	per day	m/d	per day	per day	per day	per day	
COEF-1	1	DD	15	LOUISIANA	0.000	0.000	0.000	0.500	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	2	BV	15	LOUISIANA	0.000	0.000	0.000	0.300	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	3	BV	15	LOUISIANA	0.000	0.000	0.000	6.000	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	4	BV	15	LOUISIANA	0.000	0.000	0.000	7.000	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	5	DD	15	LOUISIANA	0.000	0.000	0.000	0.500	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	6	BV	15	LOUISIANA	0.000	0.000	0.000	7.000	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	7	DD	15	LOUISIANA	0.000	0.000	0.000	0.500	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	8	BV	15	LOUISIANA	0.000	0.000	0.000	7.000	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	9	DD	15	LOUISIANA	0.000	0.000	0.000	0.500	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	10	BV	15	LOUISIANA	0.000	0.000	0.000	7.000	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	11	BV	15	LOUISIANA	0.000	0.000	0.000	4.200	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	12	BV	15	LOUISIANA	0.000	0.000	0.000	4.200	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	13	UB	15	LOUISIANA	0.000	0.000	0.000	0.500	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	14	DD	15	LOUISIANA	0.000	0.000	0.000	0.500	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

COEF-1	85	BP	1	K2=a	0.606	0.000	0.000	0.300	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	86	C	15	LOUISIANA	0.000	0.000	0.000	0.500	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	87	C	15	LOUISIANA	0.000	0.000	0.000	0.500	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	88	BP	1	K2=a	0.606	0.000	0.000	0.000	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	89	BP	1	K2=a	0.606	0.000	0.000	0.000	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	90	BL	1	K2=a	0.426	0.000	0.000	0.000	0.080	0.050	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	91	BB	1	K2=a	0.503	0.000	0.000	0.000	0.080	0.050	0.000	0.000	0.000	0.000	0.000	0.000
ENDATA12																

\$\$\$ DATA TYPE 13 (NITROGEN AND PHOSPHORUS COEFFICIENTS) \$\$\$

CARD	TYPE	REACH	ID	NBOD		SETTLD	NH3	BKGRND	BKGRND	DENIT	ORGP	ORGP	SETTLD
				DECA	SETT	AVAIL		DECA	SRCE				PO4
				per day	m/d	frac	per day	g/m ² /d	g/m ² /d	per day	per day	m/d	frac
COEF-2		1	DD	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2		2	BV	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2		3	BV	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2		4	BV	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2		5	DD	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2		6	BV	0.030	0.100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2		7	DD	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2		8	BV	0.030	0.100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2		9	DD	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2		10	BV	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2		11	BV	0.030	0.150	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2		12	BV	0.030	0.150	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2		13	UB	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2		14	DD	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2		15	UB	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2		16	UB	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2		17	BB	0.030	0.150	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2		18	DD	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2		19	BB	0.030	0.150	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2		20	BB	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2		21	WD	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2		22	BB	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2		23	DD	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2		24	BB	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2		25	DD	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2		26	TR	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2		27	BB	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2		28	BB	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2		29	C	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2		30	BB	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2		31	TR	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2		32	TR	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2		33	BB	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2		34	BB	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2		35	BB	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2		36	BB	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2		37	BB	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2		38	BL	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2		39	TR	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2		40	BL	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2		41	DD	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2		42	BL	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2		43	DD	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2		44	BL	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2		45	BL	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2		46	DD	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2		47	BL	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2		48	BL	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2		49	DD	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2		50	BL	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2		51	DD	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2		52	BL	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2		53	DD	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2		54	BL	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2		55	BL	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

COEF-2	56	BL	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	57	BL	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	58	DD	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	59	TR	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	60	BL	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	61	DD	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	62	TR	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	63	BL	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	64	TR	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	65	TR	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	66	BL	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	67	BL	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	68	TR	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	69	TR	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	70	BL	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	71	M	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	72	BL	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	73	M	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	74	BL	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	75	DD	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	76	BP	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	77	DD	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	78	BP	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	79	DD	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	80	BP	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	81	BP	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	82	BP	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	83	BP	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	84	C	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	85	BP	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	86	C	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	87	C	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	88	BP	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	89	BP	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	90	BL	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	91	BB	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

ENDATA13

\$\$\$ DATA TYPE 14 (ALGAE PHYTOPLANKTON AND PERIPHYTON COEFFICIENTS) \$\$\$

CARD TYPE	REACH	ID	SECCHI DEPTH m	CHL A: ALGAE frac	PHYTO SETT m/d	PHYTO DEATH per day	PHYTO GROW per day	PHYTO RESP per day	PERIP DEATH per day	PERIP GROW per day	PERIP RESP per day	MAX
												BANK SHADING frac

ENDATA14

\$\$\$ DATA TYPE 15 (COLIFORM AND NONCONSERVATIVE COEFFICIENTS) \$\$\$

CARD TYPE	REACH	ID	COLIFORM DIE-OFF per day	NCM DECAY per day	NCM SETT m/d
-----------	-------	----	--------------------------------	-------------------------	--------------------

ENDATA15

\$\$\$ DATA TYPE 16 (INCREMENTAL DATA FOR FLOW, TEMPERATURE, SALINITY, AND CONSERVATIVES) \$\$\$

CARD TYPE	REACH	ID	OUTFLOW	INFLOW	TEMP	SALIN	COND	CL	IN/DIST	OUT/DIST
			m ³ /s	m ³ /s	deg C	ppt				

ENDATA16

\$\$\$ DATA TYPE 17 (INCREMENTAL DATA FOR DO, BOD, AND NITROGEN) \$\$\$

CARD TYPE	REACH	ID	DO	BOD1	NBOD	mg/L	mg/L	BOD2
			mg/L	mg/L	mg/L			

ENDATA17

\$\$\$ DATA TYPE 18 (INCREMENTAL DATA FOR PHOSPHORUS, PHYTOPLANKTON, COLIFORM, AND NONCONSERVATIVES) \$\$\$

PHYTO

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

CARD TYPE	REACH	ID	PO4 mg/L	CHL A µg/L	COLI #/100mL	NCM	ORGP mg/L
-----------	-------	----	-------------	---------------	-----------------	-----	--------------

ENDATA18

\$\$\$ DATA TYPE 19 (NONPOINT SOURCE DATA) \$\$\$

CARD TYPE	REACH	ID	BOD1 kg/d	NBOD kg/d	COLI #/day	NCM	DO kg/d	BOD2 kg/d	ORG-P kg/d
NONPOINT	1	DD	0.65	0.27	0.00	0.00	0.00	0.00	0.00
NONPOINT	2	BV	0.13	0.05	0.00	0.00	0.00	0.00	0.00
NONPOINT	3	BV	1.40	0.05	0.00	0.00	0.00	0.00	0.00
NONPOINT	4	BV	1.40	0.05	0.00	0.00	0.00	0.00	0.00
NONPOINT	5	DD	0.30	0.13	0.00	0.00	0.00	0.00	0.00
NONPOINT	6	BV	1.40	0.14	0.00	0.00	0.00	0.00	0.00
NONPOINT	7	DD	0.11	0.05	0.00	0.00	0.00	0.00	0.00
NONPOINT	8	BV	1.70	0.14	0.00	0.00	0.00	0.00	0.00
NONPOINT	9	DD	0.30	0.13	0.00	0.00	0.00	0.00	0.00
NONPOINT	10	BV	0.10	0.05	0.00	0.00	0.00	0.00	0.00
NONPOINT	11	BV	0.80	0.15	0.00	0.00	0.00	0.00	0.00
NONPOINT	12	BV	1.40	0.90	0.00	0.00	0.00	0.00	0.00
NONPOINT	13	UB	0.37	0.16	0.00	0.00	0.00	0.00	0.00
NONPOINT	14	DD	0.15	0.06	0.00	0.00	0.00	0.00	0.00
NONPOINT	15	UB	0.25	0.10	0.00	0.00	0.00	0.00	0.00
NONPOINT	16	UB	0.28	0.11	0.00	0.00	0.00	0.00	0.00
NONPOINT	17	BB	0.10	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	18	DD	0.26	0.12	0.00	0.00	0.00	0.00	0.00
NONPOINT	19	BB	11.70	3.80	0.00	0.00	0.00	0.00	0.00
NONPOINT	20	BB	22.50	2.10	0.00	0.00	0.00	0.00	0.00
NONPOINT	21	WD	0.17	0.06	0.00	0.00	0.00	0.00	0.00
NONPOINT	22	BB	135.00	17.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	23	DD	0.05	0.02	0.00	0.00	0.00	0.00	0.00
NONPOINT	24	BB	160.00	18.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	25	DD	0.15	0.06	0.00	0.00	0.00	0.00	0.00
NONPOINT	26	TR	1.85	0.61	0.00	0.00	0.00	0.00	0.00
NONPOINT	27	BB	126.00	16.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	28	BB	146.00	15.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	29	C	98.00	28.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	30	BB	100.00	12.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	31	TR	0.17	0.07	0.00	0.00	0.00	0.00	0.00
NONPOINT	32	TR	5.70	1.72	0.00	0.00	0.00	0.00	0.00
NONPOINT	33	BB	140.00	15.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	34	BB	280.00	30.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	35	BB	325.00	40.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	36	BB	325.00	5.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	37	BB	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	38	BL	2.00	1.40	0.00	0.00	0.00	0.00	0.00
NONPOINT	39	TR	0.35	0.15	0.00	0.00	0.00	0.00	0.00
NONPOINT	40	BL	2.00	1.90	0.00	0.00	0.00	0.00	0.00
NONPOINT	41	DD	0.05	0.02	0.00	0.00	0.00	0.00	0.00
NONPOINT	42	BL	10.80	12.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	43	DD	0.40	0.17	0.00	0.00	0.00	0.00	0.00
NONPOINT	44	BL	3.40	4.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	45	BL	40.00	3.50	0.00	0.00	0.00	0.00	0.00
NONPOINT	46	DD	0.34	0.15	0.00	0.00	0.00	0.00	0.00
NONPOINT	47	BL	6.00	2.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	48	BL	64.00	5.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	49	DD	0.04	0.02	0.00	0.00	0.00	0.00	0.00
NONPOINT	50	BL	25.00	3.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	51	DD	0.21	0.09	0.00	0.00	0.00	0.00	0.00
NONPOINT	52	BL	38.00	3.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	53	DD	0.63	0.28	0.00	0.00	0.00	0.00	0.00
NONPOINT	54	BL	98.00	3.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	55	BL	75.00	3.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	56	BL	40.00	2.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	57	BL	120.00	2.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	58	DD	0.03	0.01	0.00	0.00	0.00	0.00	0.00
NONPOINT	59	TR	1.80	0.55	0.00	0.00	0.00	0.00	0.00
NONPOINT	60	BL	220.00	35.00	0.00	0.00	0.00	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

NONPOINT	61	DD	0.15	0.06	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	62	TR	2.30	0.74	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	63	BL	40.00	12.00	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	64	TR	0.07	0.03	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	65	TR	0.86	0.28	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	66	BL	220.00	36.00	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	67	BL	0.00	17.00	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	68	TR	0.07	0.03	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	69	TR	0.29	0.10	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	70	BL	25.00	13.00	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	71	M	3.35	0.89	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	72	BL	50.00	12.00	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	73	M	29.00	8.00	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	74	BL	150.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	75	DD	0.21	0.10	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	76	BP	0.60	0.25	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	77	DD	0.14	0.06	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	78	BP	0.40	0.14	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	79	DD	0.26	0.11	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	80	BP	0.09	0.05	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	81	BP	83.50	14.50	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	82	BP	37.00	4.00	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	83	BP	22.00	4.00	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	84	C	3.00	0.90	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	85	BP	35.00	8.50	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	86	C	4.60	1.33	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	87	C	3.60	1.10	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	88	BP	150.00	35.00	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	89	BP	160.00	30.00	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	90	BL	150.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	91	BB	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

ENDATA19

\$\$\$ DATA TYPE 20 (HEADWATER FOR FLOW, TEMPERATURE, SALINITY AND CONSERVATIVES) \$\$\$

CARD	TYPE	ELEMENT	NAME	UNIT	FLOW	FLOW	TEMP	SALIN	COND	CL	HDW DISP
					m ³ /s	cfs	deg C	ppt			EXCHG frac
HDWTR-1		1	B VINCENT & BONFOUCA	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1		67	BROWNS VILL RD (DD2)	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1		102	DRAINAGE DITCH 8	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1		119	DRAINAGE DITCH 9	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1		159	UPPER B BONFOUCA	0	0.00283	0.10000	33.80	0.26	520.900	7.230	0.000
HDWTR-1		183	DRAINAGE DITCH 23	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1		221	HIGHWAY 190(DD 5)	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1		260	WEST DRAINAGE CANAL	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1		284	DRAINAGE DITCH 6	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1		295	TRIBUTARY 2	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1		324	CANAL 26	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1		346	TRIBUTARY 4	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1		433	BAYOU LIBERTY	0	0.00283	0.10000	33.80	0.26	520.900	7.230	0.000
HDWTR-1		439	TRIBUTARY 1	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1		470	DRAINAGE DITCH 22	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1		482	DRAINAGE DITCH 20	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1		536	HIGHWAY 190	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1		576	DRAINAGE DITCH 18	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1		585	DRAINAGE DITCH 19	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1		601	DRAINAGE DITCH 4	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1		667	TRIBUTARY 9	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1		680	TRIBUTARY 6	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1		698	TRIBUTARY 10	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1		715	TRIBUTARY 8	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1		727	MARINA 1	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1		730	MARINA 2	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1		762	BAYOU PAQUET	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1		797	DRAINAGE DITCH 16	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1		819	DRAINAGE DITCH 17	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1		861	TRIBUTARY 24	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1		868	TRIBUTARY 25	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000

ENDATA20

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

\$\$\$ DATA TYPE 21 (HEADWATER DATA FOR DO, BOD, AND NITROGEN) \$\$\$

CARD TYPE	ELEMENT	NAME	DO mg/L	BOD#1 mg/L	NBOD mg/L	mg/L	mg/L	BOD2 mg/L
HDWTR-2	1	B VINCENT & BONFOUCA	6.00	2.20	1.00	0.00	0.00	0.00
HDWTR-2	67	BROWNS VILL RD (DD2)	6.00	2.20	1.00	0.00	0.00	0.00
HDWTR-2	102	DRAINAGE DITCH 8	6.00	2.20	1.00	0.00	0.00	0.00
HDWTR-2	119	DRAINAGE DITCH 9	6.00	2.20	1.00	0.00	0.00	0.00
HDWTR-2	159	UPPER B BONFOUCA	6.00	2.20	1.00	0.00	0.00	0.00
HDWTR-2	183	DRAINAGE DITCH 23	6.00	2.20	1.00	0.00	0.00	0.00
HDWTR-2	221	HIGHWAY 190(DD 5)	6.00	2.20	1.00	0.00	0.00	0.00
HDWTR-2	260	WEST DRAINAGE CANAL	6.00	2.20	1.00	0.00	0.00	0.00
HDWTR-2	284	DRAINAGE DITCH 6	6.00	2.20	1.00	0.00	0.00	0.00
HDWTR-2	295	TRIBUTARY 2	6.00	2.20	1.00	0.00	0.00	0.00
HDWTR-2	324	CANAL 26	6.00	2.20	1.00	0.00	0.00	0.00
HDWTR-2	346	TRIBUTARY 4	6.00	2.20	1.00	0.00	0.00	0.00
HDWTR-2	433	BAYOU LIBERTY	6.00	2.20	1.00	0.00	0.00	0.00
HDWTR-2	439	TRIBUTARY 1	6.00	2.20	1.00	0.00	0.00	0.00
HDWTR-2	470	DRAINAGE DITCH 22	6.00	2.20	1.00	0.00	0.00	0.00
HDWTR-2	482	DRAINAGE DITCH 20	6.00	2.20	1.00	0.00	0.00	0.00
HDWTR-2	536	HIGHWAY 190	6.00	2.20	1.00	0.00	0.00	0.00
HDWTR-2	576	DRAINAGE DITCH 18	6.00	2.20	1.00	0.00	0.00	0.00
HDWTR-2	585	DRAINAGE DITCH 19	6.00	2.20	1.00	0.00	0.00	0.00
HDWTR-2	601	DRAINAGE DITCH 4	6.00	2.20	1.00	0.00	0.00	0.00
HDWTR-2	667	TRIBUTARY 9	6.00	2.20	1.00	0.00	0.00	0.00
HDWTR-2	680	TRIBUTARY 6	6.00	2.20	1.00	0.00	0.00	0.00
HDWTR-2	698	TRIBUTARY 10	6.00	2.20	1.00	0.00	0.00	0.00
HDWTR-2	715	TRIBUTARY 8	6.00	2.20	1.00	0.00	0.00	0.00
HDWTR-2	727	MARINA 1	6.00	2.20	1.00	0.00	0.00	0.00
HDWTR-2	730	MARINA 2	6.00	2.20	1.00	0.00	0.00	0.00
HDWTR-2	762	BAYOU PAQUET	6.00	2.20	1.00	0.00	0.00	0.00
HDWTR-2	797	DRAINAGE DITCH 16	6.00	2.20	1.00	0.00	0.00	0.00
HDWTR-2	819	DRAINAGE DITCH 17	6.00	2.20	1.00	0.00	0.00	0.00
HDWTR-2	861	TRIBUTARY 24	6.00	2.20	1.00	0.00	0.00	0.00
HDWTR-2	868	TRIBUTARY 25	6.00	2.20	1.00	0.00	0.00	0.00
ENDATA21								

\$\$\$ DATA TYPE 22 (HEADWATER DATA FOR PHOSPHORUS, PHYTOPLANKTON, COLIFORM, AND NONCONSERVATIVES) \$\$\$

CARD TYPE	ELEMENT	NAME	PO4-P mg/L	PHYTO CHL A µg/L	COLI #/100mL	NCM	ORG-P mg/L
HDWTR-3	1	B VINCENT & BONFOUCA	0.00	0.00	0.00	0.00	0.00
HDWTR-3	67	BROWNS VILL RD (DD2)	0.00	0.00	0.00	0.00	0.00
HDWTR-3	102	DRAINAGE DITCH 8	0.00	0.00	0.00	0.00	0.00
HDWTR-3	119	DRAINAGE DITCH 9	0.00	0.00	0.00	0.00	0.00
HDWTR-3	159	UPPER B BONFOUCA	0.00	0.00	0.00	0.00	0.00
HDWTR-3	183	DRAINAGE DITCH 23	0.00	0.00	0.00	0.00	0.00
HDWTR-3	221	HIGHWAY 190(DD 5)	0.00	0.00	0.00	0.00	0.00
HDWTR-3	260	WEST DRAINAGE CANAL	0.00	0.00	0.00	0.00	0.00
HDWTR-3	284	DRAINAGE DITCH 6	0.00	0.00	0.00	0.00	0.00
HDWTR-3	295	TRIBUTARY 2	0.00	0.00	0.00	0.00	0.00
HDWTR-3	324	CANAL 26	0.00	0.00	0.00	0.00	0.00
HDWTR-3	346	TRIBUTARY 4	0.00	0.00	0.00	0.00	0.00
HDWTR-3	433	BAYOU LIBERTY	0.00	0.00	0.00	0.00	0.00
HDWTR-3	439	TRIBUTARY 1	0.00	0.00	0.00	0.00	0.00
HDWTR-3	470	DRAINAGE DITCH 22	0.00	0.00	0.00	0.00	0.00
HDWTR-3	482	DRAINAGE DITCH 20	0.00	0.00	0.00	0.00	0.00
HDWTR-3	536	HIGHWAY 190	0.00	0.00	0.00	0.00	0.00
HDWTR-3	576	DRAINAGE DITCH 18	0.00	0.00	0.00	0.00	0.00
HDWTR-3	585	DRAINAGE DITCH 19	0.00	0.00	0.00	0.00	0.00
HDWTR-3	601	DRAINAGE DITCH 4	0.00	0.00	0.00	0.00	0.00
HDWTR-3	667	TRIBUTARY 9	0.00	0.00	0.00	0.00	0.00
HDWTR-3	680	TRIBUTARY 6	0.00	0.00	0.00	0.00	0.00
HDWTR-3	698	TRIBUTARY 10	0.00	0.00	0.00	0.00	0.00
HDWTR-3	715	TRIBUTARY 8	0.00	0.00	0.00	0.00	0.00
HDWTR-3	727	MARINA 1	0.00	0.00	0.00	0.00	0.00
HDWTR-3	730	MARINA 2	0.00	0.00	0.00	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

HDWTR-3			0.00	0.00	0.00	0.00	0.00
762	BAYOU PAQUET						
797	DRAINAGE DITCH 16						
819	DRAINAGE DITCH 17						
861	TRIBUTARY 24						
868	TRIBUTARY 25						

ENDATA22

\$\$\$ DATA TYPE 23 (JUNCTION DATA) \$\$\$

CARD TYPE	JUNCTION ELEMENT	UPSTRM ELEMENT	RIVER KILOM	NAME
JUNCTION	88	66	17.60	DRAINAGE DITCH 2
JUNCTION	110	101	16.90	DRAINAGE DITCH 8
JUNCTION	140	118	16.00	DRAINAGE DITCH 9
JUNCTION	193	182	2.60	DRAINAGE DITCH 23
JUNCTION	219	158	14.40	UPPER BAYOU BONFOUCA
JUNCTION	239	220	14.20	HIGHWAY 190 (DRAINAGE DITCH 5)
JUNCTION	263	259	12.10	WEST DRAINAGE CANAL
JUNCTION	287	283	10.00	DRAINAGE DITCH 6
JUNCTION	310	294	9.20	TRIBUTARY 2
JUNCTION	344	323	7.80	CANAL 26
JUNCTION	365	345	7.60	TRIBUTARY 4
JUNCTION	463	438	14.40	TRIBUTARY 1
JUNCTION	473	469	13.70	DRAINAGE DITCH 22
JUNCTION	509	481	12.80	DRAINAGE DITCH 20
JUNCTION	559	535	10.10	HIGHWAY 190 (DRAINAGE DITCH 14)
JUNCTION	579	575	8.40	DRAINAGE DITCH 18
JUNCTION	599	584	7.80	DRAINAGE DITCH 19
JUNCTION	643	600	7.60	DRAINAGE DITCH 4
JUNCTION	672	666	5.20	TRIBUTARY 9
JUNCTION	696	679	4.40	TRIBUTARY 6
JUNCTION	705	697	4.20	TRIBUTARY 10
JUNCTION	721	714	3.20	TRIBUTARY 8
JUNCTION	729	726	2.60	MARINA 1
JUNCTION	748	729	2.50	MARINA 2
JUNCTION	806	796	5.10	DRAINAGE DITCH 16
JUNCTION	836	818	3.80	DRAINAGE DITCH 17
JUNCTION	865	860	1.30	CHANNEL 1
JUNCTION	878	867	1.00	CHANNEL 2
JUNCTION	888	761	1.10	BAYOU PAQUET
JUNCTION	899	432	0.80	BAYOU LIBERTY

ENDATA23

\$\$\$ DATA TYPE 24 (WASTELOAD DATA FOR FLOW, TEMPERATURE, SALINITY, AND CONSERVATIVES) \$\$\$

CARD TYPE	ELEMENT	RKILO	NAME	FLOW m ³ /s	FLOW cfs	FLOW MGD	TEMP deg C	SALIN ppt	COND	CL
WSTLD-1	1	24.20	V H SEAL APARTMENTS	0.00003	0.00116	0.001	30.00	0.39	753.600	63.300
WSTLD-1	40	20.30	GROUNDWATER	0.00550	0.19421	0.126	33.80	0.26	520.900	7.230
WSTLD-1	48	19.50	EAGLE LAKE MHP	0.00276	0.09746	0.063	30.00	0.40	774.000	34.400
WSTLD-1	63	18.00	J&K MANAGEMENT LLC	0.00001	0.00028	0.000	30.00	0.39	753.600	63.300
WSTLD-1	67	2.10	STONES THROW APTS	0.00084	0.02970	0.019	30.00	0.39	753.600	63.300
WSTLD-1	73	1.50	GOOD VALUE AUTO SALE	0.00000	0.00009	0.000	30.00	0.39	753.600	63.300
WSTLD-1	74	1.40	ADAMS MHP	0.00009	0.00325	0.002	30.00	0.39	753.600	63.300
WSTLD-1	79	0.90	WADLEIGH OFFSHORE	0.00004	0.00124	0.001	30.00	0.39	753.600	63.300
WSTLD-1	80	0.80	EXXONMOBIL #51367	0.00011	0.00387	0.002	30.00	0.39	753.600	63.300
WSTLD-1	81	0.70	LCR-M PLUMBING SUPP	0.00001	0.00018	0.000	30.00	0.39	753.600	63.300
WSTLD-1	83	0.50	BAKER-ELLIS-SHAMROCK	0.00002	0.00065	0.000	30.00	0.39	753.600	63.300
WSTLD-1	84	0.40	NORTHSHORE CHEMICAL	0.00000	0.00008	0.000	30.00	0.39	753.600	63.300
WSTLD-1	85	0.30	MANHEIM AUTO AUCTION	0.00003	0.00108	0.001	30.00	0.39	753.600	63.300
WSTLD-1	87	0.10	WADLEIGH FITNESS	0.00001	0.00046	0.000	30.00	0.39	753.600	63.300
WSTLD-1	102	0.80	JUBILEE #4815	0.00007	0.00263	0.002	30.00	0.39	753.600	63.300
WSTLD-1	107	0.30	JOHNSON-BLDG 2	0.00006	0.00216	0.001	30.00	0.39	753.600	63.300
WSTLD-1	119	2.10	CHARTER-JOHN'S AUTO	0.00001	0.00025	0.000	30.00	0.39	753.600	63.300
WSTLD-1	125	1.50	I-12 SHELL	0.00001	0.00025	0.000	30.00	0.39	753.600	63.300
WSTLD-1	135	0.50	ST TAM PAR SCH MAINT	0.00000	0.00015	0.000	30.00	0.39	753.600	63.300
WSTLD-1	136	0.40	J&D-VETS HEALTH/OMNI	0.00003	0.00118	0.001	30.00	0.39	753.600	63.300
WSTLD-1	183	1.00	GOOD SHEPHERD CHURCH	0.00005	0.00170	0.001	30.00	0.39	753.600	63.300

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

WSTLD-1	221	1.80	JOLLY APARTMENTS	0.00025	0.00882	0.006	30.00	0.39	753.600	63.300
WSTLD-1	222	1.70	PINEY RIDGE MHP	0.00041	0.01439	0.009	30.00	0.39	753.600	63.300
WSTLD-1	223	1.60	STARLING PLAZA	0.00013	0.00442	0.003	30.00	0.39	753.600	63.300
WSTLD-1	224	1.50	PO FOLKS SEAFOOD	0.00002	0.00076	0.000	30.00	0.39	753.600	63.300
WSTLD-1	227	1.20	SOUTH SEAS RSTRNT	0.00009	0.00302	0.002	30.00	0.39	753.600	63.300
WSTLD-1	228	1.10	SHADY PINES MHP	0.00046	0.01624	0.010	30.00	0.39	753.600	63.300
WSTLD-1	230	0.90	1421HWY190-ARMACOAT	0.00003	0.00099	0.001	30.00	0.39	753.600	63.300
WSTLD-1	231	0.80	FACDIR-STTAMBRACKETAG	0.00000	0.00012	0.000	30.00	0.39	753.600	63.300
WSTLD-1	232	0.70	NEW LIFE MINISTRIES	0.00002	0.00076	0.000	30.00	0.39	753.600	63.300
WSTLD-1	233	0.60	PEACE LUTH CHURCH	0.00010	0.00367	0.002	30.00	0.39	753.600	63.300
WSTLD-1	234	0.50	ERNEST WALDER	0.00002	0.00055	0.000	30.00	0.39	753.600	63.300
WSTLD-1	235	0.40	STOR N LOCK-TYMELESS	0.00001	0.00022	0.000	30.00	0.39	753.600	63.300
WSTLD-1	260	0.30	BONFOUCA SUPFND SITE	0.00063	0.02228	0.014	30.00	0.22	437.300	23.500
WSTLD-1	281	10.30	DOTD BNFC BRIDGE	0.00000	0.00003	0.000	30.00	0.39	753.600	63.300
WSTLD-1	282	10.20	SLIDELL MARINE	0.00016	0.00572	0.004	30.00	0.39	753.600	63.300
WSTLD-1	284	0.30	ARC MECH CONTRACTORS	0.00000	0.00015	0.000	30.00	0.39	753.600	200.000
WSTLD-1	289	9.80	PEARL RIVER NAV	0.00015	0.00541	0.003	30.00	0.39	753.600	63.300
WSTLD-1	295	1.50	STP CONST BUILDING	0.00004	0.00124	0.001	30.00	0.39	753.600	63.300
WSTLD-1	346	1.90	ACADIAN GRDNS CONDOS	0.00033	0.01160	0.007	30.00	0.39	753.600	63.300
WSTLD-1	351	1.40	OAKWOOD ESTATES	0.00054	0.01918	0.012	30.00	0.39	753.600	63.300
WSTLD-1	389	5.20	COIN DU LESTIN SUB	0.00350	0.12376	0.080	30.00	0.32	628.100	54.300
WSTLD-1	439	2.40	NORTHSHORE SQUADRON	0.00000	0.00004	0.000	30.00	0.39	753.600	63.300
WSTLD-1	442	2.10	ANDY KNIGHT	0.00000	0.00006	0.000	30.00	0.39	753.600	63.300
WSTLD-1	470	0.30	THE MEADOWS SUB	0.01209	0.42698	0.276	30.00	0.55	1053.000	150.000
WSTLD-1	482	2.70	ROYAL GOLF CLUB	0.00019	0.00671	0.004	30.00	0.39	753.600	63.300
WSTLD-1	494	1.50	NATFINANCE-TEXTRON	0.00018	0.00619	0.004	30.00	0.39	753.600	63.300
WSTLD-1	495	1.40	GUARDIAN ANGELS	0.00004	0.00144	0.001	30.00	0.39	753.600	63.300
WSTLD-1	498	1.10	OAKMONT SUBDIVISIO	0.00309	0.10922	0.071	30.00	0.32	619.500	47.000
WSTLD-1	536	2.30	ASSUNTA'S RESTAURANT	0.00013	0.00448	0.003	30.00	0.39	753.600	63.300
WSTLD-1	544	1.50	INDIAN HILLS RV PARK	0.00035	0.01218	0.008	30.00	0.39	753.600	63.300
WSTLD-1	546	1.30	J&J AUTO BROKERS	0.00000	0.00006	0.000	30.00	0.39	753.600	63.300
WSTLD-1	548	1.10	7THDAY & DOLLAR GEN	0.00006	0.00212	0.001	30.00	0.39	753.600	63.300
WSTLD-1	550	0.90	OMNI STORAGE VI	0.00001	0.00046	0.000	30.00	0.39	753.600	63.300
WSTLD-1	551	0.80	ABC SUPPLY CO	0.00001	0.00022	0.000	30.00	0.39	753.600	63.300
WSTLD-1	552	0.70	LION CONSULTING	0.00000	0.00006	0.000	30.00	0.39	753.600	63.300
WSTLD-1	553	0.60	CHILL RITE	0.00001	0.00034	0.000	30.00	0.39	753.600	63.300
WSTLD-1	555	0.40	HERRON-2315/17/19	0.00002	0.00088	0.001	30.00	0.39	753.600	63.300
WSTLD-1	556	0.30	THOMGROC-ST POL JURY	0.00000	0.00015	0.000	30.00	0.39	753.600	63.300
WSTLD-1	557	0.20	PITSTOP3-REFLECTMIR	0.00006	0.00216	0.001	30.00	0.39	753.600	63.300
WSTLD-1	576	0.30	ALL AM ELKS LODGE	0.00007	0.00248	0.002	30.00	0.39	753.600	63.300
WSTLD-1	585	1.40	LAKE CASTLE SCHOOL	0.00038	0.01346	0.009	30.00	0.39	753.600	63.300
WSTLD-1	601	4.20	BLUEBELL-NULITE	0.00004	0.00133	0.001	30.00	0.39	753.600	63.300
WSTLD-1	602	4.10	ALBERS AC & HEATING	0.00001	0.00018	0.000	30.00	0.39	753.600	63.300
WSTLD-1	611	3.20	BAKER SALES WRHSE	0.00000	0.00006	0.000	30.00	0.39	753.600	63.300
WSTLD-1	614	2.90	CLECO SERVICE CENTER	0.00001	0.00031	0.000	30.00	0.39	753.600	63.300
WSTLD-1	615	2.80	G&S-UNITED MEDICAL	0.00002	0.00055	0.000	30.00	0.39	753.600	63.300
WSTLD-1	616	2.70	AIRGAS-HANNA-SUNBELT	0.00069	0.02444	0.016	30.00	0.39	753.600	63.300
WSTLD-1	617	2.60	RJD CONTRACTORS	0.00000	0.00003	0.000	30.00	0.39	753.600	63.300
WSTLD-1	619	2.40	M&R-WAGNERSHOPCTR	0.00009	0.00308	0.002	30.00	0.39	753.600	63.300
WSTLD-1	620	2.30	CALWES CENTER	0.00018	0.00641	0.004	30.00	0.39	753.600	63.300
WSTLD-1	621	2.20	BEAU'S-LA LUMBER	0.00002	0.00083	0.001	30.00	0.39	753.600	63.300
WSTLD-1	625	1.80	ADVANCE AUTO	0.00000	0.00015	0.000	30.00	0.39	753.600	63.300
WSTLD-1	633	1.00	HUNTWYCK VILLAGE	0.01218	0.43008	0.278	30.00	0.30	582.300	52.500
WSTLD-1	667	0.50	B LIBERTY WATER ASSN	0.00001	0.00028	0.000	30.00	0.39	753.600	63.300
WSTLD-1	680	1.60	THOMPSON RD BAPTIST	0.00004	0.00124	0.001	30.00	0.39	753.600	63.300
WSTLD-1	698	0.70	LIBERTY FOOD STORE	0.00002	0.00088	0.001	30.00	0.39	753.600	63.300
WSTLD-1	715	0.60	A-1 REMODELING & BLD	0.00001	0.00031	0.000	30.00	0.39	753.600	63.300
WSTLD-1	723	3.00	ST GENEVIEVE CATH CH	0.00013	0.00464	0.003	30.00	0.39	753.600	63.300
WSTLD-1	728	0.10	BAYOU LIBERTY MARINA	0.00000	0.00003	0.000	30.00	0.39	753.600	63.300
WSTLD-1	746	0.20	A BONFOUCA MARINA	0.00004	0.00133	0.001	30.00	0.39	753.600	63.300
WSTLD-1	762	8.60	WASTE MGMT OF LA	0.00002	0.00077	0.000	30.00	0.39	753.600	63.300
WSTLD-1	763	8.50	ACALIGN-ALLAM-CT-M&D	0.00001	0.00028	0.000	30.00	0.39	753.600	63.300
WSTLD-1	767	8.10	K-BAR-B YOUTH RANCH	0.00010	0.00356	0.002	30.00	0.39	753.600	63.300
WSTLD-1	776	7.20	BAYOU PAQUET HEADWAT	0.00283	0.10000	0.065	33.80	0.26	520.900	7.230
WSTLD-1	797	0.90	ACTS 1 TAX SERVICE	0.00000	0.00009	0.000	30.00	0.39	753.600	63.300
WSTLD-1	819	1.70	TIMBER RIDGE SUB	0.00195	0.06869	0.044	30.00	0.45	864.700	41.600

ENDATA24

\$\$\$ DATA TYPE 25 (WASTELOAD DATA FOR DO, BOD, AND NITROGEN) \$\$\$

§ BOD

§

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

CARD TYPE	ELEMENT	NAME	DO mg/L	BOD mg/L	RMVL	NBOD mg/L	mg/L	NITRIF mg/L	BOD2 mg/L
WSTLD-2	1	V H SEAL APARTMENTS	2.00	69.00	0.00	69.00	0.00	0.00	0.00
WSTLD-2	40	GROUNDWATER	6.53	2.16	0.00	0.95	0.00	0.00	0.00
WSTLD-2	48	EAGLE LAKE MHP	6.40	6.81	0.00	2.41	0.00	0.00	0.00
WSTLD-2	63	J&K MANAGEMENT LLC	2.00	69.00	0.00	69.00	0.00	0.00	0.00
WSTLD-2	67	STONES THROW APTS	2.00	11.50	0.00	11.50	0.00	0.00	0.00
WSTLD-2	73	GOOD VALUE AUTO SALE	2.00	13.80	0.00	13.80	0.00	0.00	0.00
WSTLD-2	74	ADAMS MHP	2.00	18.40	0.00	18.40	0.00	0.00	0.00
WSTLD-2	79	WADLEIGH OFFSHORE	2.00	23.00	0.00	23.00	0.00	0.00	0.00
WSTLD-2	80	EXXONMOBIL #51367	2.00	25.30	0.00	25.30	0.00	0.00	0.00
WSTLD-2	81	LCR-M PLUMBING SUPP	2.00	16.10	0.00	16.10	0.00	0.00	0.00
WSTLD-2	83	BAKER-ELLIS-SHAMROCK	2.00	25.07	0.00	25.07	0.00	0.00	0.00
WSTLD-2	84	NORTHSHORE CHEMICAL	2.00	69.00	0.00	69.00	0.00	0.00	0.00
WSTLD-2	85	MANHEIM AUTO AUCTION	2.00	69.00	0.00	69.00	0.00	0.00	0.00
WSTLD-2	87	WADLEIGH FITNESS	2.00	69.00	0.00	69.00	0.00	0.00	0.00
WSTLD-2	102	JUBILEE #4815	2.00	23.00	0.00	23.00	0.00	0.00	0.00
WSTLD-2	107	JOHNSON-BLDG 2	2.00	40.25	0.00	40.25	0.00	0.00	0.00
WSTLD-2	119	CHARTER-JOHN'S AUTO	2.00	77.05	0.00	77.05	0.00	0.00	0.00
WSTLD-2	125	I-12 SHELL	2.00	18.40	0.00	18.40	0.00	0.00	0.00
WSTLD-2	135	ST TAM PAR SCH MAINT	2.00	16.10	0.00	16.10	0.00	0.00	0.00
WSTLD-2	136	J&D-VETS HEALTH/OMNI	2.00	69.00	0.00	69.00	0.00	0.00	0.00
WSTLD-2	183	GOOD SHEPHERD CHURCH	2.00	69.00	0.00	69.00	0.00	0.00	0.00
WSTLD-2	221	JOLLY APARTMENTS	2.00	25.30	0.00	25.30	0.00	0.00	0.00
WSTLD-2	222	PINEY RIDGE MHP	2.00	6.90	0.00	6.90	0.00	0.00	0.00
WSTLD-2	223	STARLING PLAZA	2.00	69.00	0.00	69.00	0.00	0.00	0.00
WSTLD-2	224	PO FOLKS SEAFOOD	2.00	69.00	0.00	69.00	0.00	0.00	0.00
WSTLD-2	227	SOUTH SEAS RSTRNT	2.00	621.00	0.00	621.00	0.00	0.00	0.00
WSTLD-2	228	SHADY PINES MHP	2.00	69.00	0.00	69.00	0.00	0.00	0.00
WSTLD-2	230	1421HWY190-ARMACOAT	2.00	69.00	0.00	69.00	0.00	0.00	0.00
WSTLD-2	231	FACDIR-STTAMBRACKETAG	2.00	69.00	0.00	69.00	0.00	0.00	0.00
WSTLD-2	232	NEW LIFE MINISTRIES	2.00	69.00	0.00	69.00	0.00	0.00	0.00
WSTLD-2	233	PEACE LUTH CHURCH	2.00	92.00	0.00	92.00	0.00	0.00	0.00
WSTLD-2	234	ERNEST WALDER	2.00	25.30	0.00	25.30	0.00	0.00	0.00
WSTLD-2	235	STOR N LOCK-TYMELESS	2.00	55.20	0.00	55.20	0.00	0.00	0.00
WSTLD-2	260	BONFOUCA SUPFND SITE	7.10	1.33	0.00	1.74	0.00	0.00	0.00
WSTLD-2	281	DOTD BNPCA BRIDGE	2.00	69.00	0.00	69.00	0.00	0.00	0.00
WSTLD-2	282	SLIDELL MARINE	2.00	18.40	0.00	18.40	0.00	0.00	0.00
WSTLD-2	284	ARC MECH CONTRACTORS	2.00	69.00	0.00	69.00	0.00	0.00	0.00
WSTLD-2	289	PEARL RIVER NAV	2.00	69.00	0.00	69.00	0.00	0.00	0.00
WSTLD-2	295	STP CONST BUILDING	2.00	69.00	0.00	69.00	0.00	0.00	0.00
WSTLD-2	346	ACADIAN GRDNS CONDOS	2.00	34.50	0.00	34.50	0.00	0.00	0.00
WSTLD-2	351	OAKWOOD ESTATES	2.00	2.30	0.00	2.30	0.00	0.00	0.00
WSTLD-2	389	COIN DU LESTIN SUB	3.60	3.10	0.00	2.41	0.00	0.00	0.00
WSTLD-2	439	NORTHSHORE SQUADRON	2.00	69.00	0.00	69.00	0.00	0.00	0.00
WSTLD-2	442	ANDY KNIGHT	2.00	69.00	0.00	69.00	0.00	0.00	0.00
WSTLD-2	470	THE MEADOWS SUB	4.97	10.17	0.00	3.01	0.00	0.00	0.00
WSTLD-2	482	ROYAL GOLF CLUB	2.00	69.00	0.00	69.00	0.00	0.00	0.00
WSTLD-2	494	NATFINANCE-TEXTRON	2.00	69.00	0.00	69.00	0.00	0.00	0.00
WSTLD-2	495	GUARDIAN ANGELS	2.00	69.00	0.00	69.00	0.00	0.00	0.00
WSTLD-2	498	OAKMONT SUBDIVISIO	7.40	6.20	0.00	2.80	0.00	0.00	0.00
WSTLD-2	536	ASSUNTA'S RESTAURANT	2.00	69.00	0.00	69.00	0.00	0.00	0.00
WSTLD-2	544	INDIAN HILLS RV PARK	2.00	39.10	0.00	39.10	0.00	0.00	0.00
WSTLD-2	546	J&J AUTO BROKERS	2.00	69.00	0.00	69.00	0.00	0.00	0.00
WSTLD-2	548	7THDAY & DOLLAR GEN	2.00	56.93	0.00	56.93	0.00	0.00	0.00
WSTLD-2	550	OMNI STORAGE VI	2.00	69.00	0.00	69.00	0.00	0.00	0.00
WSTLD-2	551	ABC SUPPLY CO	2.00	69.00	0.00	69.00	0.00	0.00	0.00
WSTLD-2	552	LION CONSULTING	2.00	69.00	0.00	69.00	0.00	0.00	0.00
WSTLD-2	553	CHILL RITE	2.00	69.00	0.00	69.00	0.00	0.00	0.00
WSTLD-2	555	HERRON-2315/17/19	2.00	57.39	0.00	57.39	0.00	0.00	0.00
WSTLD-2	556	THOMGROC-ST POL JURY	2.00	69.00	0.00	69.00	0.00	0.00	0.00
WSTLD-2	557	PITSTOP3-REFLECTMIR	2.00	69.00	0.00	69.00	0.00	0.00	0.00
WSTLD-2	576	ALL AM ELKS LODGE	2.00	69.00	0.00	69.00	0.00	0.00	0.00
WSTLD-2	585	LAKE CASTLE SCHOOL	2.00	46.00	0.00	46.00	0.00	0.00	0.00
WSTLD-2	601	BLUEBELL-NULITE	2.00	145.48	0.00	145.48	0.00	0.00	0.00
WSTLD-2	602	ALBERS AC & HEATING	2.00	20.70	0.00	20.70	0.00	0.00	0.00
WSTLD-2	611	BAKER SALES WRHSE	2.00	69.00	0.00	69.00	0.00	0.00	0.00
WSTLD-2	614	CLECO SERVICE CENTER	2.00	57.50	0.00	57.50	0.00	0.00	0.00
WSTLD-2	615	G&S-UNITED MEDICAL	2.00	21.85	0.00	21.85	0.00	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

WSTLD-2	616	AIRGAS-HANNA-SUNBELT	2.00	36.57	0.00	36.57	0.00	0.00	0.00	0.00
WSTLD-2	617	RJD CONTRACTORS	2.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00
WSTLD-2	619	M&R-WAGNERSHOPCTR	2.00	11.50	0.00	11.50	0.00	0.00	0.00	0.00
WSTLD-2	620	CALWES CENTER	2.00	16.10	0.00	16.10	0.00	0.00	0.00	0.00
WSTLD-2	621	BEAU'S-LA LUMBER	2.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00
WSTLD-2	625	ADVANCE AUTO	2.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00
WSTLD-2	633	HUNTWYCK VILLAGE	7.10	4.68	0.00	3.01	0.00	0.00	0.00	0.00
WSTLD-2	667	B LIBERTY WATER ASSN	2.00	46.00	0.00	46.00	0.00	0.00	0.00	0.00
WSTLD-2	680	THOMPSON RD BAPTIST	2.00	32.20	0.00	32.20	0.00	0.00	0.00	0.00
WSTLD-2	698	LIBERTY FOOD STORE	2.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00
WSTLD-2	715	A-1 REMODELING & BLD	2.00	25.30	0.00	25.30	0.00	0.00	0.00	0.00
WSTLD-2	723	ST GENEVIEVE CATH CH	2.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00
WSTLD-2	728	BAYOU LIBERTY MARINA	2.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00
WSTLD-2	746	A BONFOUCA MARINA	2.00	128.80	0.00	128.80	0.00	0.00	0.00	0.00
WSTLD-2	762	WASTE MGMT OF LA	2.00	27.60	0.00	27.60	0.00	0.00	0.00	0.00
WSTLD-2	763	ACALIGN-ALLAM-CT-M&D	2.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00
WSTLD-2	767	K-BAR-B YOUTH RANCH	2.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00
WSTLD-2	776	BAYOU PAQUET HEADWAT	6.53	2.16	0.00	0.95	0.00	0.00	0.00	0.00
WSTLD-2	797	ACTS 1 TAX SERVICE	2.00	6.90	0.00	6.90	0.00	0.00	0.00	0.00
WSTLD-2	819	TIMBER RIDGE SUB	5.00	85.00	0.00	2.41	0.00	0.00	0.00	0.00
ENDATA25										

\$\$\$ DATA TYPE 26 (WASTELOAD DATA FOR PHOSPHORUS, PHYTOPLANTON, COLIFORM, AND NONCONSERVATIVES) \$\$\$

CARD TYPE	ELEMENT	NAME	PHYTO				
			PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM	ORG-P mg/L
WSTLD-3	1	V H SEAL APARTMENTS	0.00	0.00	0.00	0.00	0.00
WSTLD-3	40	GROUNDWATER	0.00	0.00	0.00	0.00	0.00
WSTLD-3	48	EAGLE LAKE MHP	0.00	0.00	0.00	0.00	0.00
WSTLD-3	63	J&K MANAGEMENT LLC	0.00	0.00	0.00	0.00	0.00
WSTLD-3	67	STONES THROW APTS	0.00	0.00	0.00	0.00	0.00
WSTLD-3	73	GOOD VALUE AUTO SALE	0.00	0.00	0.00	0.00	0.00
WSTLD-3	74	ADAMS MHP	0.00	0.00	0.00	0.00	0.00
WSTLD-3	79	WADLEIGH OFFSHORE	0.00	0.00	0.00	0.00	0.00
WSTLD-3	80	EXXONMOBIL #51367	0.00	0.00	0.00	0.00	0.00
WSTLD-3	81	LCR-M PLUMBING SUPP	0.00	0.00	0.00	0.00	0.00
WSTLD-3	83	BAKER-ELLIS-SHAMROCK	0.00	0.00	0.00	0.00	0.00
WSTLD-3	84	NORTHSHORE CHEMICAL	0.00	0.00	0.00	0.00	0.00
WSTLD-3	85	MANHEIM AUTO AUCTION	0.00	0.00	0.00	0.00	0.00
WSTLD-3	87	WADLEIGH FITNESS	0.00	0.00	0.00	0.00	0.00
WSTLD-3	102	JUBILEE #4815	0.00	0.00	0.00	0.00	0.00
WSTLD-3	107	JOHNSON-BLDG 2	0.00	0.00	0.00	0.00	0.00
WSTLD-3	119	CHARTER-JOHN'S AUTO	0.00	0.00	0.00	0.00	0.00
WSTLD-3	125	I-12 SHELL	0.00	0.00	0.00	0.00	0.00
WSTLD-3	135	ST TAM PAR SCH MAINT	0.00	0.00	0.00	0.00	0.00
WSTLD-3	136	J&D-VETS HEALTH/OMNI	0.00	0.00	0.00	0.00	0.00
WSTLD-3	183	GOOD SHEPHERD CHURCH	0.00	0.00	0.00	0.00	0.00
WSTLD-3	221	JOLLY APARTMENTS	0.00	0.00	0.00	0.00	0.00
WSTLD-3	222	PINEY RIDGE MHP	0.00	0.00	0.00	0.00	0.00
WSTLD-3	223	STARLING PLAZA	0.00	0.00	0.00	0.00	0.00
WSTLD-3	224	PO FOLKS SEAFOOD	0.00	0.00	0.00	0.00	0.00
WSTLD-3	227	SOUTH SEAS RSTRNT	0.00	0.00	0.00	0.00	0.00
WSTLD-3	228	SHADY PINES MHP	0.00	0.00	0.00	0.00	0.00
WSTLD-3	230	1421HWY190-ARMACOAT	0.00	0.00	0.00	0.00	0.00
WSTLD-3	231	FACDIR-STTAMBRACKETAG	0.00	0.00	0.00	0.00	0.00
WSTLD-3	232	NEW LIFE MINISTRIES	0.00	0.00	0.00	0.00	0.00
WSTLD-3	233	PEACE LUTH CHURCH	0.00	0.00	0.00	0.00	0.00
WSTLD-3	234	ERNEST WALDER	0.00	0.00	0.00	0.00	0.00
WSTLD-3	235	STOR N LOCK-TYMELESS	0.00	0.00	0.00	0.00	0.00
WSTLD-3	260	BONFOUCA SUPFND SITE	0.00	0.00	0.00	0.00	0.00
WSTLD-3	281	DOTD BNFC A BRIDGE	0.00	0.00	0.00	0.00	0.00
WSTLD-3	282	SLIDELL MARINE	0.00	0.00	0.00	0.00	0.00
WSTLD-3	284	ARC MECH CONTRACTORS	0.00	0.00	0.00	0.00	0.00
WSTLD-3	289	PEARL RIVER NAV	0.00	0.00	0.00	0.00	0.00
WSTLD-3	295	STP CONST BUILDING	0.00	0.00	0.00	0.00	0.00
WSTLD-3	346	ACADIAN GRDNS CONDOS	0.00	0.00	0.00	0.00	0.00
WSTLD-3	351	OAKWOOD ESTATES	0.00	0.00	0.00	0.00	0.00
WSTLD-3	389	COIN DU LESTIN SUB	0.00	0.00	0.00	0.00	0.00
WSTLD-3	439	NORTHSHORE SQUADRON	0.00	0.00	0.00	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

WSTLD-3	442	ANDY KNIGHT	0.00	0.00	0.00	0.00	0.00
WSTLD-3	470	THE MEADOWS SUB	0.00	0.00	0.00	0.00	0.00
WSTLD-3	482	ROYAL GOLF CLUB	0.00	0.00	0.00	0.00	0.00
WSTLD-3	494	NATFINANCE-TEXTRON	0.00	0.00	0.00	0.00	0.00
WSTLD-3	495	GUARDIAN ANGELS	0.00	0.00	0.00	0.00	0.00
WSTLD-3	498	OAKMONT SUBDIVISIO	0.00	0.00	0.00	0.00	0.00
WSTLD-3	536	ASSUNTA'S RESTAURANT	0.00	0.00	0.00	0.00	0.00
WSTLD-3	544	INDIAN HILLS RV PARK	0.00	0.00	0.00	0.00	0.00
WSTLD-3	546	J&J AUTO BROKERS	0.00	0.00	0.00	0.00	0.00
WSTLD-3	548	7THDAY & DOLLAR GEN	0.00	0.00	0.00	0.00	0.00
WSTLD-3	550	OMNI STORAGE VI	0.00	0.00	0.00	0.00	0.00
WSTLD-3	551	ABC SUPPLY CO	0.00	0.00	0.00	0.00	0.00
WSTLD-3	552	LION CONSULTING	0.00	0.00	0.00	0.00	0.00
WSTLD-3	553	CHILL RITE	0.00	0.00	0.00	0.00	0.00
WSTLD-3	555	HERRON-2315/17/19	0.00	0.00	0.00	0.00	0.00
WSTLD-3	556	THOMGROC-ST POL JURY	0.00	0.00	0.00	0.00	0.00
WSTLD-3	557	PITSTOP3-REFLECTMIR	0.00	0.00	0.00	0.00	0.00
WSTLD-3	576	ALL AM ELKS LODGE	0.00	0.00	0.00	0.00	0.00
WSTLD-3	585	LAKE CASTLE SCHOOL	0.00	0.00	0.00	0.00	0.00
WSTLD-3	601	BLUEBELL-NULITE	0.00	0.00	0.00	0.00	0.00
WSTLD-3	602	ALBERS AC & HEATING	0.00	0.00	0.00	0.00	0.00
WSTLD-3	611	BAKER SALES WRHSE	0.00	0.00	0.00	0.00	0.00
WSTLD-3	614	CLECO SERVICE CENTER	0.00	0.00	0.00	0.00	0.00
WSTLD-3	615	G&S-UNITED MEDICAL	0.00	0.00	0.00	0.00	0.00
WSTLD-3	616	AIRGAS-HANNA-SUNBELT	0.00	0.00	0.00	0.00	0.00
WSTLD-3	617	RJD CONTRACTORS	0.00	0.00	0.00	0.00	0.00
WSTLD-3	619	M&R-WAGNERSHOPCTR	0.00	0.00	0.00	0.00	0.00
WSTLD-3	620	CALWES CENTER	0.00	0.00	0.00	0.00	0.00
WSTLD-3	621	BEAU'S-LA LUMBER	0.00	0.00	0.00	0.00	0.00
WSTLD-3	625	ADVANCE AUTO	0.00	0.00	0.00	0.00	0.00
WSTLD-3	633	HUNTWYCK VILLAGE	0.00	0.00	0.00	0.00	0.00
WSTLD-3	667	B LIBERTY WATER ASSN	0.00	0.00	0.00	0.00	0.00
WSTLD-3	680	THOMPSON RD BAPTIST	0.00	0.00	0.00	0.00	0.00
WSTLD-3	698	LIBERTY FOOD STORE	0.00	0.00	0.00	0.00	0.00
WSTLD-3	715	A-1 REMODELING & BLD	0.00	0.00	0.00	0.00	0.00
WSTLD-3	723	ST GENEVIEVE CATH CH	0.00	0.00	0.00	0.00	0.00
WSTLD-3	728	BAYOU LIBERTY MARINA	0.00	0.00	0.00	0.00	0.00
WSTLD-3	746	A BONFOUCA MARINA	0.00	0.00	0.00	0.00	0.00
WSTLD-3	762	WASTE MGMT OF LA	0.00	0.00	0.00	0.00	0.00
WSTLD-3	763	ACALIGN-ALLAM-CT-M&D	0.00	0.00	0.00	0.00	0.00
WSTLD-3	767	K-BAR-B YOUTH RANCH	0.00	0.00	0.00	0.00	0.00
WSTLD-3	776	BAYOU PAQUET HEADWAT	0.00	0.00	0.00	0.00	0.00
WSTLD-3	797	ACTS 1 TAX SERVICE	0.00	0.00	0.00	0.00	0.00
WSTLD-3	819	TIMBER RIDGE SUB	0.00	0.00	0.00	0.00	0.00

ENDATA26

\$\$\$ DATA TYPE 27 (LOWER BOUNDARY CONDITIONS) \$\$\$

CARD TYPE	CONSTITUENT	CONCENTRATION	
LOWER BC	TEMPERATURE	=	29.980 deg C
LOWER BC	SALINITY	=	3.940 ppt
LOWER BC	CONSERVATIVE MATERIAL I	=	7096.000
LOWER BC	CONSERVATIVE MATERIAL II	=	2200.000
LOWER BC	DISSOLVED OXYGEN	=	6.800 mg/L
LOWER BC	BOD1 BIOCHEMICAL OXYGEN DEMAND	=	7.820 mg/L
LOWER BC	BOD2 BIOCHEMICAL OXYGEN DEMAND	=	0.000 mg/L
LOWER BC	PHYTOPLANKTON	=	5.550 µg/L
LOWER BC	COLIFORM	=	0.000 #/100 mL
LOWER BC	NONCONSERVATIVE MATERIAL	=	0.000
LOWER BC	NBOD	=	1.800 mg/L

ENDATA27

\$\$\$ DATA TYPE 28 (DAM DATA) \$\$\$

CARD TYPE	ELEMENT	NAME	EQN	"A"	"B"	"H"
-----------	---------	------	-----	-----	-----	-----

ENDATA28

\$\$\$ DATA TYPE 29 (SENSITIVITY ANALYSIS DATA) \$\$\$

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

CARD TYPE	PARAMETER	COL 1	COL 2	COL 3	COL 4	COL 5	COL 6	COL 7	COL 8
SENSITIV ENDATA29	BASEFLOW	30.0	-30.0	0.0	0.0	0.0	0.0	0.0	0.0

\$\$\$ DATA TYPE 30 (PLOT CONTROL CARDS) \$\$\$

PLOT1
 RCH 1 2 3 4 6 8 10 11 12 17 19 20 22 24 27 28 30 33 34 35 36 37 91
 PLOT2
 RCH 13 15 16
 PLOT3
 RCH 38 40 42 44 45 47 48 50 52 54 55 56 57 60 63 66 67 70 72 74 90
 PLOT4
 RCH 75 76 78 80 81 82 83 85 88 89
 PLOT5
 RCH 41
 PLOT6
 RCH 43
 PLOT7
 RCH 53
 PLOT8
 RCH 79
 PLOT9
 RCH 5
 ENDATA30

\$\$\$ DATA TYPE 31 (OVERLAY PLOT DATA) \$\$\$

OVERLAY1 VINCENT-BONFOUCA.OVL
 OVERLAY2 UPPER_BONFOUCA.OVL
 OVERLAY3 LIBERTY.OVL
 OVERLAY4 PAQUET.OVL
 OVERLAY5 MEADOWS.OVL
 OVERLAY6 OAKMONT.OVL
 OVERLAY7 HWY 190 E - LIBERTY.OVL
 OVERLAY8 TIMBER RIDGE.OVL
 OVERLAY9 BROWNS_VILLAGE.OVL
 ENDATA31

.....NO ERRORS DETECTED IN INPUT DATA
HYDRAULIC CALCULATIONS COMPLETED
TRIDIAGONAL MATRIX TERMS INITIALIZED
OXYGEN DEPENDENT RATES CONVERGENT IN 49 ITERATIONS
CONSTITUENT CALCULATIONS COMPLETED
GRAPHICS DATA FOR PLOT 1 WRITTEN TO UNIT 11
GRAPHICS DATA FOR PLOT 2 WRITTEN TO UNIT 12
GRAPHICS DATA FOR PLOT 3 WRITTEN TO UNIT 13
GRAPHICS DATA FOR PLOT 4 WRITTEN TO UNIT 14
GRAPHICS DATA FOR PLOT 5 WRITTEN TO UNIT 15
GRAPHICS DATA FOR PLOT 6 WRITTEN TO UNIT 16
GRAPHICS DATA FOR PLOT 7 WRITTEN TO UNIT 17
GRAPHICS DATA FOR PLOT 8 WRITTEN TO UNIT 18
GRAPHICS DATA FOR PLOT 9 WRITTEN TO UNIT 19

FINAL REPORT B VINCENT & BONFOUCA
 REACH NO. 1 DRAINAGE DITCH 1

WATER QUALITY/HYDRAULIC MODEL FOR:
 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
----------	------	------	------------	----------	------	----	---------	-----------	-----------	------------	------------	------------	------------	------------	------------	------------	--------------	-----

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

1	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	2.20	0.00	2.20	0.00	1.00	0.00	0.00	0.00	0.00	0.00
1	WSTLD	0.00003	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
1	24.20	24.10	0.00032	10.4	0.00588	0.20	0.20	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
2	24.10	24.00	0.00032	10.4	0.00588	0.20	0.39	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
3	24.00	23.90	0.00032	10.4	0.00588	0.20	0.59	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
4	23.90	23.80	0.00032	10.4	0.00588	0.20	0.79	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
5	23.80	23.70	0.00032	10.4	0.00588	0.20	0.98	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
6	23.70	23.60	0.00032	10.4	0.00588	0.20	1.18	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
7	23.60	23.50	0.00032	10.4	0.00588	0.20	1.38	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
8	23.50	23.40	0.00032	10.4	0.00588	0.20	1.58	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
9	23.40	23.30	0.00032	10.4	0.00588	0.20	1.77	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
10	23.30	23.20	0.00032	10.4	0.00588	0.20	1.97	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
11	23.20	23.10	0.00032	10.4	0.00588	0.20	2.17	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
12	23.10	23.00	0.00032	10.4	0.00588	0.20	2.36	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
13	23.00	22.90	0.00032	10.4	0.00588	0.20	2.56	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
14	22.90	22.80	0.00032	10.4	0.00588	0.20	2.76	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
15	22.80	22.70	0.00032	10.4	0.00588	0.20	2.95	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
16	22.70	22.60	0.00032	10.4	0.00588	0.20	3.15	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
17	22.60	22.50	0.00032	10.4	0.00588	0.20	3.35	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
18	22.50	22.40	0.00032	10.4	0.00588	0.20	3.54	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
19	22.40	22.30	0.00032	10.4	0.00588	0.20	3.74	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
20	22.30	22.20	0.00032	10.4	0.00588	0.20	3.94	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
21	22.20	22.10	0.00032	10.4	0.00588	0.20	4.14	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
22	22.10	22.00	0.00032	10.4	0.00588	0.20	4.33	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
23	22.00	21.90	0.00032	10.4	0.00588	0.20	4.53	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
24	21.90	21.80	0.00032	10.4	0.00588	0.20	4.73	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
25	21.80	21.70	0.00032	10.4	0.00588	0.20	4.92	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
26	21.70	21.60	0.00032	10.4	0.00588	0.20	5.12	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
27	21.60	21.50	0.00032	10.4	0.00588	0.20	5.32	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
28	21.50	21.40	0.00032	10.4	0.00588	0.20	5.51	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
29	21.40	21.30	0.00032	10.4	0.00588	0.20	5.71	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
30	21.30	21.20	0.00032	10.4	0.00588	0.20	5.91	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
31	21.20	21.10	0.00032	10.4	0.00588	0.20	6.10	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
32	21.10	21.00	0.00032	10.4	0.00588	0.20	6.30	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
33	21.00	20.90	0.00032	10.4	0.00588	0.20	6.50	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
34	20.90	20.80	0.00032	10.4	0.00588	0.20	6.70	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
35	20.80	20.70	0.00032	10.4	0.00588	0.20	6.89	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
36	20.70	20.60	0.00032	10.4	0.00588	0.20	7.09	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
37	20.60	20.50	0.00032	10.4	0.00588	0.20	7.29	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
38	20.50	20.40	0.00032	10.4	0.00588	0.20	7.48	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
39	20.40	20.30	0.00032	10.4	0.00588	0.20	7.68	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
TOT						7.68				209.56	4029.59					
AVG				0.0059				0.05	1.03			0.05				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECAY	BOD1 SETT	ABOD1 DECAY	BOD1 HYDR	BOD2 DECAY	BOD2 SETT	ABOD2 DECAY	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECAY	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECAY	NCM DECAY	NCM SETT
		mg/L	1/da	1/da	1/da	1/da	1/da	1/da	1/da	1/da	*	*	*	1/da	1/da	1/da	*	1/da	1/da	1/da	*	**	**	1/da	1/da	1/da
1	24.100	7.53	17.33	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.94	1.43	1.43	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	24.000	7.52	17.36	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.95	1.37	1.37	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	23.900	7.51	17.39	0.13	1.23	0.00	0.00	0.00	0.00	0.00	0.96	1.32	1.32	0.06	1.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	23.800	7.50	17.42	0.13	1.23	0.00	0.00	0.00	0.00	0.00	0.96	1.28	1.28	0.06	1.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	23.700	7.48	17.45	0.13	1.23	0.00	0.00	0.00	0.00	0.00	0.97	1.25	1.25	0.06	1.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	23.600	7.47	17.48	0.13	1.24	0.00	0.00	0.00	0.00	0.00	0.97	1.23	1.23	0.06	1.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	23.500	7.46	17.50	0.13	1.24	0.00	0.00	0.00	0.00	0.00	0.98	1.21	1.21	0.06	1.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	23.400	7.45	17.53	0.13	1.24	0.00	0.00	0.00	0.00	0.00	0.99	1.20	1.20	0.06	1.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

10	23.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
11	23.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
12	23.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
13	22.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
14	22.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
15	22.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
16	22.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
17	22.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
18	22.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
19	22.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20	22.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
21	22.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
22	22.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
23	21.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
24	21.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
25	21.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
26	21.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
27	21.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
28	21.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
29	21.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
30	21.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
31	21.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
32	21.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
33	20.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
34	20.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
35	20.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
36	20.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
37	20.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
38	20.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
39	20.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT B VINCENT & BONFOUCA WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 2 VINCENT FROM RKM 20.0 TO BV01 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
40	UPR RCH	0.00032	33.82	0.27	545.07	13.05	5.66	2.11	0.00	2.11	0.00	0.93	0.10	0.10	0.00	0.00	0.00	0.00
40	WSTLD	0.00550	33.80	0.26	520.90	7.23	6.53	2.16	0.00	2.16	0.00	0.95	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRS N m²/s	MEAN VELO m/s
40	20.30	20.20	0.00582	95.1	0.11203	0.01	7.69	0.05	1.02	5.19	101.73	0.05	0.00	0.000	0.000	0.112
41	20.20	20.10	0.00582	95.1	0.11203	0.01	7.70	0.05	1.02	5.19	101.73	0.05	0.00	0.000	0.000	0.112
42	20.10	20.00	0.00582	95.1	0.11203	0.01	7.71	0.05	1.02	5.19	101.73	0.05	0.00	0.000	0.000	0.112
43	20.00	19.90	0.00582	95.1	0.11203	0.01	7.72	0.05	1.02	5.19	101.73	0.05	0.00	0.000	0.000	0.112
44	19.90	19.80	0.00582	95.1	0.11203	0.01	7.73	0.05	1.02	5.19	101.73	0.05	0.00	0.000	0.000	0.112
45	19.80	19.70	0.00582	95.1	0.11203	0.01	7.74	0.05	1.02	5.19	101.73	0.05	0.00	0.000	0.000	0.112
46	19.70	19.60	0.00582	95.1	0.11203	0.01	7.75	0.05	1.02	5.19	101.73	0.05	0.00	0.000	0.000	0.112
47	19.60	19.50	0.00582	95.1	0.11203	0.01	7.76	0.05	1.02	5.19	101.73	0.05	0.00	0.000	0.000	0.112
TOT						0.08				41.53	813.83					
AVG					0.1120			0.05	1.02			0.05				

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECATY 1/da	BOD1 SETT 1/da	ABOD1 DECATY 1/da	BOD1 HYDR 1/da	BOD2 DECATY 1/da	BOD2 SETT 1/da	ABOD2 DECATY 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECATY 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECATY 1/da	NCM DECATY 1/da	NCM SETT 1/da	
40	20.200	7.08	32.08	0.15	1.36	0.00	0.00	0.00	0.00	0.00	0.72	0.87	0.87	0.07	1.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
41	20.100	7.08	32.08	0.15	1.36	0.00	0.00	0.00	0.00	0.00	0.72	0.87	0.87	0.07	1.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
42	20.000	7.08	32.08	0.15	1.36	0.00	0.00	0.00	0.00	0.00	0.72	0.87	0.87	0.07	1.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
43	19.900	7.08	32.08	0.15	1.36	0.00	0.00	0.00	0.00	0.00	0.72	0.87	0.87	0.07	1.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
44	19.800	7.08	32.08	0.15	1.36	0.00	0.00	0.00	0.00	0.00	0.72	0.87	0.87	0.07	1.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
45	19.700	7.08	32.08	0.15	1.36	0.00	0.00	0.00	0.00	0.00	0.72	0.87	0.87	0.07	1.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
46	19.600	7.08	32.08	0.15	1.36	0.00	0.00	0.00	0.00	0.00	0.72	0.87	0.87	0.07	1.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
47	19.500	7.08	32.08	0.15	1.36	0.00	0.00	0.00	0.00	0.00	0.72	0.87	0.87	0.07	1.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			25.00	0.08	0.12	0.00	0.00	0.00	0.00	0.00	0.30			0.03	0.12	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00
*	g/m ² /d			**	mg/L/day																						

***** WATER QUALITY CONSTITUENT VALUES

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	
40	20.200	33.82	0.26	522.21	7.55	6.50	2.16	0.00	2.16	0.00	0.95	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
41	20.100	33.82	0.26	522.21	7.55	6.51	2.15	0.00	2.15	0.00	0.95	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
42	20.000	33.82	0.26	522.21	7.55	6.51	2.15	0.00	2.15	0.00	0.94	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
43	19.900	33.82	0.26	522.21	7.55	6.52	2.15	0.00	2.15	0.00	0.94	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
44	19.800	33.82	0.26	522.21	7.55	6.52	2.15	0.00	2.15	0.00	0.94	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
45	19.700	33.82	0.26	522.21	7.55	6.53	2.15	0.00	2.15	0.00	0.94	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
46	19.600	33.82	0.26	522.21	7.55	6.53	2.15	0.00	2.15	0.00	0.94	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
47	19.500	33.82	0.26	522.21	7.55	6.53	2.15	0.00	2.15	0.00	0.94	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
40	20.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
41	20.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
42	20.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
43	19.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
44	19.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
45	19.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
46	19.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
47	19.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20 DEG C RATE										0.000	0.000	0.000	0.000										0.000	0.000	0.000		

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT REACH NO. 3 B VINCENT & BONFOUCA VINCENT FROM BV01 RKM 18.5

WATER QUALITY/HYDRAULIC MODEL FOR: BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
48	UPR RCH	0.00582	33.82	0.26	522.21	7.55	6.53	2.15	0.00	2.15	0.00	0.94	0.10	0.10	0.00	0.00	0.00	0.00
48	WSTLD	0.00276	30.00	0.40	774.00	34.40	6.40	6.81	0.00	6.81	0.00	2.41	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
48	19.50	19.40	0.00858	96.7	0.12785	0.01	7.77	0.06	1.14	6.71	114.30	0.07	0.00	0.000	0.000	0.128
49	19.40	19.30	0.00858	96.7	0.12785	0.01	7.78	0.06	1.14	6.71	114.30	0.07	0.00	0.000	0.000	0.128
50	19.30	19.20	0.00858	96.7	0.12785	0.01	7.79	0.06	1.14	6.71	114.30	0.07	0.00	0.000	0.000	0.128
51	19.20	19.10	0.00858	96.7	0.12785	0.01	7.80	0.06	1.14	6.71	114.30	0.07	0.00	0.000	0.000	0.128
52	19.10	19.00	0.00858	96.7	0.12785	0.01	7.81	0.06	1.14	6.71	114.30	0.07	0.00	0.000	0.000	0.128
53	19.00	18.90	0.00858	96.7	0.12785	0.01	7.82	0.06	1.14	6.71	114.30	0.07	0.00	0.000	0.000	0.128
54	18.90	18.80	0.00858	96.7	0.12785	0.01	7.83	0.06	1.14	6.71	114.30	0.07	0.00	0.000	0.000	0.128
55	18.80	18.70	0.00858	96.7	0.12785	0.01	7.84	0.06	1.14	6.71	114.30	0.07	0.00	0.000	0.000	0.128
56	18.70	18.60	0.00858	96.7	0.12785	0.01	7.84	0.06	1.14	6.71	114.30	0.07	0.00	0.000	0.000	0.128
57	18.60	18.50	0.00858	96.7	0.12785	0.01	7.85	0.06	1.14	6.71	114.30	0.07	0.00	0.000	0.000	0.128
TOT AVG					0.1279	0.09		0.06	1.14	67.08	1143.01	0.07				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECAT	BOD1 SETT	ABOD1 DECAT	BOD1 HYDR	BOD2 DECAT	BOD2 SETT	ABOD2 DECAT	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECAT	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECAT	NCM DECAT	NCM SETT	
48	19.400	7.15	31.72	0.15	1.16	0.00	0.00	0.00	0.00	0.00	13.74	14.00	14.00	0.07	1.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
49	19.300	7.23	31.37	0.14	1.15	0.00	0.00	0.00	0.00	0.00	13.18	13.45	13.45	0.06	1.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
50	19.200	7.31	31.03	0.14	1.13	0.00	0.00	0.00	0.00	0.00	12.64	12.91	12.91	0.05	1.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
51	19.100	7.40	30.68	0.13	1.11	0.00	0.00	0.00	0.00	0.00	12.13	12.40	12.40	0.05	1.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
52	19.000	7.48	30.34	0.13	1.09	0.00	0.00	0.00	0.00	0.00	11.63	11.91	11.91	0.04	1.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
53	18.900	7.56	29.99	0.12	1.08	0.00	0.00	0.00	0.00	0.00	11.16	11.44	11.44	0.03	1.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
54	18.800	7.65	29.65	0.11	1.06	0.00	0.00	0.00	0.00	0.00	10.70	10.99	10.99	0.02	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
55	18.700	7.74	29.31	0.10	1.04	0.00	0.00	0.00	0.00	0.00	10.27	10.56	10.56	0.02	1.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
56	18.600	7.83	28.97	0.10	1.03	0.00	0.00	0.00	0.00	0.00	9.85	10.15	10.15	0.02	1.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
57	18.500	7.92	28.63	0.10	1.01	0.00	0.00	0.00	0.00	0.00	9.45	9.75	9.75	0.02	1.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE		25.00	0.08	0.09	0.00	0.00	0.00	0.00	0.00	6.00				0.03	0.09	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00
*	g/m²/d			** mg/L/day																							

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL	
48	19.400	33.16	0.31	603.25	16.19	4.95	3.79	0.00	3.79	0.00	1.40	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.
49	19.300	32.50	0.31	603.25	16.19	3.84	3.93	0.00	3.93	0.00	1.39	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.	
50	19.200	31.84	0.31	603.25	16.19	3.04	4.08	0.00	4.08	0.00	1.39	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.	

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

51	19.100	31.18	0.31	603.25	16.19	2.48	4.22	0.00	4.22	0.00	1.38	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
52	19.000	30.51	0.31	603.25	16.19	2.11	4.36	0.00	4.36	0.00	1.37	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
53	18.900	29.85	0.31	603.25	16.19	1.89	4.50	0.00	4.50	0.00	1.36	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
54	18.800	29.19	0.31	603.25	16.19	1.77	4.64	0.00	4.64	0.00	1.36	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
55	18.700	28.53	0.31	603.25	16.19	1.73	4.78	0.00	4.78	0.00	1.35	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
56	18.600	27.87	0.31	603.25	16.19	1.75	4.92	0.00	4.92	0.00	1.34	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
57	18.500	27.21	0.31	603.25	16.19	1.82	5.06	0.00	5.06	0.00	1.34	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
48	19.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
49	19.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
50	19.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
51	19.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
52	19.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
53	18.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
54	18.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
55	18.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
56	18.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
57	18.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT B VINCENT & BONFOUCA WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 4 VINCENT FROM RKM 18.5 TO BV02 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
58	UPR RCH	0.00858	27.21	0.31	603.25	16.19	1.82	5.06	0.00	5.06	0.00	1.34	0.10	0.10	0.00	0.00	0.00	0.00
63	WSTLD	0.00001	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
58	18.50	18.40	0.00858	96.7	0.12785	0.01	7.86	0.06	1.14	6.71	114.30	0.07	0.00	0.000	0.000	0.128
59	18.40	18.30	0.00858	96.7	0.12785	0.01	7.87	0.06	1.14	6.71	114.30	0.07	0.00	0.000	0.000	0.128
60	18.30	18.20	0.00858	96.7	0.12785	0.01	7.88	0.06	1.14	6.71	114.30	0.07	0.00	0.000	0.000	0.128
61	18.20	18.10	0.00858	96.7	0.12785	0.01	7.89	0.06	1.14	6.71	114.30	0.07	0.00	0.000	0.000	0.128
62	18.10	18.00	0.00858	96.7	0.12785	0.01	7.90	0.06	1.14	6.71	114.30	0.07	0.00	0.000	0.000	0.128
63	18.00	17.90	0.00858	96.7	0.12789	0.01	7.91	0.06	1.14	6.71	114.33	0.07	0.00	0.000	0.000	0.128
64	17.90	17.80	0.00858	96.7	0.12789	0.01	7.92	0.06	1.14	6.71	114.33	0.07	0.00	0.000	0.000	0.128
65	17.80	17.70	0.00858	96.7	0.12789	0.01	7.93	0.06	1.14	6.71	114.33	0.07	0.00	0.000	0.000	0.128
66	17.70	17.60	0.00858	96.7	0.12789	0.01	7.93	0.06	1.14	6.71	114.33	0.07	0.00	0.000	0.000	0.128

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

TOT 0.08 60.39 1028.83
 AVG 0.1279 0.06 1.14 0.07

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECATY 1/da	BOD1 SETT 1/da	ABOD1 DECATY 1/da	BOD1 HYDR 1/da	BOD2 DECATY 1/da	BOD2 SETT 1/da	ABOD2 DECATY 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECATY 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECATY 1/da	NCM DECATY 1/da	NCM SETT 1/da		
58	18.400	7.92	28.63	0.09	1.01	0.00	0.00	0.00	0.00	0.00	11.02	11.33	11.33	0.02	1.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
59	18.300	7.92	28.63	0.09	1.01	0.00	0.00	0.00	0.00	0.00	11.02	11.34	11.34	0.01	1.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
60	18.200	7.92	28.63	0.08	1.01	0.00	0.00	0.00	0.00	0.00	11.02	11.35	11.35	0.01	1.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
61	18.100	7.92	28.63	0.08	1.01	0.00	0.00	0.00	0.00	0.00	11.02	11.36	11.36	0.01	1.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
62	18.000	7.92	28.63	0.08	1.01	0.00	0.00	0.00	0.00	0.00	11.02	11.37	11.37	0.01	1.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
63	17.900	7.92	28.63	0.07	1.01	0.00	0.00	0.00	0.00	0.00	11.02	11.38	11.38	0.01	1.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
64	17.800	7.92	28.63	0.07	1.01	0.00	0.00	0.00	0.00	0.00	11.02	11.39	11.39	0.01	1.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
65	17.700	7.92	28.63	0.07	1.01	0.00	0.00	0.00	0.00	0.00	11.02	11.40	11.40	0.01	1.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
66	17.600	7.92	28.63	0.07	1.01	0.00	0.00	0.00	0.00	0.00	11.02	11.41	11.41	0.01	1.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
AVG 20	DEG C	RATE	25.00	0.08	0.09	0.00	0.00	0.00	0.00	0.00	7.00			0.03	0.09	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00	
*	g/m ² /d																											
**	mg/L/day																											

***** WATER QUALITY CONSTITUENT VALUES

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	
58	18.400	27.21	0.31	603.25	16.19	1.69	5.21	0.00	5.21	0.00	1.33	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
59	18.300	27.21	0.31	603.25	16.19	1.58	5.37	0.00	5.37	0.00	1.33	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
60	18.200	27.21	0.31	603.25	16.19	1.49	5.53	0.00	5.53	0.00	1.32	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
61	18.100	27.21	0.31	603.25	16.19	1.42	5.68	0.00	5.68	0.00	1.32	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
62	18.000	27.21	0.31	603.25	16.19	1.36	5.83	0.00	5.83	0.00	1.31	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
63	17.900	27.21	0.31	603.39	16.23	1.32	6.04	0.00	6.04	0.00	1.37	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
64	17.800	27.21	0.31	603.39	16.23	1.28	6.19	0.00	6.19	0.00	1.37	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
65	17.700	27.21	0.31	603.39	16.23	1.25	6.34	0.00	6.34	0.00	1.36	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
66	17.600	27.21	0.31	603.39	16.23	1.22	6.48	0.00	6.48	0.00	1.36	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
58	18.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
59	18.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
60	18.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
61	18.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
62	18.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
63	17.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
64	17.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
65	17.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
66	17.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

20 DEG C RATE

0.000 0.000 0.000 0.000

0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT B VINCENT & BONFOUCA
REACH NO. 6 VINCENT FROM BV02 TO DD 8

WATER QUALITY/HYDRAULIC MODEL FOR:
BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
88	UPR RCH	0.00858	27.21	0.31	603.39	16.23	1.22	6.48	0.00	6.48	0.00	1.36	0.10	0.10	0.00	0.00	0.00	0.00
88	TRIB	0.00143	27.21	0.36	707.64	52.23	6.59	5.47	0.00	5.47	0.00	5.19	0.10	0.10	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
88	17.60	17.55	0.01002	94.3	0.13478	0.00	7.94	0.06	1.20	3.72	59.88	0.07	0.00	0.000	0.000	0.135
89	17.55	17.50	0.01002	94.3	0.13478	0.00	7.94	0.06	1.20	3.72	59.88	0.07	0.00	0.000	0.000	0.135
90	17.50	17.45	0.01002	94.3	0.13478	0.00	7.95	0.06	1.20	3.72	59.88	0.07	0.00	0.000	0.000	0.135
91	17.45	17.40	0.01002	94.3	0.13478	0.00	7.95	0.06	1.20	3.72	59.88	0.07	0.00	0.000	0.000	0.135
92	17.40	17.35	0.01002	94.3	0.13478	0.00	7.96	0.06	1.20	3.72	59.88	0.07	0.00	0.000	0.000	0.135
93	17.35	17.30	0.01002	94.3	0.13478	0.00	7.96	0.06	1.20	3.72	59.88	0.07	0.00	0.000	0.000	0.135
94	17.30	17.25	0.01002	94.3	0.13478	0.00	7.97	0.06	1.20	3.72	59.88	0.07	0.00	0.000	0.000	0.135
95	17.25	17.20	0.01002	94.3	0.13478	0.00	7.97	0.06	1.20	3.72	59.88	0.07	0.00	0.000	0.000	0.135
96	17.20	17.15	0.01002	94.3	0.13478	0.00	7.97	0.06	1.20	3.72	59.88	0.07	0.00	0.000	0.000	0.135
97	17.15	17.10	0.01002	94.3	0.13478	0.00	7.98	0.06	1.20	3.72	59.88	0.07	0.00	0.000	0.000	0.135
98	17.10	17.05	0.01002	94.3	0.13478	0.00	7.98	0.06	1.20	3.72	59.88	0.07	0.00	0.000	0.000	0.135
99	17.05	17.00	0.01002	94.3	0.13478	0.00	7.99	0.06	1.20	3.72	59.88	0.07	0.00	0.000	0.000	0.135
100	17.00	16.95	0.01002	94.3	0.13478	0.00	7.99	0.06	1.20	3.72	59.88	0.07	0.00	0.000	0.000	0.135
101	16.95	16.90	0.01002	94.3	0.13478	0.00	8.00	0.06	1.20	3.72	59.88	0.07	0.00	0.000	0.000	0.135
TOT AVG					0.1348	0.06				52.02	838.26	0.07				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR 1/da	BOD2 DECAT 1/da	BOD2 SETT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAT 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da	
88	17.550	7.92	28.63	0.11	0.96	0.00	0.00	0.00	0.00	0.00	11.02	11.40	11.40	0.03	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
89	17.500	7.92	28.63	0.10	0.96	0.00	0.00	0.00	0.00	0.00	11.02	11.41	11.41	0.03	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90	17.450	7.92	28.63	0.10	0.96	0.00	0.00	0.00	0.00	0.00	11.02	11.41	11.41	0.02	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
91	17.400	7.92	28.63	0.10	0.96	0.00	0.00	0.00	0.00	0.00	11.02	11.42	11.42	0.02	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
92	17.350	7.92	28.63	0.10	0.96	0.00	0.00	0.00	0.00	0.00	11.02	11.42	11.42	0.02	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
93	17.300	7.92	28.63	0.10	0.96	0.00	0.00	0.00	0.00	0.00	11.02	11.43	11.43	0.02	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
94	17.250	7.92	28.63	0.09	0.96	0.00	0.00	0.00	0.00	0.00	11.02	11.43	11.43	0.02	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95	17.200	7.92	28.63	0.09	0.96	0.00	0.00	0.00	0.00	0.00	11.02	11.44	11.44	0.02	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
96	17.150	7.92	28.63	0.09	0.96	0.00	0.00	0.00	0.00	0.00	11.02	11.44	11.44	0.02	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
97	17.100	7.92	28.63	0.09	0.96	0.00	0.00	0.00	0.00	0.00	11.02	11.45	11.45	0.02	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
98	17.050	7.92	28.63	0.09	0.96	0.00	0.00	0.00	0.00	0.00	11.02	11.45	11.45	0.02	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
99	17.000	7.92	28.63	0.09	0.96	0.00	0.00	0.00	0.00	0.00	11.02	11.46	11.46	0.01	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100	16.950	7.92	28.63	0.09	0.96	0.00	0.00	0.00	0.00	0.00	11.02	11.46	11.46	0.01	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
101	16.900	7.92	28.63	0.09	0.96	0.00	0.00	0.00	0.00	0.00	11.02	11.47	11.47	0.01	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE		25.00	0.08	0.06	0.00	0.00	0.00	0.00	0.00	0.00	7.00			0.03	0.12	0.00	0.00	0.00	0.00	0.00	0.00				0.00	0.00	0.00

* g/m²/d ** mg/L/day

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL
88	17.550	27.21	0.31	618.30	21.38	1.93	6.42	0.00	6.42	0.00	1.90	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
89	17.500	27.21	0.31	618.30	21.38	1.88	6.51	0.00	6.51	0.00	1.90	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
90	17.450	27.21	0.31	618.30	21.38	1.84	6.60	0.00	6.60	0.00	1.89	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
91	17.400	27.21	0.31	618.30	21.38	1.80	6.68	0.00	6.68	0.00	1.89	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
92	17.350	27.21	0.31	618.30	21.38	1.76	6.77	0.00	6.77	0.00	1.88	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
93	17.300	27.21	0.31	618.30	21.38	1.73	6.85	0.00	6.85	0.00	1.88	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
94	17.250	27.21	0.31	618.30	21.38	1.70	6.94	0.00	6.94	0.00	1.88	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
95	17.200	27.21	0.31	618.30	21.38	1.68	7.02	0.00	7.02	0.00	1.87	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
96	17.150	27.21	0.31	618.30	21.38	1.65	7.10	0.00	7.10	0.00	1.87	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
97	17.100	27.21	0.31	618.30	21.38	1.63	7.19	0.00	7.19	0.00	1.86	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
98	17.050	27.21	0.31	618.30	21.38	1.61	7.27	0.00	7.27	0.00	1.86	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
99	17.000	27.21	0.31	618.30	21.38	1.59	7.35	0.00	7.35	0.00	1.86	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
100	16.950	27.21	0.31	618.30	21.38	1.58	7.43	0.00	7.43	0.00	1.85	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
101	16.900	27.21	0.31	618.30	21.38	1.56	7.52	0.00	7.52	0.00	1.85	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
88	17.550	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
89	17.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
90	17.450	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
91	17.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
92	17.350	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
93	17.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
94	17.250	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
95	17.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
96	17.150	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
97	17.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
98	17.050	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
99	17.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
100	16.950	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
101	16.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE

0.000 0.000 0.000 0.000

0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT B VINCENT & BONFOUCA
 REACH NO. 8 VINCENT FROM DD 8 TO DD 9

WATER QUALITY/HYDRAULIC MODEL FOR:
 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

***** REACH INPUTS

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
110	UPR RCH	0.01002	27.21	0.31	618.30	21.38	1.56	7.52	0.00	7.52	0.00	1.85	0.10	0.10	0.00	0.00	0.00	0.00
110	TRIB	0.00042	27.21	0.30	596.32	25.40	6.50	5.85	0.00	5.85	0.00	5.13	0.10	0.10	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
110	16.90	16.80	0.01044	91.9	0.13667	0.01	8.00	0.06	1.21	7.64	121.23	0.08	0.00	0.000	0.000	0.137
111	16.80	16.70	0.01044	91.9	0.13667	0.01	8.01	0.06	1.21	7.64	121.23	0.08	0.00	0.000	0.000	0.137
112	16.70	16.60	0.01044	91.9	0.13667	0.01	8.02	0.06	1.21	7.64	121.23	0.08	0.00	0.000	0.000	0.137
113	16.60	16.50	0.01044	91.9	0.13667	0.01	8.03	0.06	1.21	7.64	121.23	0.08	0.00	0.000	0.000	0.137
114	16.50	16.40	0.01044	91.9	0.13667	0.01	8.04	0.06	1.21	7.64	121.23	0.08	0.00	0.000	0.000	0.137
115	16.40	16.30	0.01044	91.9	0.13667	0.01	8.05	0.06	1.21	7.64	121.23	0.08	0.00	0.000	0.000	0.137
116	16.30	16.20	0.01044	91.9	0.13667	0.01	8.05	0.06	1.21	7.64	121.23	0.08	0.00	0.000	0.000	0.137
117	16.20	16.10	0.01044	91.9	0.13667	0.01	8.06	0.06	1.21	7.64	121.23	0.08	0.00	0.000	0.000	0.137
118	16.10	16.00	0.01044	91.9	0.13667	0.01	8.07	0.06	1.21	7.64	121.23	0.08	0.00	0.000	0.000	0.137
TOT AVG					0.1367	0.08		0.06	1.21	68.72	1091.09	0.08				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT DECAT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR 1/da	BOD2 DECAT 1/da	BOD2 SETT DECAT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT DECAT 1/da	NH3-N DECAT 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da	
110	16.800	7.91	28.67	0.10	0.94	0.00	0.00	0.00	0.00	0.00	11.08	11.53	11.53	0.02	1.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
111	16.700	7.90	28.71	0.09	0.95	0.00	0.00	0.00	0.00	0.00	11.13	11.59	11.59	0.02	1.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
112	16.600	7.89	28.75	0.09	0.95	0.00	0.00	0.00	0.00	0.00	11.18	11.65	11.65	0.02	1.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
113	16.500	7.88	28.79	0.09	0.95	0.00	0.00	0.00	0.00	0.00	11.24	11.72	11.72	0.01	1.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
114	16.400	7.87	28.83	0.09	0.95	0.00	0.00	0.00	0.00	0.00	11.29	11.78	11.78	0.01	1.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
115	16.300	7.86	28.87	0.08	0.95	0.00	0.00	0.00	0.00	0.00	11.35	11.84	11.84	0.01	1.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
116	16.200	7.85	28.90	0.08	0.95	0.00	0.00	0.00	0.00	0.00	11.40	11.91	11.91	0.01	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
117	16.100	7.84	28.94	0.08	0.96	0.00	0.00	0.00	0.00	0.00	11.46	11.97	11.97	0.01	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
118	16.000	7.83	28.99	0.08	0.96	0.00	0.00	0.00	0.00	0.00	11.51	12.04	12.04	0.01	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20	DEG C RATE	25.00	0.08	0.09	0.00	0.00	0.00	0.00	0.00	0.00	7.00			0.03	0.18	0.00	0.00	0.00	0.00	0.00	0.00				0.00	0.00	0.00
*	g/m²/d		**	mg/L/day																							

***** WATER QUALITY CONSTITUENT VALUES

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL
110	16.800	27.29	0.31	617.42	21.54	1.71	7.59	0.00	7.59	0.00	1.97	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
111	16.700	27.36	0.31	617.42	21.54	1.66	7.73	0.00	7.73	0.00	1.95	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
112	16.600	27.44	0.31	617.42	21.54	1.62	7.87	0.00	7.87	0.00	1.94	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
113	16.500	27.52	0.31	617.42	21.54	1.57	8.01	0.00	8.01	0.00	1.92	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
114	16.400	27.59	0.31	617.42	21.54	1.53	8.15	0.00	8.15	0.00	1.91	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
148	UPR RCH	0.01077	27.90	0.31	615.54	21.37	1.27	8.10	0.00	10.73	0.00	1.83	0.10	0.10	0.00	24.60	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
148	15.20	15.15	0.01077	89.5	0.00841	0.07	8.21	0.27	4.72	64.01	236.20	1.28	23.62	0.001	0.567	0.008
149	15.15	15.10	0.01077	89.5	0.00841	0.07	8.28	0.27	4.72	64.01	236.20	1.28	47.24	0.001	0.567	0.008
150	15.10	15.05	0.01077	89.5	0.00841	0.07	8.34	0.27	4.72	64.01	236.20	1.28	70.86	0.002	0.567	0.008
151	15.05	15.00	0.01077	89.5	0.00841	0.07	8.41	0.27	4.72	64.01	236.20	1.28	94.48	0.002	0.567	0.008
152	15.00	14.95	0.01077	89.5	0.00841	0.07	8.48	0.27	4.72	64.01	236.20	1.28	118.10	0.003	0.567	0.008
153	14.95	14.90	0.01077	89.5	0.00841	0.07	8.55	0.27	4.72	64.01	236.20	1.28	141.72	0.003	0.567	0.008
TOT AVG					0.0084	0.41		0.27	4.72	384.06	1417.20	1.28				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR 1/da	BOD2 DECAT 1/da	BOD2 SETT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAT 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da	
148	15.150	7.83	3.36	0.06	0.22	0.00	0.00	0.00	0.00	0.00	6.91	7.39	7.22	0.00	0.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
149	15.100	7.83	3.36	0.05	0.22	0.00	0.00	0.00	0.00	0.00	6.91	7.39	6.68	0.00	0.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
150	15.050	7.83	3.36	0.05	0.22	0.00	0.00	0.00	0.00	0.00	6.91	7.39	6.44	0.00	0.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
151	15.000	7.83	3.36	0.05	0.22	0.00	0.00	0.00	0.00	0.00	6.91	7.39	6.33	0.00	0.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
152	14.950	7.83	3.36	0.05	0.22	0.00	0.00	0.00	0.00	0.00	6.91	7.39	6.28	0.00	0.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
153	14.900	7.83	3.36	0.05	0.22	0.00	0.00	0.00	0.00	0.00	6.91	7.39	6.24	0.00	0.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			2.89	0.08	0.03	0.00	0.00	0.00	0.00	0.00	4.20			0.03	0.09	0.00	0.00	0.00	0.00	0.00	0.00				0.00	0.00	0.00
*	g/m²/d		**		mg/L/day																						

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL	
148	15.150	27.90	0.31	615.54	21.37	0.98	8.09	0.00	10.71	0.00	1.74	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.6	0.0	0.
149	15.100	27.90	0.31	615.55	21.37	0.90	8.08	0.00	10.71	0.00	1.70	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.6	0.0	0.
150	15.050	27.90	0.31	615.56	21.38	0.87	8.07	0.00	10.70	0.00	1.66	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.6	0.0	0.
151	15.000	27.90	0.31	615.58	21.39	0.86	8.06	0.00	10.69	0.00	1.62	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.6	0.0	0.
152	14.950	27.90	0.31	615.61	21.41	0.85	8.06	0.00	10.68	0.00	1.60	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.6	0.0	0.
153	14.900	27.90	0.31	615.66	21.44	0.84	8.05	0.00	10.68	0.00	1.60	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.6	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
----------	-------------	-----------------	----------------	-------------	--------------	------------	------------	--------------	--------------	----------------	----------------	-----------------	----------------	----------------	------------	-------------	--------------	------------	------------	--------------	--------------	--------------	----------------	----------------	-----------------	----------------	------------

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

155	14.700	28.58	0.31	616.21	21.76	0.82	8.01	0.00	10.64	0.00	1.68	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.6	0.0	0.
0.00																								
156	14.600	28.92	0.31	617.20	22.34	0.80	7.95	0.00	10.58	0.00	1.73	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.6	0.0	0.
0.00																								
157	14.500	29.26	0.31	619.55	23.72	0.80	7.80	0.00	10.43	0.00	1.81	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.6	0.0	0.
0.00																								
158	14.400	29.60	0.32	624.84	26.82	0.85	7.46	0.00	10.09	0.00	1.97	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.6	0.0	0.
0.00																								

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
154	14.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	24.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
155	14.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	24.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
156	14.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	24.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
157	14.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	24.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
158	14.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	24.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT B VINCENT & BONFOUCA
 REACH NO. 17 BONFOUCA FROM BV TO HWY 190

WATER QUALITY/HYDRAULIC MODEL FOR:
 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
219	UPR RCH	0.01077	29.60	0.32	624.84	26.82	0.85	7.46	0.00	10.09	0.00	1.97	0.10	0.10	0.00	24.60	0.00	0.00
219	TRIB	0.00316	29.60	0.26	524.44	8.08	6.72	2.28	0.00	4.91	0.00	1.04	0.10	0.10	0.00	24.60	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
219	14.40	14.30	0.01393	69.5	0.00148	0.78	10.02	0.87	10.84	943.08	1084.00	9.43	486.32	0.001	0.306	0.002
220	14.30	14.20	0.01393	69.5	0.00148	0.78	10.81	0.87	10.84	943.08	1084.00	9.43	594.72	0.002	0.351	0.002
TOT AVG					0.0015	1.57		0.87	10.84	1886.16	2168.00	9.43				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR DECAT 1/da	BOD2 DECAT 1/da	BOD2 SETT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR SETT 1/da	NH3-N DECAT 1/da	NH3-N SRCE 1/da	DENIT RATE 1/da	ORG-P HYDR SETT 1/da	ORG-P SRCE 1/da	PO4 PROD *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da	
219	14.300	7.60	0.96	0.07	0.07	0.00	0.00	0.00	0.00	0.00	5.13	5.57	5.57	0.00	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
220	14.200	7.60	0.96	0.06	0.07	0.00	0.00	0.00	0.00	0.00	5.13	5.60	5.33	0.00	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.80	0.08	0.03	0.00	0.00	0.00	0.00	0.00	2.80			0.03	0.09	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	

* g/m²/d ** mg/L/day

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

***** WATER QUALITY CONSTITUENT VALUES

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL	
219	14.300	29.60	0.32	630.20	29.96	1.08	7.11	0.00	11.09	0.00	2.12	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	37.2	0.0	0.
220	14.200	29.60	0.33	646.10	35.18	0.95	7.60	0.00	12.93	0.00	2.55	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.9	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
219	14.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	37.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
220	14.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	49.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT B VINCENT & BONFOUCA WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 19 BONFOUCA FROM HWY 190 TO BB02 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
239	UPR RCH	0.01393	29.60	0.33	646.10	35.18	0.95	7.60	0.00	12.93	0.00	2.55	0.10	0.10	0.00	49.90	0.00	0.00
239	TRIB	0.00181	29.60	0.37	717.23	54.54	4.40	25.39	0.00	30.72	0.00	27.18	0.10	0.10	0.00	49.90	0.00	0.00

***** HYDRAULIC PARAMETER VALUES

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
239	14.20	14.10	0.01574	71.2	0.00167	0.69	11.50	0.87	10.84	943.08	1084.00	9.43	703.12	0.002	0.410	0.002
240	14.10	14.00	0.01574	71.2	0.00167	0.69	12.19	0.87	10.84	943.08	1084.00	9.43	811.52	0.002	0.460	0.003
241	14.00	13.90	0.01574	71.2	0.00167	0.69	12.89	0.87	10.84	943.08	1084.00	9.43	919.92	0.003	0.512	0.003
242	13.90	13.80	0.01574	71.2	0.00167	0.69	13.58	0.87	10.84	943.08	1084.00	9.43	1028.32	0.003	0.565	0.003
243	13.80	13.70	0.01574	71.2	0.00167	0.69	14.27	0.87	10.84	943.08	1084.00	9.43	1136.72	0.003	0.619	0.003
244	13.70	13.60	0.01574	71.2	0.00167	0.69	14.97	0.87	10.84	943.08	1084.00	9.43	1245.12	0.004	0.674	0.004
245	13.60	13.50	0.01574	71.2	0.00167	0.69	15.66	0.87	10.84	943.08	1084.00	9.43	1353.52	0.004	0.729	0.004
246	13.50	13.40	0.01574	71.2	0.00167	0.69	16.35	0.87	10.84	943.08	1084.00	9.43	1461.92	0.004	0.784	0.004
247	13.40	13.30	0.01574	71.2	0.00167	0.69	17.05	0.87	10.84	943.08	1084.00	9.43	1570.32	0.005	0.840	0.005
TOT AVG				0.0017		6.24		0.87	10.84	8487.72	9756.00	9.43				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR 1/da	BOD2 DECAT 1/da	BOD2 SETT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAT 1/da	NH3-N SRCE 1/da	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da
----------	-------------	---------------	-----------------	-----------------	----------------	------------------	----------------	-----------------	----------------	------------------	------------	------------	------------	-----------------	-----------------	------------------	-----------------	-----------------	-----------------	-----------------	------------	---------------	---------------	-----------------	----------------	---------------

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

***** REACH INPUTS

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
248	UPR RCH	0.01574	29.60	0.54	1017.34	159.93	0.76	10.50	0.00	15.82	0.00	2.62	0.10	0.10	0.00	49.90	0.00	0.00

***** HYDRAULIC PARAMETER VALUES

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
248	13.30	13.20	0.01574	71.2	0.00167	0.69	17.74	0.87	10.84	943.08	1084.00	9.43	1678.72	0.005	0.896	0.005
249	13.20	13.10	0.01574	71.2	0.00167	0.69	18.43	0.87	10.84	943.08	1084.00	9.43	1787.12	0.005	0.952	0.005
250	13.10	13.00	0.01574	71.2	0.00167	0.69	19.13	0.87	10.84	943.08	1084.00	9.43	1895.52	0.006	1.008	0.006
251	13.00	12.90	0.01574	71.2	0.00167	0.69	19.82	0.87	10.84	943.08	1084.00	9.43	2003.92	0.006	1.065	0.006
252	12.90	12.80	0.01574	71.2	0.00167	0.69	20.51	0.87	10.84	943.08	1084.00	9.43	2112.32	0.006	1.121	0.006
253	12.80	12.70	0.01574	71.2	0.00167	0.69	21.21	0.87	10.84	943.08	1084.00	9.43	2220.72	0.007	1.178	0.007
254	12.70	12.60	0.01574	71.2	0.00167	0.69	21.90	0.87	10.84	943.08	1084.00	9.43	2329.12	0.007	1.235	0.007
255	12.60	12.50	0.01574	71.2	0.00167	0.69	22.59	0.87	10.84	943.08	1084.00	9.43	2437.52	0.007	1.292	0.007
256	12.50	12.40	0.01574	71.2	0.00167	0.69	23.29	0.87	10.84	943.08	1084.00	9.43	2545.92	0.008	1.349	0.008
257	12.40	12.30	0.01574	71.2	0.00167	0.69	23.98	0.87	10.84	943.08	1084.00	9.43	2654.32	0.008	1.406	0.008
258	12.30	12.20	0.01574	71.2	0.00167	0.69	24.67	0.87	10.84	943.08	1084.00	9.43	2762.72	0.008	1.463	0.008
259	12.20	12.10	0.01574	71.2	0.00167	0.69	25.37	0.87	10.84	943.08	1084.00	9.43	2871.12	0.009	1.520	0.009
TOT AVG					0.0017	8.32		0.87	10.84	11316.96	13008.00	9.43				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 ABOD1 SETT DECAT 1/da	BOD1 HYDR DECAT 1/da	BOD2 DECAT 1/da	BOD2 ABOD2 SETT DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT DECAT 1/da	NH3-N DECAT 1/da	NH3-N SRCE 1/da	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da	
248	13.200	7.59	1.01	0.05	0.07	0.00	0.00	0.00	0.00	6.59	7.27	5.55	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
249	13.100	7.58	1.02	0.05	0.07	0.00	0.00	0.00	0.00	6.59	7.28	5.57	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
250	13.000	7.58	1.02	0.05	0.07	0.00	0.00	0.00	0.00	6.59	7.29	5.60	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
251	12.900	7.58	1.03	0.05	0.07	0.00	0.00	0.00	0.00	6.59	7.30	5.62	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
252	12.800	7.58	1.03	0.05	0.07	0.00	0.00	0.00	0.00	6.59	7.30	5.65	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
253	12.700	7.57	1.04	0.05	0.07	0.00	0.00	0.00	0.00	6.59	7.30	5.68	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
254	12.600	7.57	1.05	0.05	0.07	0.00	0.00	0.00	0.00	6.59	7.30	5.71	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
255	12.500	7.57	1.05	0.05	0.07	0.00	0.00	0.00	0.00	6.59	7.29	5.75	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
256	12.400	7.56	1.06	0.05	0.07	0.00	0.00	0.00	0.00	6.59	7.28	5.81	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
257	12.300	7.56	1.07	0.05	0.07	0.00	0.00	0.00	0.00	6.59	7.26	5.90	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
258	12.200	7.55	1.07	0.05	0.07	0.00	0.00	0.00	0.00	6.59	7.24	6.08	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
259	12.100	7.55	1.08	0.06	0.07	0.00	0.00	0.00	0.00	6.59	7.21	6.46	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE		0.87	0.08	0.00	0.00	0.00	0.00	0.00	0.00	3.60			0.03	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00

***** WATER QUALITY CONSTITUENT VALUES

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL		
248	13.200	29.60	0.58	1095.90	186.36	0.76	10.77	0.00	15.73	0.00	2.60	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	46.5	0.0	0.
249	13.100	29.60	0.63	1183.89	215.97	0.77	10.99	0.00	15.59	0.00	2.58	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	43.1	0.0	0.

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

250	13.000	29.60	0.69	1281.81	248.92	0.77	11.16	0.00	15.39	0.00	2.56	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	39.6	0.0	0.
0.00																								
251	12.900	29.60	0.75	1390.17	285.38	0.77	11.27	0.00	15.14	0.00	2.54	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	36.2	0.0	0.
0.00																								
252	12.800	29.60	0.81	1509.47	325.52	0.77	11.33	0.00	14.83	0.00	2.52	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	32.8	0.0	0.
0.00																								
253	12.700	29.60	0.89	1640.22	369.51	0.78	11.32	0.00	14.46	0.00	2.50	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	29.4	0.0	0.
0.00																								
254	12.600	29.60	0.97	1782.91	417.52	0.78	11.26	0.00	14.03	0.00	2.47	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.9	0.0	0.
0.00																								
255	12.500	29.60	1.05	1938.03	469.72	0.79	11.14	0.00	13.54	0.00	2.44	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	22.5	0.0	0.
0.00																								
256	12.400	29.60	1.15	2106.08	526.26	0.80	10.95	0.00	12.99	0.00	2.41	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	19.1	0.0	0.
0.00																								
257	12.300	29.60	1.25	2287.56	587.32	0.81	10.69	0.00	12.36	0.00	2.37	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.7	0.0	0.
0.00																								
258	12.200	29.60	1.36	2482.94	653.06	0.84	10.36	0.00	11.66	0.00	2.33	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.2	0.0	0.
0.00																								
259	12.100	29.60	1.48	2692.72	723.65	0.89	9.94	0.00	10.88	0.00	2.29	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.
0.00																								

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
248	13.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	46.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
249	13.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	43.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
250	13.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	39.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
251	12.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	36.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
252	12.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	32.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
253	12.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	29.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
254	12.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	25.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
255	12.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	22.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
256	12.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	19.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
257	12.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	15.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
258	12.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	12.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
259	12.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT B VINCENT & BONFOUCA WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 22 BONFOUCA FROM WD TO DD6 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
263	UPR RCH	0.01574	29.60	1.48	2692.72	723.65	0.89	9.94	0.00	10.88	0.00	2.29	0.10	0.10	0.00	8.80	0.00	0.00
263	TRIB	0.00091	29.60	1.56	2849.81	776.81	1.15	9.49	0.00	10.43	0.00	2.24	0.10	0.10	0.00	8.80	0.00	0.00
281	WSTLD	0.00000	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00	0.00
282	WSTLD	0.00016	30.00	0.39	753.60	63.30	2.00	18.40	0.00	18.40	0.00	18.40	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
----------	---------------	----------------	-----------	---------	-----------------	------------------	---------------	---------	---------	-----------	-----------------	----------------	----------------	----------------	--------------	---------------

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

263	12.10	12.00	0.01666	71.1	0.00025	4.67	30.04	1.24	54.25	6727.00	5425.00	67.27	3503.62	0.001	0.349	0.001
264	12.00	11.90	0.01666	71.1	0.00025	4.67	34.71	1.24	54.25	6727.00	5425.00	67.27	4046.12	0.002	0.403	0.002
265	11.90	11.80	0.01666	71.1	0.00025	4.67	39.39	1.24	54.25	6727.00	5425.00	67.27	4588.62	0.002	0.457	0.002
266	11.80	11.70	0.01666	71.1	0.00025	4.67	44.06	1.24	54.25	6727.00	5425.00	67.27	5131.12	0.002	0.511	0.002
267	11.70	11.60	0.01666	71.1	0.00025	4.67	48.74	1.24	54.25	6727.00	5425.00	67.27	5673.62	0.002	0.565	0.002
268	11.60	11.50	0.01666	71.1	0.00025	4.67	53.41	1.24	54.25	6727.00	5425.00	67.27	6216.12	0.003	0.620	0.003
269	11.50	11.40	0.01666	71.1	0.00025	4.67	58.08	1.24	54.25	6727.00	5425.00	67.27	6758.62	0.003	0.674	0.003
270	11.40	11.30	0.01666	71.1	0.00025	4.67	62.76	1.24	54.25	6727.00	5425.00	67.27	7301.12	0.003	0.728	0.003
271	11.30	11.20	0.01666	71.1	0.00025	4.67	67.43	1.24	54.25	6727.00	5425.00	67.27	7843.62	0.003	0.782	0.003
272	11.20	11.10	0.01666	71.1	0.00025	4.67	72.11	1.24	54.25	6727.00	5425.00	67.27	8386.12	0.004	0.836	0.003
273	11.10	11.00	0.01666	71.1	0.00025	4.67	76.78	1.24	54.25	6727.00	5425.00	67.27	8928.62	0.004	0.891	0.004
274	11.00	10.90	0.01666	71.1	0.00025	4.67	81.45	1.24	54.25	6727.00	5425.00	67.27	9471.12	0.004	0.945	0.004
275	10.90	10.80	0.01666	71.1	0.00025	4.67	86.13	1.24	54.25	6727.00	5425.00	67.27	10013.62	0.004	0.999	0.004
276	10.80	10.70	0.01666	71.1	0.00025	4.67	90.80	1.24	54.25	6727.00	5425.00	67.27	10556.12	0.004	1.053	0.004
277	10.70	10.60	0.01666	71.1	0.00025	4.67	95.48	1.24	54.25	6727.00	5425.00	67.27	11098.62	0.005	1.107	0.005
278	10.60	10.50	0.01666	71.1	0.00025	4.67	100.15	1.24	54.25	6727.00	5425.00	67.27	11641.12	0.005	1.162	0.005
279	10.50	10.40	0.01666	71.1	0.00025	4.67	104.82	1.24	54.25	6727.00	5425.00	67.27	12183.62	0.005	1.216	0.005
280	10.40	10.30	0.01666	71.1	0.00025	4.67	109.50	1.24	54.25	6727.00	5425.00	67.27	12726.12	0.005	1.270	0.005
281	10.30	10.20	0.01666	71.1	0.00025	4.67	114.17	1.24	54.25	6727.00	5425.00	67.27	13268.62	0.006	1.324	0.006
282	10.20	10.10	0.01682	71.4	0.00025	4.63	118.80	1.24	54.25	6727.00	5425.00	67.27	13811.12	0.006	1.379	0.006
283	10.10	10.00	0.01682	71.4	0.00025	4.63	123.43	1.24	54.25	6727.00	5425.00	67.27	14353.62	0.006	1.433	0.006

TOT 98.06 141267.02 113925.00
 AVG 0.0002 1.24 54.25 67.27

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR 1/da	BOD2 DECAT 1/da	BOD2 SETT 1/da	ABOD2 DECAT 1/da	BKGD * 1/da	FULL SOD * 1/da	CORR SOD * 1/da	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAT 1/da	NH3-N SRCE * 1/da	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE * 1/da	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da	
263	12.000	7.53	0.68	0.06	0.05	0.00	0.00	0.00	0.00	0.00	4.23	4.84	4.77	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
264	11.900	7.52	0.68	0.06	0.05	0.00	0.00	0.00	0.00	0.00	4.26	4.85	4.76	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
265	11.800	7.50	0.68	0.06	0.05	0.00	0.00	0.00	0.00	0.00	4.28	4.86	4.77	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
266	11.700	7.49	0.68	0.06	0.05	0.00	0.00	0.00	0.00	0.00	4.31	4.88	4.77	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
267	11.600	7.47	0.68	0.06	0.05	0.00	0.00	0.00	0.00	0.00	4.33	4.89	4.78	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
268	11.500	7.46	0.68	0.06	0.05	0.00	0.00	0.00	0.00	0.00	4.36	4.91	4.79	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
269	11.400	7.44	0.68	0.06	0.05	0.00	0.00	0.00	0.00	0.00	4.39	4.93	4.80	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
270	11.300	7.43	0.68	0.06	0.05	0.00	0.00	0.00	0.00	0.00	4.41	4.95	4.80	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
271	11.200	7.42	0.68	0.06	0.05	0.00	0.00	0.00	0.00	0.00	4.44	4.97	4.81	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
272	11.100	7.40	0.68	0.06	0.05	0.00	0.00	0.00	0.00	0.00	4.46	4.99	4.82	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
273	11.000	7.39	0.69	0.06	0.05	0.00	0.00	0.00	0.00	0.00	4.49	5.02	4.84	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
274	10.900	7.37	0.69	0.06	0.05	0.00	0.00	0.00	0.00	0.00	4.51	5.04	4.87	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
275	10.800	7.36	0.69	0.06	0.05	0.00	0.00	0.00	0.00	0.00	4.54	5.06	4.92	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
276	10.700	7.35	0.69	0.07	0.05	0.00	0.00	0.00	0.00	0.00	4.57	5.08	5.02	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
277	10.600	7.33	0.69	0.07	0.05	0.00	0.00	0.00	0.00	0.00	4.59	5.10	5.10	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
278	10.500	7.32	0.69	0.07	0.05	0.00	0.00	0.00	0.00	0.00	4.62	5.12	5.12	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
279	10.400	7.31	0.69	0.08	0.05	0.00	0.00	0.00	0.00	0.00	4.65	5.15	5.15	0.01	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
280	10.300	7.29	0.69	0.09	0.05	0.00	0.00	0.00	0.00	0.00	4.67	5.17	5.17	0.01	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
281	10.200	7.28	0.69	0.10	0.05	0.00	0.00	0.00	0.00	0.00	4.70	5.19	5.19	0.02	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
282	10.100	7.27	0.70	0.13	0.05	0.00	0.00	0.00	0.00	0.00	4.73	5.22	5.22	0.03	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
283	10.000	7.25	0.70	0.14	0.05	0.00	0.00	0.00	0.00	0.00	4.76	5.25	5.25	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

AVG 20 DEG C RATE 0.56 0.08 0.00 0.00 0.00 0.00 0.00 0.00 0.00 2.30 0.03 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	
263	12.000	29.69	1.57	2866.23	782.03	0.99	9.56	0.00	10.50	0.00	2.25	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT B VINCENT & BONFOUCA
 REACH NO. 24 BONFOUCA FROM DD 6 TO TRIB 2

WATER QUALITY/HYDRAULIC MODEL FOR:
 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
287	UPR RCH	0.01682	31.54	2.69	4869.06	1453.74	2.26	7.43	0.00	8.37	0.00	1.77	0.10	0.10	0.00	8.80	0.00	0.00
287	TRIB	0.00029	31.54	0.26	524.38	10.12	6.04	2.60	0.00	3.54	0.00	1.48	0.10	0.10	0.00	8.80	0.00	0.00
289	WSTLD	0.00015	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
287	10.00	9.90	0.01711	70.2	0.00011	10.09	133.52	1.60	93.08	14920.72	9308.00	149.21	15284.42	0.003	0.852	0.003
288	9.90	9.80	0.01711	70.2	0.00011	10.09	143.62	1.60	93.08	14920.72	9308.00	149.21	16215.22	0.003	0.904	0.003
289	9.80	9.70	0.01726	70.5	0.00012	10.00	153.62	1.60	93.08	14920.72	9308.00	149.21	17146.02	0.003	0.956	0.003
290	9.70	9.60	0.01726	70.5	0.00012	10.00	163.63	1.60	93.08	14920.72	9308.00	149.21	18076.82	0.003	1.008	0.003
291	9.60	9.50	0.01726	70.5	0.00012	10.00	173.63	1.60	93.08	14920.72	9308.00	149.21	19007.62	0.004	1.060	0.004
292	9.50	9.40	0.01726	70.5	0.00012	10.00	183.64	1.60	93.08	14920.72	9308.00	149.21	19938.42	0.004	1.112	0.004
293	9.40	9.30	0.01726	70.5	0.00012	10.00	193.64	1.60	93.08	14920.72	9308.00	149.21	20869.22	0.004	1.164	0.004
294	9.30	9.20	0.01726	70.5	0.00012	10.00	203.65	1.60	93.08	14920.72	9308.00	149.21	21800.02	0.004	1.216	0.004
TOT AVG					0.0001	80.22		1.60	93.08	119365.80	74464.00					

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECAT	BOD1 SETT	ABOD1 DECAT	BOD1 HYDR	BOD2 DECAT	BOD2 SETT	ABOD2 DECAT	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECAT	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECAT	NCM DECAT	NCM SETT		
287	9.900	7.25	0.62	0.14	0.04	0.00	0.00	0.00	0.00	0.00	1.03	1.52	1.52	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
288	9.800	7.25	0.62	0.14	0.04	0.00	0.00	0.00	0.00	0.00	1.03	1.52	1.52	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
289	9.700	7.25	0.62	0.14	0.04	0.00	0.00	0.00	0.00	0.00	1.03	1.53	1.53	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
290	9.600	7.25	0.62	0.14	0.04	0.00	0.00	0.00	0.00	0.00	1.03	1.53	1.53	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
291	9.500	7.25	0.62	0.14	0.04	0.00	0.00	0.00	0.00	0.00	1.03	1.53	1.53	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
292	9.400	7.25	0.62	0.14	0.04	0.00	0.00	0.00	0.00	0.00	1.03	1.52	1.52	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
293	9.300	7.25	0.62	0.14	0.04	0.00	0.00	0.00	0.00	0.00	1.03	1.52	1.52	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
294	9.200	7.25	0.62	0.14	0.04	0.00	0.00	0.00	0.00	0.00	1.03	1.52	1.52	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG	20 DEG C RATE	0.50	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50			0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00	0.00	0.00	0.00

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL
--------------	-------------	------------	----------	------	----	---------	-----------	-----------	------------	------------	------------	------------	------------	------------	-------------	-------------	------------	------------	------------	-------------	-------------	------------	------------	--------------

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

287	9.900	31.54	2.73	4933.27	1475.28	2.74	7.45	0.00	8.39	0.00	1.75	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.0
288	9.800	31.54	2.76	4989.84	1494.25	3.06	7.46	0.00	8.40	0.00	1.73	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.0
289	9.700	31.54	2.79	5043.94	1512.39	3.29	7.47	0.00	8.41	0.00	1.72	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.0
290	9.600	31.54	2.82	5096.27	1529.94	3.47	7.47	0.00	8.41	0.00	1.70	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.0
291	9.500	31.54	2.85	5146.54	1546.80	3.60	7.47	0.00	8.41	0.00	1.69	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.0
292	9.400	31.54	2.88	5194.95	1563.03	3.71	7.46	0.00	8.40	0.00	1.67	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.0
293	9.300	31.54	2.90	5241.64	1578.69	3.81	7.46	0.00	8.40	0.00	1.66	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.0
294	9.200	31.54	2.93	5286.74	1593.82	3.89	7.45	0.00	8.39	0.00	1.65	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.0

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
287	9.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
288	9.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
289	9.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
290	9.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
291	9.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
292	9.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
293	9.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
294	9.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT B VINCENT & BONFOUCA WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 27 BONFOUCA FROM TRIB 2 TO BB03 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
310	UPR RCH	0.01726	31.54	2.93	5286.74	1593.82	3.89	7.45	0.00	8.39	0.00	1.65	0.10	0.10	0.00	8.80	0.00	0.00
310	TRIB	0.00032	31.54	2.95	5323.88	1606.28	4.04	7.31	0.00	8.25	0.00	1.63	0.10	0.10	0.00	8.80	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
310	9.20	9.10	0.01758	69.4	0.00012	9.82	213.47	1.60	93.08	14920.72	9308.00	149.21	23330.82	0.004	1.301	0.004
311	9.10	9.00	0.01758	69.4	0.00012	9.82	223.29	1.60	93.08	14920.72	9308.00	149.21	24261.62	0.005	1.353	0.005
312	9.00	8.90	0.01758	69.4	0.00012	9.82	233.12	1.60	93.08	14920.72	9308.00	149.21	25192.43	0.005	1.405	0.005
313	8.90	8.80	0.01758	69.4	0.00012	9.82	242.94	1.60	93.08	14920.72	9308.00	149.21	26123.23	0.005	1.457	0.005
314	8.80	8.70	0.01758	69.4	0.00012	9.82	252.76	1.60	93.08	14920.72	9308.00	149.21	27054.03	0.005	1.509	0.005
315	8.70	8.60	0.01758	69.4	0.00012	9.82	262.59	1.60	93.08	14920.72	9308.00	149.21	27984.83	0.005	1.561	0.005
TOT AVG					0.0001	58.94		1.60	93.08	89524.35	55848.00		149.21			

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR 1/da	BOD2 DECAT 1/da	BOD2 SETT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAT 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da			
310	9.100	7.24	0.62	0.14	0.04	0.00	0.00	0.00	0.00	0.00	0.83	1.32	1.32	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
311	9.000	7.24	0.62	0.14	0.04	0.00	0.00	0.00	0.00	0.00	0.83	1.32	1.32	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
312	8.900	7.24	0.62	0.14	0.04	0.00	0.00	0.00	0.00	0.00	0.83	1.32	1.32	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
313	8.800	7.24	0.62	0.14	0.04	0.00	0.00	0.00	0.00	0.00	0.83	1.32	1.32	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
314	8.700	7.24	0.62	0.14	0.04	0.00	0.00	0.00	0.00	0.00	0.83	1.31	1.31	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
315	8.600	7.24	0.62	0.14	0.04	0.00	0.00	0.00	0.00	0.00	0.83	1.31	1.31	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
AVG 20 DEG C RATE			0.50	0.08	0.01	0.00	0.00	0.00	0.00	0.00	0.40			0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00				0.00	0.00	0.00		
* g/m ² /d			** mg/L/day																										

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL		
310	9.100	31.54	2.95	5329.79	1608.26	3.96	7.44	0.00	8.38	0.00	1.64	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.
311	9.000	31.54	2.97	5371.76	1622.33	4.01	7.44	0.00	8.38	0.00	1.63	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.
312	8.900	31.54	3.00	5412.50	1635.99	4.06	7.43	0.00	8.37	0.00	1.62	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.
313	8.800	31.54	3.02	5452.10	1649.27	4.10	7.42	0.00	8.36	0.00	1.61	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.
314	8.700	31.54	3.04	5490.62	1662.19	4.13	7.40	0.00	8.34	0.00	1.60	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.
315	8.600	31.54	3.06	5528.13	1674.77	4.16	7.37	0.00	8.31	0.00	1.58	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
310	9.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
311	9.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
312	8.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
313	8.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
314	8.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
315	8.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20 DEG C RATE										0.000	0.000	0.000	0.000								0.000	0.000	0.000				

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT B VINCENT & BONFOUCA WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 28 BONFOUCA FROM BB03 TO CANAL 26 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
----------	------	------	------------	----------	------	----	---------	-----------	-----------	------------	------------	------------	------------	------------	------------	------------	--------------	-----

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

316 UPR RCH 0.01758 31.54 3.06 5528.13 1674.77 4.16 7.37 0.00 8.31 0.00 1.58 0.10 0.10 0.00 8.80 0.00 0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
316	8.60	8.50	0.01758	69.4	0.00012	9.82	272.41	1.60	93.08	14920.72	9308.00	149.21	28915.63	0.005	1.613	0.005
317	8.50	8.40	0.01758	69.4	0.00012	9.82	282.23	1.60	93.08	14920.72	9308.00	149.21	29846.43	0.006	1.665	0.006
318	8.40	8.30	0.01758	69.4	0.00012	9.82	292.06	1.60	93.08	14920.72	9308.00	149.21	30777.23	0.006	1.717	0.006
319	8.30	8.20	0.01758	69.4	0.00012	9.82	301.88	1.60	93.08	14920.72	9308.00	149.21	31708.03	0.006	1.769	0.006
320	8.20	8.10	0.01758	69.4	0.00012	9.82	311.71	1.60	93.08	14920.72	9308.00	149.21	32638.83	0.006	1.821	0.006
321	8.10	8.00	0.01758	69.4	0.00012	9.82	321.53	1.60	93.08	14920.72	9308.00	149.21	33569.63	0.006	1.873	0.006
322	8.00	7.90	0.01758	69.4	0.00012	9.82	331.35	1.60	93.08	14920.72	9308.00	149.21	34500.43	0.007	1.925	0.006
323	7.90	7.80	0.01758	69.4	0.00012	9.82	341.18	1.60	93.08	14920.72	9308.00	149.21	35431.23	0.007	1.977	0.007
TOT						78.59				119365.80	74464.00					
AVG					0.0001			1.60	93.08			149.21				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECA	BOD1 SETT	ABOD1 DECA	BOD1 HYDR	BOD2 DECA	BOD2 SETT	ABOD2 DECA	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECA	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECA	NCM DECA	NCM SETT		
316	8.500	7.24	0.62	0.14	0.04	0.00	0.00	0.00	0.00	0.00	0.83	1.31	1.31	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
317	8.400	7.24	0.62	0.14	0.04	0.00	0.00	0.00	0.00	0.00	0.83	1.31	1.31	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
318	8.300	7.24	0.62	0.14	0.04	0.00	0.00	0.00	0.00	0.00	0.83	1.31	1.31	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
319	8.200	7.24	0.62	0.14	0.04	0.00	0.00	0.00	0.00	0.00	0.83	1.30	1.30	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
320	8.100	7.24	0.62	0.14	0.04	0.00	0.00	0.00	0.00	0.00	0.83	1.30	1.30	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
321	8.000	7.24	0.62	0.14	0.04	0.00	0.00	0.00	0.00	0.00	0.83	1.30	1.30	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
322	7.900	7.23	0.62	0.14	0.04	0.00	0.00	0.00	0.00	0.00	0.83	1.30	1.30	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
323	7.800	7.23	0.62	0.14	0.04	0.00	0.00	0.00	0.00	0.00	0.83	1.30	1.30	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
AVG	20	DEG C	RATE	0.50	0.08	0.00	0.00	0.00	0.00	0.00	0.40			0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00	

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO	BOD1	BOD2	EBOD1	EBOD2	ORG-N	NH3-N	NO3-N	TOT-N	EORG-N	ETOT-N	ORG-P	PO4-P	TOT-P	EORG-P	ETOT-P	CHL A	PERIP	COLI
316	8.500	31.54	3.08	5564.70	1687.03	4.19	7.33	0.00	8.30	0.00	1.57	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.0	0.0	0.
317	8.400	31.54	3.10	5600.36	1698.99	4.22	7.30	0.00	8.29	0.00	1.55	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.2	0.0	0.
318	8.300	31.54	3.12	5635.18	1710.67	4.25	7.28	0.00	8.29	0.00	1.54	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.5	0.0	0.
319	8.200	31.54	3.14	5669.20	1722.07	4.28	7.26	0.00	8.30	0.00	1.53	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.7	0.0	0.
320	8.100	31.54	3.16	5702.45	1733.22	4.32	7.25	0.00	8.31	0.00	1.53	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.9	0.0	0.
321	8.000	31.54	3.18	5734.97	1744.13	4.36	7.24	0.00	8.32	0.00	1.52	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.2	0.0	0.
322	7.900	31.54	3.20	5766.81	1754.81	4.40	7.23	0.00	8.34	0.00	1.52	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.4	0.0	0.
323	7.800	31.54	3.21	5797.99	1765.26	4.45	7.23	0.00	8.36	0.00	1.51	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.6	0.0	0.

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
316	8.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
317	8.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
318	8.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
319	8.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
320	8.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
321	8.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
322	7.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
323	7.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT B VINCENT & BONFOUCA WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 30 BONFOUCA FROM CANAL 26 TO TRIB 4 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
344	UPR RCH	0.01758	31.54	3.21	5797.99	1765.26	4.45	7.23	0.00	8.36	0.00	1.51	0.10	0.10	0.00	10.60	0.00	0.00
344	TRIB	0.00028	31.54	3.23	5818.58	1772.17	4.53	6.78	0.00	7.91	0.00	1.48	0.10	0.10	0.00	10.60	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
344	7.80	7.70	0.01786	68.3	0.00012	9.27	350.45	1.87	76.51	14307.37	7651.00	143.07	58996.34	0.012	3.905	0.012
345	7.70	7.60	0.01786	68.3	0.00012	9.27	359.72	1.87	76.51	14307.37	7651.00	143.07	59761.44	0.012	3.956	0.012
TOT						18.54				28614.74	15302.00					
AVG					0.0001			1.87	76.51			143.07				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR DECAT 1/da	BOD2 DECAT 1/da	BOD2 SETT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAT 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da	
344	7.700	7.25	0.59	0.14	0.04	0.00	0.00	0.00	0.00	0.00	0.82	1.29	1.29	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
345	7.600	7.26	0.59	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.81	1.29	1.29	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
AVG 20 DEG C RATE		0.48	0.08	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.40			0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	
*																											
g/m²/d			**																								
mg/L/day																											

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL
----------	-------------	------------	----------	------	----	---------	-----------	-----------	------------	------------	------------	------------	------------	------------	-------------	-------------	------------	------------	------------	-------------	-------------	------------	------------	--------------

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

344	7.700	31.42	3.23	5819.39	1772.44	4.49	7.23	0.00	8.40	0.00	1.51	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.0	0.0	0.0
0.00																									
345	7.600	31.29	3.23	5835.96	1778.00	4.52	7.31	0.00	8.52	0.00	1.52	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.3	0.0	0.0
0.00																									

***** PHYTOPLANKTON AND PERIPHYTON DATA

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
344	7.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	11.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
345	7.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	11.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT B VINCENT & BONFOUCA WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 33 BONFOUCA FROM TRIB 4 TO BB04 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
365	UPR RCH	0.01786	31.29	3.23	5835.96	1778.00	4.52	7.31	0.00	8.52	0.00	1.52	0.10	0.10	0.00	11.30	0.00	0.00
365	TRIB	0.00115	31.29	3.24	5839.48	1779.16	4.56	7.14	0.00	8.35	0.00	1.50	0.10	0.10	0.00	11.30	0.00	0.00

***** HYDRAULIC PARAMETER VALUES

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
365	7.60	7.50	0.01902	68.7	0.00013	8.71	368.43	1.87	76.51	14307.37	7651.00	143.07	61966.54	0.012	4.102	0.012
366	7.50	7.40	0.01902	68.7	0.00013	8.71	377.13	1.87	76.51	14307.37	7651.00	143.07	62731.64	0.012	4.153	0.012
367	7.40	7.30	0.01902	68.7	0.00013	8.71	385.84	1.87	76.51	14307.37	7651.00	143.07	63496.74	0.012	4.203	0.012
368	7.30	7.20	0.01902	68.7	0.00013	8.71	394.55	1.87	76.51	14307.37	7651.00	143.07	64261.84	0.013	4.254	0.013
369	7.20	7.10	0.01902	68.7	0.00013	8.71	403.26	1.87	76.51	14307.37	7651.00	143.07	65026.95	0.013	4.305	0.013
370	7.10	7.00	0.01902	68.7	0.00013	8.71	411.96	1.87	76.51	14307.37	7651.00	143.07	65792.05	0.013	4.355	0.013
371	7.00	6.90	0.01902	68.7	0.00013	8.71	420.67	1.87	76.51	14307.37	7651.00	143.07	66557.15	0.013	4.406	0.013
372	6.90	6.80	0.01902	68.7	0.00013	8.71	429.38	1.87	76.51	14307.37	7651.00	143.07	67322.25	0.013	4.457	0.013
TOT						69.66				114458.95	61208.00					
AVG				0.0001				1.87	76.51			143.07				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER 1/da	BOD1 DECAT 1/da	BOD1 SETT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR DECAT 1/da	BOD2 DECAT 1/da	BOD2 SETT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAT 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da	
365	7.500	7.26	0.59	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.41	0.89	0.89	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
366	7.400	7.26	0.59	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.41	0.89	0.89	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
367	7.300	7.26	0.59	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.41	0.89	0.89	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
368	7.200	7.26	0.59	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.41	0.89	0.89	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
369	7.100	7.26	0.59	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.41	0.89	0.89	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
370	7.000	7.26	0.59	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.41	0.90	0.90	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
371	6.900	7.26	0.59	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.41	0.90	0.90	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

NO.	DIST km	DIST km	EFF m ³ /s	VELO m/s	TIME days	TIME days	m	m	m ³	AREA m ²	AREA m ²	PRISM m ³	VELO m/s	m ² /s	VELO m/s	
373	6.80	6.70	0.01902	68.7	0.00011	10.51	439.89	1.89	91.40	17274.60	9140.00	172.75	68236.25	0.011	3.775	0.011
374	6.70	6.60	0.01902	68.7	0.00011	10.51	450.41	1.89	91.40	17274.60	9140.00	172.75	69150.25	0.011	3.825	0.011
375	6.60	6.50	0.01902	68.7	0.00011	10.51	460.92	1.89	91.40	17274.60	9140.00	172.75	70064.25	0.011	3.876	0.011
376	6.50	6.40	0.01902	68.7	0.00011	10.51	471.43	1.89	91.40	17274.60	9140.00	172.75	70978.25	0.012	3.926	0.012
377	6.40	6.30	0.01902	68.7	0.00011	10.51	481.95	1.89	91.40	17274.60	9140.00	172.75	71892.25	0.012	3.977	0.012
378	6.30	6.20	0.01902	68.7	0.00011	10.51	492.46	1.89	91.40	17274.60	9140.00	172.75	72806.25	0.012	4.028	0.012
379	6.20	6.10	0.01902	68.7	0.00011	10.51	502.98	1.89	91.40	17274.60	9140.00	172.75	73720.25	0.012	4.078	0.012
380	6.10	6.00	0.01902	68.7	0.00011	10.51	513.49	1.89	91.40	17274.60	9140.00	172.75	74634.25	0.012	4.129	0.012
381	6.00	5.90	0.01902	68.7	0.00011	10.51	524.00	1.89	91.40	17274.60	9140.00	172.75	75548.25	0.012	4.179	0.012
382	5.90	5.80	0.01902	68.7	0.00011	10.51	534.52	1.89	91.40	17274.60	9140.00	172.75	76462.25	0.012	4.230	0.012
383	5.80	5.70	0.01902	68.7	0.00011	10.51	545.03	1.89	91.40	17274.60	9140.00	172.75	77376.25	0.013	4.281	0.013
384	5.70	5.60	0.01902	68.7	0.00011	10.51	555.54	1.89	91.40	17274.60	9140.00	172.75	78290.25	0.013	4.331	0.013
TOT						126.16				207295.17	109680.00					
AVG				0.0001				1.89	91.40			172.75				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAY 1/da	BOD1 SETT 1/da	ABOD1 DECAY 1/da	BOD1 HYDR 1/da	BOD2 DECAY 1/da	BOD2 SETT 1/da	ABOD2 DECAY 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAY 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAY 1/da	NCM DECAY 1/da	NCM SETT 1/da	
373	6.700	7.26	0.59	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.50	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
374	6.600	7.26	0.59	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.50	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
375	6.500	7.26	0.59	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.50	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
376	6.400	7.26	0.59	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.50	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
377	6.300	7.26	0.59	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.50	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
378	6.200	7.26	0.59	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.50	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
379	6.100	7.26	0.59	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.51	0.51	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
380	6.000	7.26	0.59	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.51	0.51	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
381	5.900	7.26	0.59	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.51	0.51	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
382	5.800	7.26	0.59	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.51	0.51	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
383	5.700	7.26	0.59	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.51	0.51	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
384	5.600	7.26	0.59	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.51	0.51	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
AVG 20	DEG C	RATE	0.48	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	
*	g/m ² /d		**	mg/L/day																							

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO	BOD1	BOD2	EBOD1	EBOD2	ORG-N	NH3-N	NO3-N	TOT-N	EORG-N	ETOT-N	ORG-P	PO4-P	TOT-P	EORG-P	ETOT-P	CHL A	PERIP	COLI	
						mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	g/m ²	#/100mL	
373	6.700	31.29	3.32	5983.17	1827.36	4.75	7.58	0.00	8.80	0.00	1.49	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.4	0.0	0.
374	6.600	31.29	3.33	5998.75	1832.59	4.78	7.61	0.00	8.84	0.00	1.48	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.6	0.0	0.
375	6.500	31.29	3.33	6014.17	1837.76	4.80	7.64	0.00	8.89	0.00	1.48	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.7	0.0	0.
376	6.400	31.29	3.34	6029.43	1842.88	4.83	7.67	0.00	8.93	0.00	1.48	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.8	0.0	0.
377	6.300	31.29	3.35	6044.53	1847.94	4.85	7.69	0.00	8.97	0.00	1.47	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.0	0.0	0.
378	6.200	31.29	3.36	6059.49	1852.96	4.86	7.71	0.00	9.01	0.00	1.47	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.1	0.0	0.
379	6.100	31.29	3.37	6074.30	1857.93	4.88	7.74	0.00	9.04	0.00	1.47	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.2	0.0	0.
380	6.000	31.29	3.38	6088.97	1862.84	4.90	7.76	0.00	9.08	0.00	1.46	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.4	0.0	0.
381	5.900	31.29	3.38	6103.50	1867.72	4.92	7.78	0.00	9.11	0.00	1.46	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.5	0.0	0.

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

382	5.800	31.29	3.39	6117.90	1872.54	4.94	7.80	0.00	9.14	0.00	1.46	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.6	0.0	0.
383	5.700	31.29	3.40	6132.16	1877.33	4.96	7.81	0.00	9.18	0.00	1.45	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.8	0.0	0.
384	5.600	31.29	3.41	6146.28	1882.06	4.98	7.83	0.00	9.21	0.00	1.45	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.9	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
373	6.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	11.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
374	6.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	11.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
375	6.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	11.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
376	6.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	11.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
377	6.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	12.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
378	6.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	12.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
379	6.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	12.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
380	6.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	12.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
381	5.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	12.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
382	5.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	12.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
383	5.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	12.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
384	5.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	12.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT B VINCENT & BONFOUCA WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 35 BONFOUCA FROM RKM 5.6 TO BB05 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
385	UPR RCH	0.01902	31.29	3.41	6146.28	1882.06	4.98	7.83	0.00	9.21	0.00	1.45	0.10	0.10	0.00	12.90	0.00	0.00
389	WSTLD	0.00350	30.00	0.32	628.10	54.30	3.60	3.10	0.00	3.10	0.00	2.41	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
385	5.60	5.50	0.01902	68.7	0.00010	11.62	567.16	1.67	114.30	19088.10	11430.00	190.88	79433.25	0.012	3.587	0.012
386	5.50	5.40	0.01902	68.7	0.00010	11.62	578.78	1.67	114.30	19088.10	11430.00	190.88	80576.25	0.012	3.639	0.012
387	5.40	5.30	0.01902	68.7	0.00010	11.62	590.40	1.67	114.30	19088.10	11430.00	190.88	81719.25	0.012	3.691	0.012
388	5.30	5.20	0.01902	68.7	0.00010	11.62	602.01	1.67	114.30	19088.10	11430.00	190.88	82862.25	0.012	3.742	0.012
389	5.20	5.10	0.02252	73.6	0.00012	9.81	611.82	1.67	114.30	19088.10	11430.00	190.88	84005.25	0.012	3.794	0.012
390	5.10	5.00	0.02252	73.6	0.00012	9.81	621.63	1.67	114.30	19088.10	11430.00	190.88	85148.25	0.013	3.845	0.013
391	5.00	4.90	0.02252	73.6	0.00012	9.81	631.44	1.67	114.30	19088.10	11430.00	190.88	86291.25	0.013	3.897	0.013
392	4.90	4.80	0.02252	73.6	0.00012	9.81	641.25	1.67	114.30	19088.10	11430.00	190.88	87434.25	0.013	3.949	0.013
393	4.80	4.70	0.02252	73.6	0.00012	9.81	651.06	1.67	114.30	19088.10	11430.00	190.88	88577.25	0.013	4.000	0.013
394	4.70	4.60	0.02252	73.6	0.00012	9.81	660.87	1.67	114.30	19088.10	11430.00	190.88	89720.25	0.013	4.052	0.013
395	4.60	4.50	0.02252	73.6	0.00012	9.81	670.68	1.67	114.30	19088.10	11430.00	190.88	90863.25	0.013	4.104	0.013
TOT						115.14				209969.08	125730.00					
AVG					0.0001			1.67	114.30				190.88			

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR 1/da	BOD2 DECAT 1/da	BOD2 SETT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAT 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da		
385	5.500	7.26	0.67	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.51	0.51	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
386	5.400	7.26	0.67	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.51	0.51	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
387	5.300	7.26	0.67	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.51	0.51	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
388	5.200	7.26	0.67	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.51	0.51	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
389	5.100	7.26	0.67	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.51	0.51	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
390	5.000	7.26	0.67	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.51	0.51	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
391	4.900	7.26	0.67	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.51	0.51	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
392	4.800	7.25	0.67	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.51	0.51	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
393	4.700	7.25	0.67	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.51	0.51	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
394	4.600	7.25	0.67	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.51	0.51	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
395	4.500	7.25	0.67	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.50	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
AVG 20 DEG C RATE			0.54	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.03	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00	
*	g/m ² /d		**	mg/L/day																								

***** WATER QUALITY CONSTITUENT VALUES

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL
385	5.500	31.29	3.42	6160.99	1887.00	5.00	7.84	0.00	9.22	0.00	1.44	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.9	0.0	0.
386	5.400	31.29	3.43	6176.30	1892.13	5.03	7.86	0.00	9.23	0.00	1.44	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.9	0.0	0.
387	5.300	31.29	3.43	6191.45	1897.21	5.05	7.86	0.00	9.24	0.00	1.43	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.9	0.0	0.
388	5.200	31.29	3.44	6206.42	1902.23	5.07	7.86	0.00	9.24	0.00	1.42	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.9	0.0	0.
389	5.100	31.29	3.45	6221.23	1907.20	5.09	7.85	0.00	9.23	0.00	1.41	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.9	0.0	0.
390	5.000	31.29	3.46	6238.56	1913.00	5.11	7.84	0.00	9.22	0.00	1.39	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.9	0.0	0.
391	4.900	31.29	3.47	6255.72	1918.74	5.14	7.83	0.00	9.21	0.00	1.38	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.9	0.0	0.
392	4.800	31.29	3.48	6272.70	1924.43	5.16	7.81	0.00	9.18	0.00	1.36	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.9	0.0	0.
393	4.700	31.29	3.49	6289.52	1930.06	5.18	7.78	0.00	9.16	0.00	1.34	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.9	0.0	0.
394	4.600	31.29	3.50	6306.16	1935.63	5.21	7.75	0.00	9.13	0.00	1.33	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.9	0.0	0.
395	4.500	31.29	3.51	6322.65	1941.15	5.23	7.71	0.00	9.09	0.00	1.31	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.9	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
385	5.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	12.9	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
386	5.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	12.9	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
387	5.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	12.9	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
388	5.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	12.9	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
389	5.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	12.9	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
390	5.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	12.9	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
391	4.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	12.9	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
392	4.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	12.9	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

401	3.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	12.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
402	3.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	11.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
403	3.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	11.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
404	3.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	11.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
405	3.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	11.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
406	3.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	11.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
407	3.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	11.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
408	3.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
409	3.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
410	3.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
411	2.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
412	2.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
413	2.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT B VINCENT & BONFOUCA WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 37 BONFOUCA FROM RKM 2.7 TO LIBERTY BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
414	UPR RCH	0.02252	31.29	3.69	6640.76	2047.63	5.69	6.08	0.00	7.17	0.00	1.14	0.10	0.10	0.00	10.20	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
414	2.70	2.60	0.02252	73.6	0.00016	7.24	781.41	1.60	88.00	14080.00	8800.00	140.80	105729.25	0.021	6.247	0.021
415	2.60	2.50	0.02252	73.6	0.00016	7.24	788.65	1.60	88.00	14080.00	8800.00	140.80	106609.25	0.021	6.299	0.021
416	2.50	2.40	0.02252	73.6	0.00016	7.24	795.88	1.60	88.00	14080.00	8800.00	140.80	107489.25	0.021	6.351	0.021
417	2.40	2.30	0.02252	73.6	0.00016	7.24	803.12	1.60	88.00	14080.00	8800.00	140.80	108369.25	0.022	6.403	0.022
418	2.30	2.20	0.02252	73.6	0.00016	7.24	810.36	1.60	88.00	14080.00	8800.00	140.80	109249.25	0.022	6.455	0.022
419	2.20	2.10	0.02252	73.6	0.00016	7.24	817.59	1.60	88.00	14080.00	8800.00	140.80	110129.25	0.022	6.507	0.022
420	2.10	2.00	0.02252	73.6	0.00016	7.24	824.83	1.60	88.00	14080.00	8800.00	140.80	111009.25	0.022	6.559	0.022
421	2.00	1.90	0.02252	73.6	0.00016	7.24	832.06	1.60	88.00	14080.00	8800.00	140.80	111889.25	0.022	6.611	0.022
422	1.90	1.80	0.02252	73.6	0.00016	7.24	839.30	1.60	88.00	14080.00	8800.00	140.80	112769.25	0.023	6.663	0.023
423	1.80	1.70	0.02252	73.6	0.00016	7.24	846.53	1.60	88.00	14080.00	8800.00	140.80	113649.25	0.023	6.715	0.023
424	1.70	1.60	0.02252	73.6	0.00016	7.24	853.77	1.60	88.00	14080.00	8800.00	140.80	114529.25	0.023	6.767	0.023
425	1.60	1.50	0.02252	73.6	0.00016	7.24	861.01	1.60	88.00	14080.00	8800.00	140.80	115409.25	0.023	6.819	0.023
426	1.50	1.40	0.02252	73.6	0.00016	7.24	868.24	1.60	88.00	14080.00	8800.00	140.80	116289.25	0.023	6.871	0.023
427	1.40	1.30	0.02252	73.6	0.00016	7.24	875.48	1.60	88.00	14080.00	8800.00	140.80	117169.25	0.023	6.923	0.023
428	1.30	1.20	0.02252	73.6	0.00016	7.24	882.71	1.60	88.00	14080.00	8800.00	140.80	118049.25	0.024	6.975	0.024
429	1.20	1.10	0.02252	73.6	0.00016	7.24	889.95	1.60	88.00	14080.00	8800.00	140.80	118929.25	0.024	7.027	0.024
430	1.10	1.00	0.02252	73.6	0.00016	7.24	897.18	1.60	88.00	14080.00	8800.00	140.80	119809.25	0.024	7.079	0.024
431	1.00	0.90	0.02252	73.6	0.00016	7.24	904.42	1.60	88.00	14080.00	8800.00	140.80	120689.25	0.024	7.131	0.024
432	0.90	0.80	0.02252	73.6	0.00016	7.24	911.66	1.60	88.00	14080.00	8800.00	140.80	121569.25	0.024	7.183	0.024

TOT 137.48 267520.00 167200.00
 AVG 0.0002 1.60 88.00 140.80

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT RATE mg/L	REAER 1/da	BOD1 1/da	BOD1 SETT 1/da	ABOD1 1/da	BOD1 HYDR 1/da	BOD2 1/da	BOD2 SETT 1/da	ABOD2 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N 1/da	NH3-N SRCE 1/da	DENIT 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI 1/da	NCM 1/da	NCM DECAY 1/da	NCM SETT 1/da

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

***** PHYTOPLANKTON AND PERIPHYTON DATA

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
414	2.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
415	2.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
416	2.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
417	2.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
418	2.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
419	2.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
420	2.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
421	1.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
422	1.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
423	1.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
424	1.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
425	1.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
426	1.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
427	1.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
428	1.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
429	1.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
430	1.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
431	0.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
432	0.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT B VINCENT & BONFOUCA WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 91 BONFOUCA FROM LIBERTY TO BB06 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
899	UPR RCH	0.02252	30.22	3.84	6922.00	2141.77	6.11	6.47	0.00	7.26	0.00	1.62	0.10	0.10	0.00	7.40	0.00	0.00
899	TRIB	0.04302	30.22	3.84	6911.05	2138.10	6.07	6.71	0.00	7.50	0.00	1.67	0.10	0.10	0.00	7.40	0.00	0.00

***** HYDRAULIC PARAMETER VALUES

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
899	0.80	0.70	0.06554	78.8	0.00032	3.65	915.31	1.96	105.59	20695.64	10559.00	206.96	188246.19	0.026	8.958	0.026
900	0.70	0.60	0.06554	78.8	0.00032	3.65	918.97	1.96	105.59	20695.64	10559.00	206.96	189302.09	0.026	9.008	0.026
901	0.60	0.50	0.06554	78.8	0.00032	3.65	922.62	1.96	105.59	20695.64	10559.00	206.96	190358.00	0.026	9.059	0.026
902	0.50	0.40	0.06554	78.8	0.00032	3.65	926.27	1.96	105.59	20695.64	10559.00	206.96	191413.91	0.026	9.109	0.026
903	0.40	0.30	0.06554	78.8	0.00032	3.65	929.93	1.96	105.59	20695.64	10559.00	206.96	192469.81	0.026	9.159	0.026
904	0.30	0.20	0.06554	78.8	0.00032	3.65	933.58	1.96	105.59	20695.64	10559.00	206.96	193525.72	0.026	9.210	0.026
905	0.20	0.10	0.06554	78.8	0.00032	3.65	937.24	1.96	105.59	20695.64	10559.00	206.96	194581.62	0.026	9.260	0.026
906	0.10	0.00	0.06554	78.8	0.00032	3.65	940.89	1.96	105.59	20695.64	10559.00	206.96	195637.53	0.027	9.310	0.027
TOT AVG					0.0003	29.24		1.96	105.59	165565.11	84472.00		206.96			

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR 1/da	BOD2 DECAT 1/da	BOD2 SETT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAT 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da	
899	0.700	7.38	0.61	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
900	0.600	7.38	0.61	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
901	0.500	7.38	0.61	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
902	0.400	7.39	0.61	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
903	0.300	7.39	0.60	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
904	0.200	7.39	0.60	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
905	0.100	7.40	0.60	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
906	0.000	7.40	0.60	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.50	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	
899	0.700	30.19	3.85	6931.93	2145.09	6.14	6.60	0.00	7.36	0.00	1.65	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.2	0.0	0.
900	0.600	30.16	3.86	6953.94	2152.46	6.22	6.64	0.00	7.38	0.00	1.66	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.9	0.0	0.
901	0.500	30.13	3.87	6975.91	2159.81	6.29	6.69	0.00	7.41	0.00	1.68	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.7	0.0	0.
902	0.400	30.10	3.89	6997.84	2167.15	6.37	6.76	0.00	7.45	0.00	1.70	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.5	0.0	0.
903	0.300	30.07	3.90	7019.73	2174.47	6.46	6.84	0.00	7.50	0.00	1.72	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.2	0.0	0.
904	0.200	30.04	3.91	7041.57	2181.78	6.55	6.93	0.00	7.57	0.00	1.74	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.0	0.0	0.
905	0.100	30.01	3.92	7063.36	2189.08	6.64	7.04	0.00	7.66	0.00	1.76	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.8	0.0	0.
906	0.000	29.98	3.93	7085.12	2196.36	6.75	7.16	0.00	7.75	0.00	1.79	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.6	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
899	0.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
900	0.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
901	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
902	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
903	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
904	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
905	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	5.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
906	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	5.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20 DEG C RATE										0.000	0.000	0.000	0.000										0.000	0.000	0.000		

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT REACH NO. 5 BROWNS VILL RD (DD2) DRAINAGE DITCH 2
 WATER QUALITY/HYDRAULIC MODEL FOR: BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

***** REACH INPUTS

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
67	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	2.20	0.00	2.20	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
67	WSTLD	0.00084	30.00	0.39	753.60	63.30	2.00	11.50	0.00	11.50	0.00	11.50	0.00	0.00	0.00	0.00	0.00	0.00
73	WSTLD	0.00000	30.00	0.39	753.60	63.30	2.00	13.80	0.00	13.80	0.00	13.80	0.00	0.00	0.00	0.00	0.00	0.00
74	WSTLD	0.00009	30.00	0.39	753.60	63.30	2.00	18.40	0.00	18.40	0.00	18.40	0.00	0.00	0.00	0.00	0.00	0.00
79	WSTLD	0.00004	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	23.00	0.00	0.00	0.00	0.00	0.00	0.00
80	WSTLD	0.00011	30.00	0.39	753.60	63.30	2.00	25.30	0.00	25.30	0.00	25.30	0.00	0.00	0.00	0.00	0.00	0.00
81	WSTLD	0.00001	30.00	0.39	753.60	63.30	2.00	16.10	0.00	16.10	0.00	16.10	0.00	0.00	0.00	0.00	0.00	0.00
83	WSTLD	0.00002	30.00	0.39	753.60	63.30	2.00	25.07	0.00	25.07	0.00	25.07	0.00	0.00	0.00	0.00	0.00	0.00
84	WSTLD	0.00000	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00	0.00
85	WSTLD	0.00003	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00	0.00
87	WSTLD	0.00001	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
67	2.10	2.00	0.00112	74.8	0.00905	0.13	0.13	0.08	1.51	12.42	151.23	0.12	0.00	0.000	0.000	0.009
68	2.00	1.90	0.00112	74.8	0.00905	0.13	0.26	0.08	1.51	12.42	151.23	0.12	0.00	0.000	0.000	0.009
69	1.90	1.80	0.00112	74.8	0.00905	0.13	0.38	0.08	1.51	12.42	151.23	0.12	0.00	0.000	0.000	0.009
70	1.80	1.70	0.00112	74.8	0.00905	0.13	0.51	0.08	1.51	12.42	151.23	0.12	0.00	0.000	0.000	0.009
71	1.70	1.60	0.00112	74.8	0.00905	0.13	0.64	0.08	1.51	12.42	151.23	0.12	0.00	0.000	0.000	0.009
72	1.60	1.50	0.00112	74.8	0.00905	0.13	0.77	0.08	1.51	12.42	151.23	0.12	0.00	0.000	0.000	0.009
73	1.50	1.40	0.00113	74.9	0.00906	0.13	0.90	0.08	1.51	12.44	151.33	0.12	0.00	0.000	0.000	0.009
74	1.40	1.30	0.00122	76.8	0.00930	0.12	1.02	0.08	1.55	13.10	154.94	0.13	0.00	0.000	0.000	0.009
75	1.30	1.20	0.00122	76.8	0.00930	0.12	1.14	0.08	1.55	13.10	154.94	0.13	0.00	0.000	0.000	0.009
76	1.20	1.10	0.00122	76.8	0.00930	0.12	1.27	0.08	1.55	13.10	154.94	0.13	0.00	0.000	0.000	0.009
77	1.10	1.00	0.00122	76.8	0.00930	0.12	1.39	0.08	1.55	13.10	154.94	0.13	0.00	0.000	0.000	0.009
78	1.00	0.90	0.00122	76.8	0.00930	0.12	1.52	0.08	1.55	13.10	154.94	0.13	0.00	0.000	0.000	0.009
79	0.90	0.80	0.00125	77.4	0.00939	0.12	1.64	0.09	1.56	13.35	156.26	0.13	0.00	0.000	0.000	0.009
80	0.80	0.70	0.00136	79.2	0.00966	0.12	1.76	0.09	1.60	14.11	160.23	0.14	0.00	0.000	0.000	0.010
81	0.70	0.60	0.00137	79.3	0.00968	0.12	1.88	0.09	1.60	14.14	160.42	0.14	0.00	0.000	0.000	0.010
82	0.60	0.50	0.00137	79.3	0.00968	0.12	2.00	0.09	1.60	14.14	160.42	0.14	0.00	0.000	0.000	0.010
83	0.50	0.40	0.00139	79.6	0.00972	0.12	2.12	0.09	1.61	14.27	161.06	0.14	0.00	0.000	0.000	0.010
84	0.40	0.30	0.00139	79.6	0.00973	0.12	2.24	0.09	1.61	14.28	161.14	0.14	0.00	0.000	0.000	0.010
85	0.30	0.20	0.00142	80.1	0.00980	0.12	2.36	0.09	1.62	14.49	162.20	0.14	0.00	0.000	0.000	0.010
86	0.20	0.10	0.00142	80.1	0.00980	0.12	2.47	0.09	1.62	14.49	162.20	0.14	0.00	0.000	0.000	0.010
87	0.10	0.00	0.00143	80.3	0.00983	0.12	2.59	0.09	1.63	14.58	162.65	0.15	0.00	0.000	0.000	0.010
TOT						2.59				280.34	3279.93					
AVG					0.0094			0.09	1.56			0.13				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECAT	BOD1 SETT	ABOD1 DECAT	BOD1 HYDR	BOD2 DECAT	BOD2 SETT	ABOD2 DECAT	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECAT	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECAT	NCM DECAT	NCM SETT	
67	2.000	7.56	11.59	0.13	0.77	0.00	0.00	0.00	0.00	0.00	0.93	1.46	1.46	0.05	0.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
68	1.900	7.58	11.56	0.13	0.77	0.00	0.00	0.00	0.00	0.00	0.92	1.40	1.40	0.05	0.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
69	1.800	7.60	11.54	0.12	0.76	0.00	0.00	0.00	0.00	0.00	0.92	1.35	1.35	0.05	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
70	1.700	7.61	11.51	0.12	0.76	0.00	0.00	0.00	0.00	0.00	0.91	1.31	1.31	0.05	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
71	1.600	7.63	11.48	0.12	0.76	0.00	0.00	0.00	0.00	0.00	0.90	1.27	1.27	0.05	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
72	1.500	7.65	11.46	0.12	0.76	0.00	0.00	0.00	0.00	0.00	0.89	1.23	1.23	0.05	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
73	1.400	7.67	11.42	0.12	0.75	0.00	0.00	0.00	0.00	0.00	0.89	1.20	1.20	0.05	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
74	1.300	7.68	11.13	0.12	0.73	0.00	0.00	0.00	0.00	0.00	0.88	1.22	1.22	0.05	0.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
75	1.200	7.70	11.10	0.12	0.73	0.00	0.00	0.00	0.00	0.00	0.87	1.19	1.19	0.05	0.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
76	1.100	7.72	11.07	0.12	0.73	0.00	0.00	0.00	0.00	0.00	0.86	1.16	1.16	0.05	0.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
77	1.000	7.74	11.05	0.12	0.72	0.00	0.00	0.00	0.00	0.00	0.86	1.13	1.13	0.05	0.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
67	2.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
68	1.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
69	1.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
70	1.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
71	1.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
72	1.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
73	1.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
74	1.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
75	1.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
76	1.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
77	1.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
78	0.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
79	0.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
80	0.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
81	0.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
82	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
83	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
84	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
85	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
86	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
87	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT DRAINAGE DITCH 8 WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 7 DRAINAGE DITCH 8 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
102	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	2.20	0.00	2.20	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
102	WSTLD	0.00007	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	23.00	0.00	0.00	0.00	0.00	0.00	0.00
107	WSTLD	0.00006	30.00	0.39	753.60	63.30	2.00	40.25	0.00	40.25	0.00	40.25	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
102	0.80	0.70	0.00036	20.8	0.00613	0.19	0.19	0.05	1.07	5.83	107.23	0.06	0.00	0.000	0.000	0.006
103	0.70	0.60	0.00036	20.8	0.00613	0.19	0.38	0.05	1.07	5.83	107.23	0.06	0.00	0.000	0.000	0.006
104	0.60	0.50	0.00036	20.8	0.00613	0.19	0.57	0.05	1.07	5.83	107.23	0.06	0.00	0.000	0.000	0.006
105	0.50	0.40	0.00036	20.8	0.00613	0.19	0.76	0.05	1.07	5.83	107.23	0.06	0.00	0.000	0.000	0.006
106	0.40	0.30	0.00036	20.8	0.00613	0.19	0.94	0.05	1.07	5.83	107.23	0.06	0.00	0.000	0.000	0.006
107	0.30	0.20	0.00042	32.4	0.00647	0.18	1.12	0.06	1.12	6.47	112.45	0.06	0.00	0.000	0.000	0.006
108	0.20	0.10	0.00042	32.4	0.00647	0.18	1.30	0.06	1.12	6.47	112.45	0.06	0.00	0.000	0.000	0.006
109	0.10	0.00	0.00042	32.4	0.00647	0.18	1.48	0.06	1.12	6.47	112.45	0.06	0.00	0.000	0.000	0.006
TOT AVG					0.0063	1.48		0.06	1.09	48.57	873.49	0.06				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM ENDING SAT REAER BOD1 BOD1 ABOD1 BOD1 BOD2 BOD2 ABOD2 BKGD FULL CORR ORG-N NH3-N NH3-N DENIT ORG-P ORG-P PO4 PHYTO PERIP COLI NCM NCM

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

NO.	DIST	D.O. mg/L	RATE 1/da	DECAY 1/da	SETT 1/da	DECAY 1/da	HYDR 1/da	DECAY 1/da	SETT 1/da	DECAY 1/da	SOD *	SOD *	SOD *	HYDR 1/da	SETT 1/da	DECAY 1/da	SRCE *	RATE 1/da	HYDR 1/da	SETT 1/da	SRCE *	PROD **	PROD **	DECAY 1/da	DECAY 1/da	SETT 1/da			
102	0.700	7.59	16.52	0.12	1.16	0.00	0.00	0.00	0.00	0.00	0.92	1.27	1.27	0.05	1.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
103	0.600	7.64	16.42	0.12	1.15	0.00	0.00	0.00	0.00	0.00	0.90	1.20	1.20	0.05	1.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
104	0.500	7.68	16.33	0.12	1.14	0.00	0.00	0.00	0.00	0.00	0.88	1.15	1.15	0.05	1.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
105	0.400	7.73	16.23	0.12	1.13	0.00	0.00	0.00	0.00	0.00	0.86	1.10	1.10	0.05	1.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
106	0.300	7.78	16.13	0.12	1.12	0.00	0.00	0.00	0.00	0.00	0.84	1.05	1.05	0.05	1.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
107	0.200	7.83	15.24	0.12	1.05	0.00	0.00	0.00	0.00	0.00	0.82	1.28	1.28	0.05	1.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
108	0.100	7.88	15.14	0.11	1.04	0.00	0.00	0.00	0.00	0.00	0.80	1.20	1.20	0.05	1.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
109	0.000	7.92	15.05	0.11	1.03	0.00	0.00	0.00	0.00	0.00	0.79	1.13	1.13	0.05	1.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
AVG 20	DEG C	RATE	13.57	0.08	0.11	0.00	0.00	0.00	0.00	0.00	0.50			0.03	0.11	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00	0.00	
*	g/m ² /d		**	mg/L/day																									

***** WATER QUALITY CONSTITUENT VALUES

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	
102	0.700	29.65	0.29	569.34	18.90	5.89	5.62	0.00	5.62	0.00	4.71	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
103	0.600	29.30	0.29	569.34	18.90	6.16	4.89	0.00	4.89	0.00	4.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
104	0.500	28.95	0.29	569.34	18.90	6.30	4.31	0.00	4.31	0.00	3.43	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.	
105	0.400	28.60	0.29	569.34	18.90	6.42	3.85	0.00	3.85	0.00	2.97	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.	
106	0.300	28.26	0.29	569.34	18.90	6.51	3.48	0.00	3.48	0.00	2.60	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.	
107	0.200	27.91	0.30	596.32	25.40	6.17	7.65	0.00	7.65	0.00	6.93	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.	
108	0.100	27.56	0.30	596.32	25.40	6.36	6.66	0.00	6.66	0.00	5.94	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.	
109	0.000	27.21	0.30	596.32	25.40	6.50	5.85	0.00	5.85	0.00	5.13	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.	

***** PHYTOPLANKTON AND PERIPHYTON DATA

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
102	0.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
103	0.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
104	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
105	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
106	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
107	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
108	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
109	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20	DEG C	RATE								0.000	0.000	0.000	0.000										0.000	0.000	0.000		

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT DRAINAGE DITCH 9 WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 9 DRAINAGE DITCH 9 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
119	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	2.20	0.00	2.20	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
119	WSTLD	0.00001	30.00	0.39	753.60	63.30	2.00	77.05	0.00	77.05	0.00	77.05	0.00	0.00	0.00	0.00	0.00	0.00
125	WSTLD	0.00001	30.00	0.39	753.60	63.30	2.00	18.40	0.00	18.40	0.00	18.40	0.00	0.00	0.00	0.00	0.00	0.00
135	WSTLD	0.00000	30.00	0.39	753.60	63.30	2.00	16.10	0.00	16.10	0.00	16.10	0.00	0.00	0.00	0.00	0.00	0.00
136	WSTLD	0.00003	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
119	2.10	2.00	0.00029	2.4	0.00571	0.20	0.20	0.05	1.01	5.08	100.71	0.05	0.00	0.000	0.000	0.006
120	2.00	1.90	0.00029	2.4	0.00571	0.20	0.41	0.05	1.01	5.08	100.71	0.05	0.00	0.000	0.000	0.006
121	1.90	1.80	0.00029	2.4	0.00571	0.20	0.61	0.05	1.01	5.08	100.71	0.05	0.00	0.000	0.000	0.006
122	1.80	1.70	0.00029	2.4	0.00571	0.20	0.81	0.05	1.01	5.08	100.71	0.05	0.00	0.000	0.000	0.006
123	1.70	1.60	0.00029	2.4	0.00571	0.20	1.01	0.05	1.01	5.08	100.71	0.05	0.00	0.000	0.000	0.006
124	1.60	1.50	0.00029	2.4	0.00571	0.20	1.22	0.05	1.01	5.08	100.71	0.05	0.00	0.000	0.000	0.006
125	1.50	1.40	0.00030	4.7	0.00576	0.20	1.42	0.05	1.01	5.16	101.44	0.05	0.00	0.000	0.000	0.006
126	1.40	1.30	0.00030	4.7	0.00576	0.20	1.62	0.05	1.01	5.16	101.44	0.05	0.00	0.000	0.000	0.006
127	1.30	1.20	0.00030	4.7	0.00576	0.20	1.82	0.05	1.01	5.16	101.44	0.05	0.00	0.000	0.000	0.006
128	1.20	1.10	0.00030	4.7	0.00576	0.20	2.02	0.05	1.01	5.16	101.44	0.05	0.00	0.000	0.000	0.006
129	1.10	1.00	0.00030	4.7	0.00576	0.20	2.22	0.05	1.01	5.16	101.44	0.05	0.00	0.000	0.000	0.006
130	1.00	0.90	0.00030	4.7	0.00576	0.20	2.42	0.05	1.01	5.16	101.44	0.05	0.00	0.000	0.000	0.006
131	0.90	0.80	0.00030	4.7	0.00576	0.20	2.62	0.05	1.01	5.16	101.44	0.05	0.00	0.000	0.000	0.006
132	0.80	0.70	0.00030	4.7	0.00576	0.20	2.83	0.05	1.01	5.16	101.44	0.05	0.00	0.000	0.000	0.006
133	0.70	0.60	0.00030	4.7	0.00576	0.20	3.03	0.05	1.01	5.16	101.44	0.05	0.00	0.000	0.000	0.006
134	0.60	0.50	0.00030	4.7	0.00576	0.20	3.23	0.05	1.01	5.16	101.44	0.05	0.00	0.000	0.000	0.006
135	0.50	0.40	0.00030	6.1	0.00578	0.20	3.43	0.05	1.02	5.21	101.88	0.05	0.00	0.000	0.000	0.006
136	0.40	0.30	0.00033	15.4	0.00599	0.19	3.62	0.05	1.05	5.58	105.13	0.06	0.00	0.000	0.000	0.006
137	0.30	0.20	0.00033	15.4	0.00599	0.19	3.81	0.05	1.05	5.58	105.13	0.06	0.00	0.000	0.000	0.006
138	0.20	0.10	0.00033	15.4	0.00599	0.19	4.01	0.05	1.05	5.58	105.13	0.06	0.00	0.000	0.000	0.006
139	0.10	0.00	0.00033	15.4	0.00599	0.19	4.20	0.05	1.05	5.58	105.13	0.06	0.00	0.000	0.000	0.006
TOT AVG					0.0058	4.20		0.05	1.02	109.61	2141.06	0.05				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECAY	BOD1 SETT	ABOD1 DECAY	BOD1 HYDR	BOD2 DECAY	BOD2 SETT	ABOD2 DECAY	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECAY	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECAY	NCM DECAY	NCM SETT
		mg/L	1/da	1/da	1/da	1/da	1/da	1/da	1/da	1/da	*	*	*	1/da	1/da	1/da	*	1/da	1/da	1/da	*	**	**	1/da	1/da	1/da
119	2.000	7.56	17.75	0.13	1.25	0.00	0.00	0.00	0.00	0.00	0.93	1.16	1.16	0.06	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
120	1.900	7.57	17.72	0.13	1.25	0.00	0.00	0.00	0.00	0.00	0.93	1.13	1.13	0.06	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
121	1.800	7.59	17.69	0.12	1.25	0.00	0.00	0.00	0.00	0.00	0.92	1.11	1.11	0.06	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
122	1.700	7.60	17.66	0.12	1.24	0.00	0.00	0.00	0.00	0.00	0.92	1.09	1.09	0.06	1.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
123	1.600	7.61	17.63	0.12	1.24	0.00	0.00	0.00	0.00	0.00	0.91	1.07	1.07	0.05	1.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
124	1.500	7.63	17.60	0.12	1.24	0.00	0.00	0.00	0.00	0.00	0.90	1.06	1.06	0.05	1.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
125	1.400	7.64	17.43	0.12	1.23	0.00	0.00	0.00	0.00	0.00	0.90	1.07	1.07	0.05	1.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
126	1.300	7.65	17.40	0.12	1.22	0.00	0.00	0.00	0.00	0.00	0.89	1.05	1.05	0.05	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
127	1.200	7.67	17.37	0.12	1.22	0.00	0.00	0.00	0.00	0.00	0.89	1.04	1.04	0.05	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
128	1.100	7.68	17.34	0.12	1.22	0.00	0.00	0.00	0.00	0.00	0.88	1.03	1.03	0.05	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
129	1.000	7.69	17.31	0.12	1.21	0.00	0.00	0.00	0.00	0.00	0.88	1.02	1.02	0.05	1.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
130	0.900	7.71	17.28	0.12	1.21	0.00	0.00	0.00	0.00	0.00	0.87	1.01	1.01	0.05	1.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
131	0.800	7.72	17.25	0.12	1.21	0.00	0.00	0.00	0.00	0.00	0.86	1.00	1.00	0.05	1.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
132	0.700	7.73	17.22	0.12	1.21	0.00	0.00	0.00	0.00	0.00	0.86	0.99	0.99	0.05	1.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
133	0.600	7.75	17.19	0.12	1.20	0.00	0.00	0.00	0.00	0.00	0.85	0.99	0.99	0.05	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
134	0.500	7.76	17.16	0.12	1.20	0.00	0.00	0.00	0.00	0.00	0.85	0.98	0.98	0.05	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
135	0.400	7.77	17.05	0.12	1.19	0.00	0.00	0.00	0.00	0.00	0.84	0.98	0.98	0.05	1.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
136	0.300	7.79	16.46	0.12	1.14	0.00	0.00	0.00	0.00	0.00	0.84	1.30	1.30	0.05	1.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
137	0.200	7.80	16.43	0.12	1.14	0.00	0.00	0.00	0.00	0.00	0.83	1.23	1.23	0.05	1.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
138	0.100	7.82	16.40	0.12	1.14	0.00	0.00	0.00	0.00	0.00	0.83	1.17	1.17	0.05	1.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

139 0.000 7.83 16.37 0.11 1.14 0.00 0.00 0.00 0.00 0.00 0.82 1.12 1.12 0.05 1.14 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
 AVG 20 DEG C RATE 14.59 0.08 0.05 0.00 0.00 0.00 0.00 0.00 0.50 0.03 0.05 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	
119	2.000	29.90	0.26	526.52	8.58	6.16	3.58	0.00	3.58	0.00	2.44	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
120	1.900	29.80	0.26	526.52	8.58	6.25	3.24	0.00	3.24	0.00	2.13	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
121	1.800	29.70	0.26	526.52	8.58	6.30	2.98	0.00	2.98	0.00	1.88	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
122	1.700	29.60	0.26	526.52	8.58	6.34	2.78	0.00	2.78	0.00	1.69	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
123	1.600	29.50	0.26	526.52	8.58	6.37	2.62	0.00	2.62	0.00	1.54	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
124	1.500	29.40	0.26	526.52	8.58	6.40	2.50	0.00	2.50	0.00	1.42	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
125	1.400	29.30	0.27	531.87	9.87	6.39	2.70	0.00	2.70	0.00	1.64	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
126	1.300	29.20	0.27	531.87	9.87	6.43	2.57	0.00	2.57	0.00	1.50	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
127	1.200	29.10	0.27	531.87	9.87	6.46	2.46	0.00	2.46	0.00	1.39	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
128	1.100	29.00	0.27	531.87	9.87	6.49	2.38	0.00	2.38	0.00	1.31	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
129	1.000	28.90	0.27	531.87	9.87	6.51	2.31	0.00	2.31	0.00	1.24	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
130	0.900	28.80	0.27	531.87	9.87	6.53	2.26	0.00	2.26	0.00	1.18	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
131	0.800	28.70	0.27	531.87	9.87	6.55	2.23	0.00	2.23	0.00	1.14	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
132	0.700	28.60	0.27	531.87	9.87	6.57	2.20	0.00	2.20	0.00	1.11	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
133	0.600	28.50	0.27	531.87	9.87	6.59	2.18	0.00	2.18	0.00	1.08	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
134	0.500	28.40	0.27	531.87	9.87	6.61	2.16	0.00	2.16	0.00	1.06	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
135	0.400	28.30	0.27	535.03	10.64	6.61	2.31	0.00	2.31	0.00	1.22	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
136	0.300	28.20	0.28	556.79	15.88	6.21	7.59	0.00	7.59	0.00	6.65	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
137	0.200	28.10	0.28	556.79	15.88	6.30	6.50	0.00	6.50	0.00	5.58	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
138	0.100	28.00	0.28	556.79	15.88	6.39	5.63	0.00	5.63	0.00	4.72	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
139	0.000	27.90	0.28	556.79	15.88	6.47	4.94	0.00	4.94	0.00	4.02	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
119	2.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
120	1.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
121	1.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
122	1.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
123	1.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

124	1.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
125	1.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
126	1.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
127	1.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
128	1.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
129	1.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
130	0.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
131	0.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
132	0.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
133	0.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
134	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
135	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
136	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
137	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
138	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
139	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT UPPER B BONFOUCA
REACH NO. 13 UB FROM RKM 5.0 TO DD 23

WATER QUALITY/HYDRAULIC MODEL FOR:
BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
159	HDWTR	0.00283	33.80	0.26	520.90	7.23	6.00	2.20	0.00	2.20	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
159	5.00	4.90	0.00283	0.0	0.05667	0.02	0.02	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
160	4.90	4.80	0.00283	0.0	0.05667	0.02	0.04	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
161	4.80	4.70	0.00283	0.0	0.05667	0.02	0.06	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
162	4.70	4.60	0.00283	0.0	0.05667	0.02	0.08	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
163	4.60	4.50	0.00283	0.0	0.05667	0.02	0.10	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
164	4.50	4.40	0.00283	0.0	0.05667	0.02	0.12	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
165	4.40	4.30	0.00283	0.0	0.05667	0.02	0.14	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
166	4.30	4.20	0.00283	0.0	0.05667	0.02	0.16	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
167	4.20	4.10	0.00283	0.0	0.05667	0.02	0.18	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
168	4.10	4.00	0.00283	0.0	0.05667	0.02	0.20	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
169	4.00	3.90	0.00283	0.0	0.05667	0.02	0.22	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
170	3.90	3.80	0.00283	0.0	0.05667	0.02	0.25	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
171	3.80	3.70	0.00283	0.0	0.05667	0.02	0.27	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
172	3.70	3.60	0.00283	0.0	0.05667	0.02	0.29	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
173	3.60	3.50	0.00283	0.0	0.05667	0.02	0.31	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
174	3.50	3.40	0.00283	0.0	0.05667	0.02	0.33	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
175	3.40	3.30	0.00283	0.0	0.05667	0.02	0.35	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
176	3.30	3.20	0.00283	0.0	0.05667	0.02	0.37	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
177	3.20	3.10	0.00283	0.0	0.05667	0.02	0.39	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
178	3.10	3.00	0.00283	0.0	0.05667	0.02	0.41	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
179	3.00	2.90	0.00283	0.0	0.05667	0.02	0.43	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
180	2.90	2.80	0.00283	0.0	0.05667	0.02	0.45	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
181	2.80	2.70	0.00283	0.0	0.05667	0.02	0.47	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
182	2.70	2.60	0.00283	0.0	0.05667	0.02	0.49	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
TOT						0.49				119.93	2400.16					
AVG					0.0567			0.05	1.00			0.05				

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR 1/da	BOD2 DECAT 1/da	BOD2 SETT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAT 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da	
159	4.900	7.55	30.07	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.94	1.08	1.08	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
160	4.800	7.55	30.07	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.94	1.08	1.08	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
161	4.700	7.55	30.07	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.94	1.08	1.08	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
162	4.600	7.55	30.07	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.94	1.08	1.08	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
163	4.500	7.55	30.07	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.94	1.08	1.08	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
164	4.400	7.55	30.07	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.94	1.08	1.08	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
165	4.300	7.55	30.07	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.94	1.08	1.08	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
166	4.200	7.55	30.07	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.94	1.08	1.08	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
167	4.100	7.55	30.07	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.94	1.08	1.08	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
168	4.000	7.55	30.07	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.94	1.08	1.08	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
169	3.900	7.55	30.07	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.94	1.08	1.08	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
170	3.800	7.55	30.07	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.94	1.08	1.08	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
171	3.700	7.55	30.07	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.94	1.08	1.08	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
172	3.600	7.55	30.07	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.94	1.08	1.08	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
173	3.500	7.55	30.07	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.94	1.08	1.08	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
174	3.400	7.55	30.07	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.94	1.08	1.08	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
175	3.300	7.55	30.07	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.94	1.08	1.08	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
176	3.200	7.55	30.07	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.94	1.08	1.08	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
177	3.100	7.55	30.07	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.94	1.08	1.08	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
178	3.000	7.55	30.07	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.94	1.08	1.08	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
179	2.900	7.55	30.07	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.94	1.08	1.08	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
180	2.800	7.55	30.07	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.94	1.08	1.08	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
181	2.700	7.55	30.07	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.94	1.08	1.08	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
182	2.600	7.55	30.07	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.94	1.08	1.08	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20	DEG C RATE	25.00	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.50			0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00
*	g/m ² /d		**	mg/L/day																							

***** WATER QUALITY CONSTITUENT VALUES

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	
159	4.900	30.00	0.26	520.90	7.23	6.31	2.20	0.00	2.20	0.00	1.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
160	4.800	30.00	0.26	520.90	7.23	6.50	2.20	0.00	2.20	0.00	1.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
161	4.700	30.00	0.26	520.90	7.23	6.62	2.20	0.00	2.20	0.00	1.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
162	4.600	30.00	0.26	520.90	7.23	6.70	2.20	0.00	2.20	0.00	1.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
163	4.500	30.00	0.26	520.90	7.23	6.74	2.20	0.00	2.20	0.00	1.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
164	4.400	30.00	0.26	520.90	7.23	6.77	2.20	0.00	2.20	0.00	1.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
165	4.300	30.00	0.26	520.90	7.23	6.79	2.20	0.00	2.20	0.00	1.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
166	4.200	30.00	0.26	520.90	7.23	6.80	2.20	0.00	2.20	0.00	1.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
167	4.100	30.00	0.26	520.90	7.23	6.81	2.20	0.00	2.20	0.00	1.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
168	4.000	30.00	0.26	520.90	7.23	6.81	2.20	0.00	2.20	0.00	1.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
169	3.900	30.00	0.26	520.90	7.23	6.81	2.20	0.00	2.20	0.00	1.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
170	3.800	30.00	0.26	520.90	7.23	6.82	2.20	0.00	2.20	0.00	1.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

171	3.700	30.00	0.26	520.90	7.23	6.82	2.20	0.00	2.20	0.00	1.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																								
172	3.600	30.00	0.26	520.90	7.23	6.82	2.20	0.00	2.20	0.00	1.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																								
173	3.500	30.00	0.26	520.90	7.23	6.82	2.20	0.00	2.20	0.00	1.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																								
174	3.400	30.00	0.26	520.90	7.23	6.82	2.20	0.00	2.20	0.00	1.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																								
175	3.300	30.00	0.26	520.90	7.23	6.82	2.20	0.00	2.20	0.00	1.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																								
176	3.200	30.00	0.26	520.90	7.23	6.82	2.20	0.00	2.20	0.00	1.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																								
177	3.100	30.00	0.26	520.90	7.23	6.82	2.20	0.00	2.20	0.00	1.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																								
178	3.000	30.00	0.26	520.90	7.23	6.82	2.20	0.00	2.20	0.00	1.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																								
179	2.900	30.00	0.26	520.90	7.23	6.82	2.21	0.00	2.21	0.00	1.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																								
180	2.800	30.00	0.26	520.90	7.23	6.82	2.21	0.00	2.21	0.00	1.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																								
181	2.700	30.00	0.26	520.90	7.23	6.82	2.21	0.00	2.21	0.00	1.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																								
182	2.600	30.00	0.26	520.90	7.23	6.82	2.21	0.00	2.21	0.00	1.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																								

***** PHYTOPLANKTON AND PERIPHYTON DATA

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
159	4.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
160	4.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
161	4.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
162	4.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
163	4.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
164	4.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
165	4.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
166	4.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
167	4.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
168	4.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
169	3.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
170	3.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
171	3.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
172	3.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
173	3.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
174	3.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
175	3.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
176	3.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
177	3.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
178	3.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
179	2.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
180	2.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
181	2.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
182	2.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE

0.000 0.000 0.000 0.000

0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT UPPER B BONFOUCA
 REACH NO. 15 UB FROM DD 23 TO BB01

WATER QUALITY/HYDRAULIC MODEL FOR:
 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
193	UPR RCH	0.00283	30.00	0.26	520.90	7.23	6.82	2.21	0.00	2.21	0.00	1.00	0.10	0.10	0.00	0.00	0.00	0.00
193	TRIB	0.00033	30.00	0.28	554.71	15.38	6.26	3.03	0.00	3.03	0.00	2.06	0.10	0.10	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
193	2.60	2.50	0.00316	1.5	0.05884	0.02	0.51	0.05	1.03	5.38	103.38	0.05	0.00	0.000	0.000	0.059
194	2.50	2.40	0.00316	1.5	0.05884	0.02	0.53	0.05	1.03	5.38	103.38	0.05	0.00	0.000	0.000	0.059
195	2.40	2.30	0.00316	1.5	0.05884	0.02	0.55	0.05	1.03	5.38	103.38	0.05	0.00	0.000	0.000	0.059
196	2.30	2.20	0.00316	1.5	0.05884	0.02	0.57	0.05	1.03	5.38	103.38	0.05	0.00	0.000	0.000	0.059
197	2.20	2.10	0.00316	1.5	0.05884	0.02	0.59	0.05	1.03	5.38	103.38	0.05	0.00	0.000	0.000	0.059
198	2.10	2.00	0.00316	1.5	0.05884	0.02	0.61	0.05	1.03	5.38	103.38	0.05	0.00	0.000	0.000	0.059
199	2.00	1.90	0.00316	1.5	0.05884	0.02	0.63	0.05	1.03	5.38	103.38	0.05	0.00	0.000	0.000	0.059
200	1.90	1.80	0.00316	1.5	0.05884	0.02	0.65	0.05	1.03	5.38	103.38	0.05	0.00	0.000	0.000	0.059
201	1.80	1.70	0.00316	1.5	0.05884	0.02	0.67	0.05	1.03	5.38	103.38	0.05	0.00	0.000	0.000	0.059
202	1.70	1.60	0.00316	1.5	0.05884	0.02	0.69	0.05	1.03	5.38	103.38	0.05	0.00	0.000	0.000	0.059
203	1.60	1.50	0.00316	1.5	0.05884	0.02	0.71	0.05	1.03	5.38	103.38	0.05	0.00	0.000	0.000	0.059
204	1.50	1.40	0.00316	1.5	0.05884	0.02	0.73	0.05	1.03	5.38	103.38	0.05	0.00	0.000	0.000	0.059
205	1.40	1.30	0.00316	1.5	0.05884	0.02	0.75	0.05	1.03	5.38	103.38	0.05	0.00	0.000	0.000	0.059
206	1.30	1.20	0.00316	1.5	0.05884	0.02	0.77	0.05	1.03	5.38	103.38	0.05	0.00	0.000	0.000	0.059
207	1.20	1.10	0.00316	1.5	0.05884	0.02	0.79	0.05	1.03	5.38	103.38	0.05	0.00	0.000	0.000	0.059
TOT						0.30				80.63	1550.69					
AVG				0.0588				0.05	1.03			0.05				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECAT	BOD1 SETT	ABOD1 DECAT	BOD1 HYDR	BOD2 DECAT	BOD2 SETT	ABOD2 DECAT	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECAT	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECAT	NCM DECAT	NCM SETT		
193	2.500	7.55	30.07	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.94	1.08	1.08	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
194	2.400	7.55	30.07	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.94	1.08	1.08	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
195	2.300	7.55	30.07	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.94	1.08	1.08	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
196	2.200	7.55	30.07	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.94	1.08	1.08	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
197	2.100	7.55	30.07	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.94	1.08	1.08	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
198	2.000	7.55	30.07	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.94	1.08	1.08	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
199	1.900	7.55	30.07	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.94	1.08	1.08	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
200	1.800	7.55	30.07	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.94	1.08	1.08	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
201	1.700	7.55	30.07	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.94	1.08	1.08	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
202	1.600	7.55	30.07	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.94	1.08	1.08	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
203	1.500	7.55	30.07	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.94	1.08	1.08	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
204	1.400	7.55	30.07	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.94	1.08	1.08	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
205	1.300	7.55	30.07	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.94	1.08	1.08	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
206	1.200	7.55	30.07	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.94	1.08	1.08	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
207	1.100	7.55	30.07	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.94	1.08	1.08	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
AVG 20	DEG C RATE	25.00	0.08	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.50			0.03	0.06	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00		
*	g/m²/d		**	mg/L/day																								

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL
--------------	-------------	------------	----------	------	----	---------	-----------	-----------	------------	------------	------------	------------	------------	------------	-------------	-------------	------------	------------	------------	-------------	-------------	------------	------------	--------------

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

208 UPR RCH 0.00316 30.00 0.26 524.44 8.08 6.84 2.30 0.00 2.30 0.00 1.08 0.10 0.10 0.00 0.00 0.00 0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
208	1.10	1.00	0.00316	1.5	0.02613	0.04	0.83	0.08	1.55	12.10	155.06	0.12	0.00	0.000	0.000	0.026
209	1.00	0.90	0.00316	1.5	0.02613	0.04	0.87	0.08	1.55	12.10	155.06	0.12	0.00	0.000	0.000	0.026
210	0.90	0.80	0.00316	1.5	0.02613	0.04	0.92	0.08	1.55	12.10	155.06	0.12	0.00	0.000	0.000	0.026
211	0.80	0.70	0.00316	1.5	0.02613	0.04	0.96	0.08	1.55	12.10	155.06	0.12	0.00	0.000	0.000	0.026
212	0.70	0.60	0.00316	1.5	0.02613	0.04	1.01	0.08	1.55	12.10	155.06	0.12	0.00	0.000	0.000	0.026
213	0.60	0.50	0.00316	1.5	0.02613	0.04	1.05	0.08	1.55	12.10	155.06	0.12	0.00	0.000	0.000	0.026
214	0.50	0.40	0.00316	1.5	0.02613	0.04	1.10	0.08	1.55	12.10	155.06	0.12	0.00	0.000	0.000	0.026
215	0.40	0.30	0.00316	1.5	0.02613	0.04	1.14	0.08	1.55	12.10	155.06	0.12	0.00	0.000	0.000	0.026
216	0.30	0.20	0.00316	1.5	0.02613	0.04	1.18	0.08	1.55	12.10	155.06	0.12	0.00	0.000	0.000	0.026
217	0.20	0.10	0.00316	1.5	0.02613	0.04	1.23	0.08	1.55	12.10	155.06	0.12	0.00	0.000	0.000	0.026
218	0.10	0.00	0.00316	1.5	0.02613	0.04	1.27	0.08	1.55	12.10	155.06	0.12	0.00	0.000	0.000	0.026
TOT AVG					0.0261	0.49		0.08	1.55	133.15	1705.66	0.12				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. RATE mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT DECAT 1/da	ABOD1 1/da	BOD1 HYDR DECAT 1/da	BOD2 DECAT 1/da	BOD2 SETT DECAT 1/da	ABOD2 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT DECAT 1/da	NH3-N SRCE 1/da	NH3-N RATE 1/da	DENIT HYDR 1/da	ORG-P SETT 1/da	ORG-P PROD **	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI 1/da	NCM DECAT 1/da	NCM SETT 1/da		
208	1.000	7.55	15.97	0.13	0.81	0.00	0.00	0.00	0.00	0.00	0.94	1.08	1.08	0.06	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
209	0.900	7.56	15.96	0.13	0.81	0.00	0.00	0.00	0.00	0.00	0.93	1.08	1.08	0.06	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
210	0.800	7.56	15.95	0.13	0.81	0.00	0.00	0.00	0.00	0.00	0.93	1.08	1.08	0.06	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
211	0.700	7.57	15.94	0.13	0.81	0.00	0.00	0.00	0.00	0.00	0.93	1.07	1.07	0.06	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
212	0.600	7.57	15.93	0.13	0.81	0.00	0.00	0.00	0.00	0.00	0.93	1.07	1.07	0.06	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
213	0.500	7.58	15.93	0.13	0.81	0.00	0.00	0.00	0.00	0.00	0.93	1.07	1.07	0.06	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
214	0.400	7.58	15.91	0.13	0.81	0.00	0.00	0.00	0.00	0.00	0.92	1.07	1.07	0.06	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
215	0.300	7.59	15.90	0.12	0.81	0.00	0.00	0.00	0.00	0.00	0.92	1.07	1.07	0.06	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
216	0.200	7.59	15.89	0.12	0.81	0.00	0.00	0.00	0.00	0.00	0.92	1.06	1.06	0.06	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
217	0.100	7.60	15.88	0.12	0.80	0.00	0.00	0.00	0.00	0.00	0.92	1.06	1.06	0.06	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
218	0.000	7.60	15.87	0.12	0.80	0.00	0.00	0.00	0.00	0.00	0.92	1.06	1.06	0.06	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
AVG 20	DEG C	RATE	13.29	0.08	0.06	0.00	0.00	0.00	0.00	0.00	0.50			0.03	0.06	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00		
*	g/m ² /d		**		mg/L/day																							

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL
208	1.000	29.96	0.26	524.44	8.08	6.77	2.29	0.00	2.53	0.00	1.07	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.2	0.0	0.
209	0.900	29.93	0.26	524.44	8.08	6.73	2.29	0.00	2.77	0.00	1.07	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.5	0.0	0.
210	0.800	29.89	0.26	524.44	8.08	6.71	2.29	0.00	3.01	0.00	1.06	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.7	0.0	0.
211	0.700	29.85	0.26	524.44	8.08	6.70	2.29	0.00	3.24	0.00	1.06	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.9	0.0	0.
212	0.600	29.82	0.26	524.44	8.08	6.69	2.29	0.00	3.48	0.00	1.06	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.2	0.0	0.
213	0.500	29.78	0.26	524.44	8.08	6.69	2.29	0.00	3.72	0.00	1.05	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.4	0.0	0.

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

214	0.400	29.75	0.26	524.44	8.08	6.70	2.28	0.00	3.96	0.00	1.05	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.7	0.0	0.
215	0.300	29.71	0.26	524.44	8.08	6.70	2.28	0.00	4.19	0.00	1.05	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17.9	0.0	0.
216	0.200	29.67	0.26	524.44	8.08	6.71	2.28	0.00	4.43	0.00	1.05	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.1	0.0	0.
217	0.100	29.64	0.26	524.44	8.08	6.71	2.28	0.00	4.67	0.00	1.04	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	22.4	0.0	0.
218	0.000	29.60	0.26	524.44	8.08	6.72	2.28	0.00	4.91	0.00	1.04	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.6	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
208	1.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
209	0.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	4.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
210	0.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
211	0.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
212	0.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	11.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
213	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	13.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
214	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	15.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
215	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	17.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
216	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	20.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
217	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	22.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
218	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	24.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT DRAINAGE DITCH 23 WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 14 DRAINAGE DITCH 23 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
183	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	2.20	0.00	2.20	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
183	WSTLD	0.00005	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRS N m²/s	MEAN VELO m/s
183	1.00	0.90	0.00033	14.5	0.00597	0.19	0.19	0.05	1.05	5.54	104.80	0.06	0.00	0.000	0.000	0.006
184	0.90	0.80	0.00033	14.5	0.00597	0.19	0.39	0.05	1.05	5.54	104.80	0.06	0.00	0.000	0.000	0.006
185	0.80	0.70	0.00033	14.5	0.00597	0.19	0.58	0.05	1.05	5.54	104.80	0.06	0.00	0.000	0.000	0.006
186	0.70	0.60	0.00033	14.5	0.00597	0.19	0.78	0.05	1.05	5.54	104.80	0.06	0.00	0.000	0.000	0.006
187	0.60	0.50	0.00033	14.5	0.00597	0.19	0.97	0.05	1.05	5.54	104.80	0.06	0.00	0.000	0.000	0.006
188	0.50	0.40	0.00033	14.5	0.00597	0.19	1.16	0.05	1.05	5.54	104.80	0.06	0.00	0.000	0.000	0.006
189	0.40	0.30	0.00033	14.5	0.00597	0.19	1.36	0.05	1.05	5.54	104.80	0.06	0.00	0.000	0.000	0.006
190	0.30	0.20	0.00033	14.5	0.00597	0.19	1.55	0.05	1.05	5.54	104.80	0.06	0.00	0.000	0.000	0.006
191	0.20	0.10	0.00033	14.5	0.00597	0.19	1.74	0.05	1.05	5.54	104.80	0.06	0.00	0.000	0.000	0.006
192	0.10	0.00	0.00033	14.5	0.00597	0.19	1.94	0.05	1.05	5.54	104.80	0.06	0.00	0.000	0.000	0.006
TOT						1.94				55.44	1048.00					
AVG					0.0060			0.05	1.05				0.06			

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR 1/da	BOD2 DECAT 1/da	BOD2 SETT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAT 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da		
183	0.900	7.55	17.04	0.13	1.20	0.00	0.00	0.00	0.00	0.00	0.94	1.57	1.57	0.06	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
184	0.800	7.55	17.04	0.13	1.20	0.00	0.00	0.00	0.00	0.00	0.94	1.46	1.46	0.06	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
185	0.700	7.55	17.04	0.13	1.20	0.00	0.00	0.00	0.00	0.00	0.94	1.38	1.38	0.06	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
186	0.600	7.55	17.04	0.13	1.20	0.00	0.00	0.00	0.00	0.00	0.94	1.32	1.32	0.06	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
187	0.500	7.55	17.04	0.13	1.20	0.00	0.00	0.00	0.00	0.00	0.94	1.27	1.27	0.06	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
188	0.400	7.55	17.04	0.13	1.20	0.00	0.00	0.00	0.00	0.00	0.94	1.23	1.23	0.06	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
189	0.300	7.55	17.04	0.13	1.20	0.00	0.00	0.00	0.00	0.00	0.94	1.19	1.19	0.06	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
190	0.200	7.55	17.04	0.13	1.20	0.00	0.00	0.00	0.00	0.00	0.94	1.17	1.17	0.06	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
191	0.100	7.55	17.04	0.13	1.20	0.00	0.00	0.00	0.00	0.00	0.94	1.15	1.15	0.06	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
192	0.000	7.55	17.04	0.13	1.20	0.00	0.00	0.00	0.00	0.00	0.94	1.13	1.13	0.06	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
AVG 20	DEG C RATE	14.17	0.08	0.09	0.00	0.00	0.00	0.00	0.00	0.50				0.03	0.09	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00		
*	g/m ² /d		**	mg/L/day																								

***** WATER QUALITY CONSTITUENT VALUES

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	
183	0.900	30.00	0.28	554.71	15.38	5.64	9.89	0.00	9.89	0.00	8.94	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
184	0.800	30.00	0.28	554.71	15.38	5.79	8.28	0.00	8.28	0.00	7.37	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
185	0.700	30.00	0.28	554.71	15.38	5.91	7.00	0.00	7.00	0.00	6.11	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
186	0.600	30.00	0.28	554.71	15.38	6.00	5.99	0.00	5.99	0.00	5.10	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
187	0.500	30.00	0.28	554.71	15.38	6.07	5.18	0.00	5.18	0.00	4.29	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
188	0.400	30.00	0.28	554.71	15.38	6.12	4.54	0.00	4.54	0.00	3.63	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
189	0.300	30.00	0.28	554.71	15.38	6.17	4.02	0.00	4.02	0.00	3.10	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
190	0.200	30.00	0.28	554.71	15.38	6.20	3.62	0.00	3.62	0.00	2.68	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
191	0.100	30.00	0.28	554.71	15.38	6.23	3.29	0.00	3.29	0.00	2.34	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
192	0.000	30.00	0.28	554.71	15.38	6.26	3.03	0.00	3.03	0.00	2.06	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
183	0.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
184	0.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
185	0.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
186	0.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
187	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
188	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
189	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
190	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
191	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

192 0.000 0.00 Inf 1.00 0.00 0.00 0.00 0.00 0.00 0.000 0.000 0.000 0.000 0.0 0.0 0.50 0.00 0.00 0.00 0.00 0.00 0.00 0.000 0.000 0.000 0.0 0.0
 20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT HIGHWAY 190(DD 5) WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 18 HWY 190 (DRAINAGE DITCH 5) BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
221	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	2.20	0.00	2.20	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
221	WSTLD	0.00025	30.00	0.39	753.60	63.30	2.00	25.30	0.00	25.30	0.00	25.30	0.00	0.00	0.00	0.00	0.00	0.00
222	WSTLD	0.00041	30.00	0.39	753.60	63.30	2.00	6.90	0.00	6.90	0.00	6.90	0.00	0.00	0.00	0.00	0.00	0.00
223	WSTLD	0.00013	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00	0.00
224	WSTLD	0.00002	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00	0.00
227	WSTLD	0.00009	30.00	0.39	753.60	63.30	2.00	621.00	0.00	621.00	0.00	621.00	0.00	0.00	0.00	0.00	0.00	0.00
228	WSTLD	0.00046	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00	0.00
230	WSTLD	0.00003	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00	0.00
231	WSTLD	0.00000	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00	0.00
232	WSTLD	0.00002	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00	0.00
233	WSTLD	0.00010	30.00	0.39	753.60	63.30	2.00	92.00	0.00	92.00	0.00	92.00	0.00	0.00	0.00	0.00	0.00	0.00
234	WSTLD	0.00002	30.00	0.39	753.60	63.30	2.00	25.30	0.00	25.30	0.00	25.30	0.00	0.00	0.00	0.00	0.00	0.00
235	WSTLD	0.00001	30.00	0.39	753.60	63.30	2.00	55.20	0.00	55.20	0.00	55.20	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
221	1.80	1.70	0.00053	46.9	0.00702	0.16	0.16	0.06	1.21	7.59	120.87	0.08	0.00	0.000	0.000	0.007
222	1.70	1.60	0.00094	69.9	0.00852	0.14	0.30	0.08	1.43	11.04	143.33	0.11	0.00	0.000	0.000	0.009
223	1.60	1.50	0.00107	73.4	0.00889	0.13	0.43	0.08	1.49	11.99	148.81	0.12	0.00	0.000	0.000	0.009
224	1.50	1.40	0.00109	74.0	0.00895	0.13	0.56	0.08	1.50	12.15	149.70	0.12	0.00	0.000	0.000	0.009
225	1.40	1.30	0.00109	74.0	0.00895	0.13	0.69	0.08	1.50	12.15	149.70	0.12	0.00	0.000	0.000	0.009
226	1.30	1.20	0.00109	74.0	0.00895	0.13	0.82	0.08	1.50	12.15	149.70	0.12	0.00	0.000	0.000	0.009
227	1.20	1.10	0.00117	75.9	0.00918	0.13	0.95	0.08	1.53	12.77	153.13	0.13	0.00	0.000	0.000	0.009
228	1.10	1.00	0.00163	82.7	0.01027	0.11	1.06	0.09	1.69	15.89	169.12	0.16	0.00	0.000	0.000	0.010
229	1.00	0.90	0.00163	82.7	0.01027	0.11	1.17	0.09	1.69	15.89	169.12	0.16	0.00	0.000	0.000	0.010
230	0.90	0.80	0.00166	83.0	0.01033	0.11	1.28	0.09	1.70	16.07	169.99	0.16	0.00	0.000	0.000	0.010
231	0.80	0.70	0.00166	83.0	0.01034	0.11	1.39	0.09	1.70	16.09	170.10	0.16	0.00	0.000	0.000	0.010
232	0.70	0.60	0.00169	83.2	0.01039	0.11	1.51	0.10	1.71	16.23	170.75	0.16	0.00	0.000	0.000	0.010
233	0.60	0.50	0.00179	84.2	0.01060	0.11	1.62	0.10	1.74	16.88	173.84	0.17	0.00	0.000	0.000	0.011
234	0.50	0.40	0.00180	84.3	0.01063	0.11	1.72	0.10	1.74	16.98	174.30	0.17	0.00	0.000	0.000	0.011
235	0.40	0.30	0.00181	84.4	0.01064	0.11	1.83	0.10	1.74	17.01	174.47	0.17	0.00	0.000	0.000	0.011
236	0.30	0.20	0.00181	84.4	0.01064	0.11	1.94	0.10	1.74	17.01	174.47	0.17	0.00	0.000	0.000	0.011
237	0.20	0.10	0.00181	84.4	0.01064	0.11	2.05	0.10	1.74	17.01	174.47	0.17	0.00	0.000	0.000	0.011
238	0.10	0.00	0.00181	84.4	0.01064	0.11	2.16	0.10	1.74	17.01	174.47	0.17	0.00	0.000	0.000	0.011
TOT						2.16				261.90	2910.34					
AVG				0.0096				0.09	1.62			0.15				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE mg/L	BOD1 DECAT 1/da	BOD1 SETT DECAT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR DECAT 1/da	BOD2 DECAT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT DECAT 1/da	NH3-N SRCE 1/da	NH3-N DECAT 1/da	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da	
221	1.700	7.55	14.64	0.13	1.01	0.00	0.00	0.00	0.00	0.00	0.94	1.65	1.65	0.05	1.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
221	1.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
222	1.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	5.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
223	1.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
224	1.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	11.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
225	1.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	13.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
226	1.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	16.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
227	1.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	19.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
228	1.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	22.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
229	0.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	25.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
230	0.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	27.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
231	0.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	30.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
232	0.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	33.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
233	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	36.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
234	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	38.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
235	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	41.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
236	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	44.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
237	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	47.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
238	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	49.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT WEST DRAINAGE CANAL WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 21 WEST DRAINAGE CANAL BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
260	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	2.20	0.00	2.20	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
260	WSTLD	0.00063	30.00	0.22	437.30	23.50	7.10	1.33	0.00	1.33	0.00	1.74	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
260	0.30	0.20	0.00091	69.0	0.00203	0.57	0.57	0.15	3.00	45.00	300.00	0.45	30.00	0.002	0.094	0.002
261	0.20	0.10	0.00091	69.0	0.00203	0.57	1.14	0.15	3.00	45.00	300.00	0.45	60.00	0.004	0.160	0.004
262	0.10	0.00	0.00091	69.0	0.00203	0.57	1.71	0.15	3.00	45.00	300.00	0.45	90.00	0.006	0.233	0.006
TOT AVG					0.0020	1.71		0.15	3.00	135.00	900.00	0.45				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR DECAT 1/da	BOD2 DECAT 1/da	BOD2 SETT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAT 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da
260	0.200	7.56	5.60	0.13	0.42	0.00	0.00	0.00	0.00	0.00	0.93	1.11	1.11	0.06	0.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
261	0.100	7.56	5.74	0.13	0.42	0.00	0.00	0.00	0.00	0.00	0.92	1.24	1.24	0.05	0.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
262	0.000	7.55	5.93	0.07	0.42	0.00	0.00	0.00	0.00	0.00	0.92	1.51	1.51	0.00	0.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			4.81	0.08	0.11	0.00	0.00	0.00	0.00	0.00	0.50			0.03	0.11	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	
260	0.200	29.87	0.48	914.23	161.78	6.17	2.80	0.00	3.12	0.00	1.50	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.9	0.0	0.
261	0.100	29.73	0.89	1636.91	391.41	5.24	4.98	0.00	5.61	0.00	1.70	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.9	0.0	0.
262	0.000	29.60	1.56	2849.81	776.81	1.15	9.49	0.00	10.43	0.00	2.24	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P N&P LIM	PHYT TOT LIM	PHYT P/R	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²					
260	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.00	2.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0
261	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.00	5.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0
262	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.00	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0

20 DEG C RATE

0.000 0.000 0.000 0.000

0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT DRAINAGE DITCH 6
 REACH NO. 23 DRAINAGE DITCH 6

WATER QUALITY/HYDRAULIC MODEL FOR:
 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
284	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	2.20	0.00	2.20	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
284	WSTLD	0.00000	30.00	0.39	753.60	200.00	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
284	0.30	0.20	0.00029	1.5	0.00569	0.20	0.20	0.05	1.00	5.05	100.43	0.05	0.00	0.000	0.000	0.006
285	0.20	0.10	0.00029	1.5	0.00569	0.20	0.41	0.05	1.00	5.05	100.43	0.05	0.00	0.000	0.000	0.006
286	0.10	0.00	0.00029	1.5	0.00569	0.20	0.61	0.05	1.00	5.05	100.43	0.05	0.00	0.000	0.000	0.006
TOT AVG					0.0057	0.61		0.05	1.00	15.14	301.30	0.05				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE 1/da	BOD1 DECAF 1/da	BOD1 SETT DECAF 1/da	ABOD1 DECAF 1/da	BOD1 HYDR DECAF 1/da	BOD2 DECAF 1/da	ABOD2 DECAF 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT DECAF 1/da	NH3-N DECAF 1/da	NH3-N SRCE 1/da	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAF 1/da	NCM DECAF 1/da	NCM SETT 1/da
----------	-------------	----------	-----------------	-----------------	----------------------	------------------	----------------------	-----------------	------------------	------------	------------	------------	-----------------	-----------------------	------------------	-----------------	-----------------	-----------------	-----------------	------------	---------------	---------------	-----------------	----------------	---------------

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

303	0.70	0.60	0.00032	11.0	0.00589	0.20	1.77	0.05	1.04	5.40	103.54	0.05	0.00	0.000	0.000	0.006
304	0.60	0.50	0.00032	11.0	0.00589	0.20	1.96	0.05	1.04	5.40	103.54	0.05	0.00	0.000	0.000	0.006
TOT						1.96				53.98	1035.38					
AVG					0.0059			0.05	1.04							0.05

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECA 1/da	BOD1 SETT 1/da	ABOD1 DECA 1/da	BOD1 HYDR 1/da	BOD2 DECA 1/da	BOD2 SETT 1/da	ABOD2 DECA 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECA 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECA 1/da	NCM DECA 1/da	NCM SETT 1/da	
295	1.400	7.55	17.26	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.94	1.44	1.44	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
296	1.300	7.55	17.26	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.94	1.37	1.37	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
297	1.200	7.55	17.26	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.94	1.30	1.30	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
298	1.100	7.55	17.26	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.94	1.25	1.25	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
299	1.000	7.55	17.26	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.94	1.22	1.22	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300	0.900	7.55	17.26	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.94	1.18	1.18	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
301	0.800	7.55	17.26	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.94	1.16	1.16	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
302	0.700	7.55	17.26	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.94	1.14	1.14	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
303	0.600	7.55	17.26	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.94	1.13	1.13	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
304	0.500	7.46	17.25	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.94	1.17	1.17	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
AVG 20	DEG C RATE	14.35	0.08	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.50			0.03	0.10	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	
*	g/m ² /d		**	mg/L/day																							

***** WATER QUALITY CONSTITUENT VALUES

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	
295	1.400	30.00	0.27	546.51	13.40	5.79	7.98	0.00	7.98	0.00	6.98	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
296	1.300	30.00	0.27	546.51	13.40	5.92	6.74	0.00	6.74	0.00	5.77	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
297	1.200	30.00	0.27	546.51	13.40	6.01	5.76	0.00	5.76	0.00	4.81	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
298	1.100	30.00	0.27	546.51	13.40	6.08	4.99	0.00	4.99	0.00	4.04	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
299	1.000	30.00	0.27	546.51	13.40	6.14	4.37	0.00	4.37	0.00	3.42	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
300	0.900	30.00	0.27	546.51	13.40	6.18	3.89	0.00	3.89	0.00	2.92	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
301	0.800	30.00	0.27	546.51	13.40	6.21	3.50	0.00	3.50	0.00	2.53	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
302	0.700	30.00	0.27	546.51	13.40	6.24	3.20	0.00	3.20	0.00	2.21	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
303	0.600	30.00	0.27	546.51	13.40	6.26	2.96	0.00	2.96	0.00	1.96	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
304	0.500	30.00	2.36	4278.17	1257.62	5.76	3.69	0.00	3.69	0.00	1.41	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
295	1.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
296	1.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
297	1.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
298	1.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

299	1.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
300	0.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
301	0.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
302	0.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
303	0.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
304	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT TRIBUTARY 2 WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 26 TRIBUTARY 2 - TIDAL BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
305	UPR RCH	0.00032	30.00	2.36	4278.17	1257.62	5.76	3.69	0.00	3.69	0.00	1.41	0.10	0.10	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
305	0.50	0.40	0.00032	11.0	0.00004	26.21	28.17	0.60	12.00	720.00	1200.00	7.20	120.00	0.000	0.061	0.000
306	0.40	0.30	0.00032	11.0	0.00004	26.21	54.38	0.60	12.00	720.00	1200.00	7.20	240.00	0.001	0.122	0.001
307	0.30	0.20	0.00032	11.0	0.00004	26.21	80.58	0.60	12.00	720.00	1200.00	7.20	360.00	0.001	0.184	0.001
308	0.20	0.10	0.00032	11.0	0.00004	26.21	106.79	0.60	12.00	720.00	1200.00	7.20	480.00	0.002	0.245	0.002
309	0.10	0.00	0.00032	11.0	0.00004	26.21	132.99	0.60	12.00	720.00	1200.00	7.20	600.00	0.002	0.306	0.002
TOT AVG					0.0000	131.03		0.60	12.00	3600.00	6000.00	7.20				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT DECAT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR DECAT 1/da	BOD2 DECAT 1/da	BOD2 SETT DECAT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT DECAT 1/da	NH3-N SRCE *	NH3-N RATE 1/da	DENIT HYDR 1/da	ORG-P SETT 1/da	ORG-P SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da	
305	0.400	7.41	1.41	0.13	0.11	0.00	0.00	0.00	0.00	0.00	0.96	1.20	1.20	0.06	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
306	0.300	7.37	1.42	0.13	0.11	0.00	0.00	0.00	0.00	0.00	0.98	1.26	1.26	0.06	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
307	0.200	7.32	1.42	0.13	0.11	0.00	0.00	0.00	0.00	0.00	0.99	1.33	1.33	0.06	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
308	0.100	7.28	1.43	0.13	0.11	0.00	0.00	0.00	0.00	0.00	1.01	1.42	1.42	0.06	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
309	0.000	7.24	1.44	0.14	0.11	0.00	0.00	0.00	0.00	0.00	1.03	1.51	1.51	0.06	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE		1.17	0.08	0.02	0.00	0.00	0.00	0.00	0.00	0.50				0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00	

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL	
305	0.400	30.31	2.67	4818.22	1437.69	5.51	3.86	0.00	4.05	0.00	1.34	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.8	0.0	0.

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

306	0.300	30.62	2.78	5024.09	1506.33	5.28	4.43	0.00	4.80	0.00	1.38	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.5	0.0	0.
0.00																									
307	0.200	30.92	2.85	5153.45	1549.46	4.99	5.19	0.00	5.75	0.00	1.44	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.3	0.0	0.
0.00																									
308	0.100	31.23	2.91	5248.47	1581.14	4.60	6.14	0.00	6.89	0.00	1.53	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.0	0.0	0.
0.00																									
309	0.000	31.54	2.95	5323.88	1606.28	4.04	7.31	0.00	8.25	0.00	1.63	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.
0.00																									

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
305	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
306	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
307	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	5.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
308	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
309	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT CANAL 26 WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 29 CANAL 26 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
324	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	2.20	0.00	2.20	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
324	2.00	1.90	0.00028	0.0	0.00000	466.23	466.23	1.00	114.00	11400.00	11400.00	114.00	1140.00	0.000	0.056	0.000
325	1.90	1.80	0.00028	0.0	0.00000	466.23	932.47	1.00	114.00	11400.00	11400.00	114.00	2280.00	0.001	0.113	0.001
326	1.80	1.70	0.00028	0.0	0.00000	466.23	1398.70	1.00	114.00	11400.00	11400.00	114.00	3420.00	0.001	0.169	0.001
327	1.70	1.60	0.00028	0.0	0.00000	466.23	1864.94	1.00	114.00	11400.00	11400.00	114.00	4560.00	0.001	0.225	0.001
328	1.60	1.50	0.00028	0.0	0.00000	466.23	2331.17	1.00	114.00	11400.00	11400.00	114.00	5700.00	0.001	0.281	0.001
329	1.50	1.40	0.00028	0.0	0.00000	466.23	2797.41	1.00	114.00	11400.00	11400.00	114.00	6840.00	0.002	0.338	0.002
330	1.40	1.30	0.00028	0.0	0.00000	466.23	3263.64	1.00	114.00	11400.00	11400.00	114.00	7980.00	0.002	0.394	0.002
331	1.30	1.20	0.00028	0.0	0.00000	466.23	3729.88	1.00	114.00	11400.00	11400.00	114.00	9120.00	0.002	0.450	0.002
332	1.20	1.10	0.00028	0.0	0.00000	466.23	4196.11	1.00	114.00	11400.00	11400.00	114.00	10260.00	0.003	0.506	0.003
333	1.10	1.00	0.00028	0.0	0.00000	466.23	4662.35	1.00	114.00	11400.00	11400.00	114.00	11400.00	0.003	0.563	0.003
334	1.00	0.90	0.00028	0.0	0.00000	466.23	5128.58	1.00	114.00	11400.00	11400.00	114.00	12540.00	0.003	0.619	0.003
335	0.90	0.80	0.00028	0.0	0.00000	466.23	5594.82	1.00	114.00	11400.00	11400.00	114.00	13680.00	0.003	0.675	0.003
336	0.80	0.70	0.00028	0.0	0.00000	466.23	6061.05	1.00	114.00	11400.00	11400.00	114.00	14820.00	0.004	0.731	0.004
337	0.70	0.60	0.00028	0.0	0.00000	466.23	6527.29	1.00	114.00	11400.00	11400.00	114.00	15960.00	0.004	0.788	0.004
338	0.60	0.50	0.00028	0.0	0.00000	466.23	6993.52	1.00	114.00	11400.00	11400.00	114.00	17100.00	0.004	0.844	0.004
339	0.50	0.40	0.00028	0.0	0.00000	466.23	7459.76	1.00	114.00	11400.00	11400.00	114.00	18240.00	0.005	0.900	0.005
340	0.40	0.30	0.00028	0.0	0.00000	466.23	7925.99	1.00	114.00	11400.00	11400.00	114.00	19380.00	0.005	0.956	0.005
341	0.30	0.20	0.00028	0.0	0.00000	466.23	8392.23	1.00	114.00	11400.00	11400.00	114.00	20520.00	0.005	1.013	0.005
342	0.20	0.10	0.00028	0.0	0.00000	466.23	8858.46	1.00	114.00	11400.00	11400.00	114.00	21660.00	0.005	1.069	0.005
343	0.10	0.00	0.00028	0.0	0.00000	466.23	9324.70	1.00	114.00	11400.00	11400.00	114.00	22800.00	0.006	1.125	0.006

TOT 9324.70 228000.00 228000.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

AVG 0.0000 1.00 114.00 114.00

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT DECAT 1/da	ABOD1 1/da	BOD1 HYDR DECAT 1/da	BOD2 DECAT 1/da	BOD2 SETT DECAT 1/da	ABOD2 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT DECAT 1/da	NH3-N SRCE *	NH3-N RATE 1/da	DENIT HYDR 1/da	ORG-P SETT 1/da	ORG-P SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da	
324	1.900	7.42	0.84	0.13	0.06	0.00	0.00	0.00	0.00	0.00	0.94	1.09	1.09	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
325	1.800	7.41	0.84	0.13	0.06	0.00	0.00	0.00	0.00	0.00	0.95	1.10	1.10	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
326	1.700	7.40	0.84	0.13	0.06	0.00	0.00	0.00	0.00	0.00	0.95	1.11	1.11	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
327	1.600	7.39	0.85	0.13	0.06	0.00	0.00	0.00	0.00	0.00	0.96	1.12	1.12	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
328	1.500	7.38	0.85	0.13	0.06	0.00	0.00	0.00	0.00	0.00	0.96	1.13	1.13	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
329	1.400	7.37	0.85	0.13	0.06	0.00	0.00	0.00	0.00	0.00	0.97	1.14	1.14	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
330	1.300	7.36	0.85	0.13	0.06	0.00	0.00	0.00	0.00	0.00	0.97	1.15	1.15	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
331	1.200	7.35	0.85	0.13	0.06	0.00	0.00	0.00	0.00	0.00	0.98	1.16	1.16	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
332	1.100	7.34	0.85	0.13	0.06	0.00	0.00	0.00	0.00	0.00	0.98	1.18	1.18	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
333	1.000	7.33	0.85	0.13	0.06	0.00	0.00	0.00	0.00	0.00	0.99	1.19	1.19	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
334	0.900	7.32	0.85	0.13	0.06	0.00	0.00	0.00	0.00	0.00	0.99	1.21	1.21	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
335	0.800	7.31	0.85	0.13	0.06	0.00	0.00	0.00	0.00	0.00	0.99	1.23	1.23	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
336	0.700	7.30	0.86	0.13	0.06	0.00	0.00	0.00	0.00	0.00	1.00	1.25	1.25	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
337	0.600	7.29	0.86	0.13	0.07	0.00	0.00	0.00	0.00	0.00	1.00	1.28	1.28	0.06	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
338	0.500	7.28	0.86	0.13	0.07	0.00	0.00	0.00	0.00	0.00	1.01	1.30	1.30	0.06	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
339	0.400	7.27	0.86	0.13	0.07	0.00	0.00	0.00	0.00	0.00	1.01	1.33	1.33	0.06	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
340	0.300	7.26	0.86	0.13	0.07	0.00	0.00	0.00	0.00	0.00	1.02	1.36	1.36	0.06	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
341	0.200	7.25	0.86	0.13	0.07	0.00	0.00	0.00	0.00	0.00	1.02	1.40	1.40	0.06	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
342	0.100	7.24	0.86	0.14	0.07	0.00	0.00	0.00	0.00	0.00	1.03	1.44	1.44	0.06	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
343	0.000	7.23	0.86	0.14	0.07	0.00	0.00	0.00	0.00	0.00	1.03	1.48	1.48	0.06	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20	DEG C	RATE	0.70	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.50			0.03	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND mg/L	CL mg/L	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A ug/L	PERIP g/m ²	COLI #/100mL
324	1.900	30.08	3.19	5749.90	1749.29	5.67	2.39	0.00	2.45	0.00	1.06	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.5	0.0	0.
325	1.800	30.15	3.20	5765.29	1754.41	5.64	2.43	0.00	2.54	0.00	1.06	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.1	0.0	0.
326	1.700	30.23	3.20	5774.54	1757.50	5.61	2.48	0.00	2.65	0.00	1.07	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.6	0.0	0.
327	1.600	30.31	3.20	5781.17	1759.70	5.58	2.54	0.00	2.77	0.00	1.08	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.1	0.0	0.
328	1.500	30.39	3.21	5786.33	1761.42	5.54	2.61	0.00	2.90	0.00	1.09	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.7	0.0	0.
329	1.400	30.46	3.21	5790.55	1762.83	5.50	2.70	0.00	3.04	0.00	1.10	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.
330	1.300	30.54	3.21	5794.13	1764.02	5.45	2.81	0.00	3.21	0.00	1.11	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.7	0.0	0.
331	1.200	30.62	3.21	5797.23	1765.06	5.40	2.93	0.00	3.39	0.00	1.13	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.2	0.0	0.
332	1.100	30.69	3.21	5799.97	1765.97	5.35	3.08	0.00	3.58	0.00	1.14	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.8	0.0	0.
333	1.000	30.77	3.22	5802.42	1766.78	5.29	3.24	0.00	3.81	0.00	1.16	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.3	0.0	0.
334	0.900	30.85	3.22	5804.64	1767.52	5.22	3.43	0.00	4.05	0.00	1.18	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.8	0.0	0.
335	0.800	30.92	3.22	5806.67	1768.20	5.15	3.65	0.00	4.32	0.00	1.20	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.4	0.0	0.
336	0.700	31.00	3.22	5808.53	1768.82	5.08	3.89	0.00	4.63	0.00	1.23	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.9	0.0	0.

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

337	0.600	31.08	3.22	5810.26	1769.40	5.00	4.17	0.00	4.96	0.00	1.25	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.4	0.0	0.
338	0.500	31.16	3.22	5811.87	1769.93	4.91	4.49	0.00	5.34	0.00	1.28	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.0	0.0	0.
339	0.400	31.23	3.22	5813.38	1770.43	4.83	4.85	0.00	5.75	0.00	1.32	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.5	0.0	0.
340	0.300	31.31	3.22	5814.79	1770.91	4.75	5.25	0.00	6.21	0.00	1.35	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.0	0.0	0.
341	0.200	31.39	3.22	5816.12	1771.35	4.66	5.70	0.00	6.72	0.00	1.39	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.5	0.0	0.
342	0.100	31.46	3.22	5817.39	1771.77	4.59	6.21	0.00	7.28	0.00	1.43	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.1	0.0	0.
343	0.000	31.54	3.23	5818.58	1772.17	4.53	6.78	0.00	7.91	0.00	1.48	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.6	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
324	1.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
325	1.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
326	1.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
327	1.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
328	1.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
329	1.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
330	1.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
331	1.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	4.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
332	1.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	4.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
333	1.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	5.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
334	0.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	5.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
335	0.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
336	0.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
337	0.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
338	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
339	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
340	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
341	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
342	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
343	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT TRIBUTARY 4 WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 31 TRIBUTARY 10 - UPLAND BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
346	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	2.20	0.00	2.20	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
346	WSTLD	0.00033	30.00	0.39	753.60	63.30	2.00	34.50	0.00	34.50	0.00	34.50	0.00	0.00	0.00	0.00	0.00	0.00
351	WSTLD	0.00054	30.00	0.39	753.60	63.30	2.00	2.30	0.00	2.30	0.00	2.30	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
----------	---------------	----------------	-----------	---------	-----------------	------------------	---------------	---------	---------	-----------	-----------------	----------------	----------------	----------------	--------------	---------------

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

346	1.90	1.80	0.00061	53.7	0.00736	0.16	0.16	0.07	1.26	8.31	125.98	0.08	0.00	0.000	0.000	0.007
347	1.80	1.70	0.00061	53.7	0.00736	0.16	0.31	0.07	1.26	8.31	125.98	0.08	0.00	0.000	0.000	0.007
348	1.70	1.60	0.00061	53.7	0.00736	0.16	0.47	0.07	1.26	8.31	125.98	0.08	0.00	0.000	0.000	0.007
349	1.60	1.50	0.00061	53.7	0.00736	0.16	0.63	0.07	1.26	8.31	125.98	0.08	0.00	0.000	0.000	0.007
350	1.50	1.40	0.00061	53.7	0.00736	0.16	0.79	0.07	1.26	8.31	125.98	0.08	0.00	0.000	0.000	0.007
351	1.40	1.30	0.00115	75.5	0.00913	0.13	0.91	0.08	1.52	12.64	152.44	0.13	0.00	0.000	0.000	0.009
352	1.30	1.20	0.00115	75.5	0.00913	0.13	1.04	0.08	1.52	12.64	152.44	0.13	0.00	0.000	0.000	0.009
353	1.20	1.10	0.00115	75.5	0.00913	0.13	1.17	0.08	1.52	12.64	152.44	0.13	0.00	0.000	0.000	0.009
354	1.10	1.00	0.00115	75.5	0.00913	0.13	1.29	0.08	1.52	12.64	152.44	0.13	0.00	0.000	0.000	0.009
355	1.00	0.90	0.00115	75.5	0.00913	0.13	1.42	0.08	1.52	12.64	152.44	0.13	0.00	0.000	0.000	0.009
356	0.90	0.80	0.00115	75.5	0.00913	0.13	1.55	0.08	1.52	12.64	152.44	0.13	0.00	0.000	0.000	0.009
TOT							1.55			117.41	1544.55					
AVG				0.0082				0.08	1.40			0.11				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT DECAT 1/da	ABOD1 1/da	BOD1 HYDR DECAT 1/da	BOD2 SETT DECAT 1/da	ABOD2 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT DECAT 1/da	NH3-N SRCE *	NH3-N RATE 1/da	DENIT HYDR 1/da	ORG-P SETT 1/da	ORG-P SRCE *	PHYTO PROD **	PERIP PROD **	COLI 1/da	NCM DECAT 1/da	NCM SETT 1/da	
346	1.800	7.55	14.02	0.13	0.96	0.00	0.00	0.00	0.00	0.94	2.01	2.01	0.05	0.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
347	1.700	7.55	14.02	0.13	0.96	0.00	0.00	0.00	0.00	0.94	1.87	1.87	0.05	0.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
348	1.600	7.55	14.02	0.13	0.96	0.00	0.00	0.00	0.00	0.94	1.75	1.75	0.05	0.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
349	1.500	7.55	14.02	0.13	0.96	0.00	0.00	0.00	0.00	0.94	1.65	1.65	0.06	0.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
350	1.400	7.55	14.02	0.13	0.96	0.00	0.00	0.00	0.00	0.94	1.56	1.56	0.06	0.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
351	1.300	7.54	11.52	0.13	0.76	0.00	0.00	0.00	0.00	0.94	1.30	1.30	0.05	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
352	1.200	7.54	11.52	0.13	0.76	0.00	0.00	0.00	0.00	0.94	1.28	1.28	0.06	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
353	1.100	7.54	11.52	0.13	0.76	0.00	0.00	0.00	0.00	0.94	1.25	1.25	0.06	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
354	1.000	7.54	11.52	0.13	0.76	0.00	0.00	0.00	0.00	0.94	1.23	1.23	0.06	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
355	0.900	7.54	11.52	0.13	0.76	0.00	0.00	0.00	0.00	0.94	1.21	1.21	0.06	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
356	0.800	7.47	11.51	0.13	0.76	0.00	0.00	0.00	0.00	0.94	1.15	1.15	0.06	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20	DEG C	RATE	10.52	0.08	0.06	0.00	0.00	0.00	0.00	0.50			0.03	0.06	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	
*	g/m ² /d		**	mg/L/day																					

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL
346	1.800	30.00	0.33	645.91	37.35	4.75	16.94	0.00	17.04	0.00	16.49	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.0	0.
347	1.700	30.00	0.33	645.91	37.35	5.15	14.71	0.00	14.91	0.00	14.32	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.9	0.0	0.
348	1.600	30.00	0.33	645.91	37.35	5.38	12.80	0.00	13.11	0.00	12.46	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.9	0.0	0.
349	1.500	30.00	0.33	645.91	37.35	5.55	11.17	0.00	11.59	0.00	10.84	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.9	0.0	0.
350	1.400	30.00	0.33	645.91	37.35	5.68	9.78	0.00	10.30	0.00	9.46	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.8	0.0	0.
351	1.300	30.00	0.36	696.57	49.56	5.22	5.76	0.00	6.38	0.00	5.58	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.8	0.0	0.
352	1.200	30.00	0.36	696.57	49.56	5.76	5.31	0.00	6.03	0.00	5.11	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.7	0.0	0.
353	1.100	30.00	0.36	696.57	49.56	6.00	4.91	0.00	5.73	0.00	4.69	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.7	0.0	0.
354	1.000	30.00	0.36	696.57	49.56	6.11	4.55	0.00	5.47	0.00	4.30	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.7	0.0	0.
355	0.900	30.00	0.36	696.57	49.56	6.17	4.22	0.00	5.25	0.00	3.96	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.6	0.0	0.
356	0.800	30.00	2.15	3904.84	1128.52	5.78	3.40	0.00	4.53	0.00	1.97	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.6	0.0	0.

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

***** PHYTOPLANKTON AND PERIPHYTON DATA

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
346	1.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
347	1.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
348	1.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
349	1.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
350	1.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	4.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
351	1.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	5.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
352	1.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
353	1.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
354	1.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
355	0.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
356	0.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT TRIBUTARY 4 WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 32 TRIBUTARY 4 - TIDAL BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
357	UPR RCH	0.00115	30.00	2.15	3904.84	1128.52	5.78	3.40	0.00	4.53	0.00	1.97	0.10	0.10	0.00	10.60	0.00	0.00

***** HYDRAULIC PARAMETER VALUES

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
357	0.80	0.70	0.00115	75.5	0.00007	16.24	17.78	0.90	18.00	1620.00	1800.00	16.20	180.00	0.000	0.057	0.000
358	0.70	0.60	0.00115	75.5	0.00007	16.24	34.02	0.90	18.00	1620.00	1800.00	16.20	360.00	0.001	0.114	0.001
359	0.60	0.50	0.00115	75.5	0.00007	16.24	50.26	0.90	18.00	1620.00	1800.00	16.20	540.00	0.001	0.171	0.001
360	0.50	0.40	0.00115	75.5	0.00007	16.24	66.50	0.90	18.00	1620.00	1800.00	16.20	720.00	0.001	0.228	0.001
361	0.40	0.30	0.00115	75.5	0.00007	16.24	82.74	0.90	18.00	1620.00	1800.00	16.20	900.00	0.002	0.286	0.002
362	0.30	0.20	0.00115	75.5	0.00007	16.24	98.97	0.90	18.00	1620.00	1800.00	16.20	1080.00	0.002	0.343	0.002
363	0.20	0.10	0.00115	75.5	0.00007	16.24	115.21	0.90	18.00	1620.00	1800.00	16.20	1260.00	0.002	0.400	0.002
364	0.10	0.00	0.00115	75.5	0.00007	16.24	131.45	0.90	18.00	1620.00	1800.00	16.20	1440.00	0.003	0.457	0.002
TOT AVG				0.0001		129.90		0.90	18.00	12960.00	14400.00	16.20				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECA 1/da	BOD1 SETT 1/da	ABOD1 DECA 1/da	BOD1 HYDR 1/da	BOD2 DECA 1/da	BOD2 SETT 1/da	ABOD2 DECA 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECA 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECA 1/da	NCM DECA 1/da	NCM SETT 1/da
357	0.700	7.43	0.94	0.13	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.95	1.15	1.15	0.06	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
358	0.600	7.40	0.94	0.13	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.96	1.18	1.18	0.06	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
359	0.500	7.38	0.94	0.13	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.97	1.21	1.21	0.06	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
360	0.400	7.35	0.94	0.13	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.98	1.25	1.25	0.06	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
433	15.00	14.90	0.00283	0.0	0.02517	0.05	0.05	0.08	1.50	11.25	150.02	0.11	0.00	0.000	0.000	0.025
434	14.90	14.80	0.00283	0.0	0.02517	0.05	0.09	0.08	1.50	11.25	150.02	0.11	0.00	0.000	0.000	0.025
435	14.80	14.70	0.00283	0.0	0.02517	0.05	0.14	0.08	1.50	11.25	150.02	0.11	0.00	0.000	0.000	0.025
436	14.70	14.60	0.00283	0.0	0.02517	0.05	0.18	0.08	1.50	11.25	150.02	0.11	0.00	0.000	0.000	0.025
437	14.60	14.50	0.00283	0.0	0.02517	0.05	0.23	0.08	1.50	11.25	150.02	0.11	0.00	0.000	0.000	0.025
438	14.50	14.40	0.00283	0.0	0.02517	0.05	0.28	0.08	1.50	11.25	150.02	0.11	0.00	0.000	0.000	0.025
TOT						0.28				67.52	900.11					
AVG				0.0252				0.08	1.50			0.11				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECA	BOD1 SETT	ABOD1 DECA	BOD1 HYDR	BOD2 DECA	BOD2 SETT	ABOD2 DECA	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECA	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECA	NCM DECA	NCM SETT		
433	14.900	7.64	16.22	0.12	0.83	0.00	0.00	0.00	0.00	0.00	3.60	3.81	3.81	0.05	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
434	14.800	7.64	16.22	0.12	0.83	0.00	0.00	0.00	0.00	0.00	3.60	3.88	3.88	0.05	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
435	14.700	7.64	16.22	0.12	0.83	0.00	0.00	0.00	0.00	0.00	3.60	3.95	3.95	0.05	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
436	14.600	7.64	16.22	0.12	0.83	0.00	0.00	0.00	0.00	0.00	3.60	4.02	4.02	0.05	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
437	14.500	7.64	16.22	0.12	0.83	0.00	0.00	0.00	0.00	0.00	3.60	4.08	4.08	0.05	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
438	14.400	7.64	16.22	0.12	0.83	0.00	0.00	0.00	0.00	0.00	3.60	4.15	4.15	0.05	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG	20 DEG C	RATE	13.65	0.08	0.11	0.00	0.00	0.00	0.00	0.00	2.00		0.03	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00	0.00
*	g/m ² /d			**	mg/L/day																							

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	
433	14.900	29.33	0.26	520.90	7.23	5.35	3.41	0.00	3.41	0.00	1.88	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
434	14.800	29.33	0.26	520.90	7.23	4.94	4.57	0.00	4.57	0.00	2.72	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
435	14.700	29.33	0.26	520.90	7.23	4.68	5.69	0.00	5.69	0.00	3.53	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
436	14.600	29.33	0.26	520.90	7.23	4.50	6.75	0.00	6.75	0.00	4.31	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
437	14.500	29.33	0.26	520.90	7.23	4.38	7.77	0.00	7.77	0.00	5.06	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
438	14.400	29.33	0.26	520.90	7.23	4.28	8.75	0.00	8.75	0.00	5.78	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
433	14.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
434	14.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
435	14.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
436	14.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
437	14.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR 1/da	BOD2 DECAT 1/da	BOD2 SETT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAT 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da				
473	13.600	7.63	4.64	0.12	0.28	0.00	0.00	0.00	0.00	0.00	4.86	5.51	5.51	0.05	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
474	13.500	7.63	4.64	0.12	0.28	0.00	0.00	0.00	0.00	0.00	4.86	5.55	5.55	0.05	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
475	13.400	7.63	4.64	0.12	0.28	0.00	0.00	0.00	0.00	0.00	4.86	5.58	5.58	0.05	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
476	13.300	7.63	4.64	0.12	0.28	0.00	0.00	0.00	0.00	0.00	4.86	5.61	5.61	0.04	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
477	13.200	7.63	4.64	0.12	0.28	0.00	0.00	0.00	0.00	0.00	4.86	5.64	5.64	0.04	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
478	13.100	7.63	4.64	0.12	0.28	0.00	0.00	0.00	0.00	0.00	4.86	5.67	5.67	0.04	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
479	13.000	7.63	4.64	0.12	0.28	0.00	0.00	0.00	0.00	0.00	4.86	5.70	5.70	0.04	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
480	12.900	7.63	4.64	0.12	0.28	0.00	0.00	0.00	0.00	0.00	4.86	5.72	5.72	0.04	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
481	12.800	7.63	4.64	0.12	0.28	0.00	0.00	0.00	0.00	0.00	4.86	5.73	5.73	0.03	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
AVG 20 DEG C RATE				3.91	0.08	0.03	0.00	0.00	0.00	0.00	0.00	2.70					0.03	0.03	0.00	0.00	0.00	0.00	0.00					0.00	0.00	0.00
* g/m ² /d			** mg/L/day																											

***** WATER QUALITY CONSTITUENT VALUES

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	
473	13.600	29.33	0.49	936.24	118.67	4.25	10.49	0.00	10.67	0.00	5.15	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.6	0.0	0.
474	13.500	29.33	0.49	936.24	118.67	3.59	11.02	0.00	11.37	0.00	5.98	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.3	0.0	0.
475	13.400	29.33	0.49	936.24	118.67	3.10	11.53	0.00	12.06	0.00	6.79	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.9	0.0	0.
476	13.300	29.33	0.49	936.24	118.67	2.74	12.03	0.00	12.73	0.00	7.59	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.6	0.0	0.
477	13.200	29.33	0.49	936.24	118.67	2.46	12.50	0.00	13.38	0.00	8.36	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.2	0.0	0.
478	13.100	29.33	0.49	936.24	118.67	2.24	12.97	0.00	14.02	0.00	9.11	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.9	0.0	0.
479	13.000	29.33	0.49	936.24	118.67	2.08	13.42	0.00	14.64	0.00	9.85	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.5	0.0	0.
480	12.900	29.33	0.49	936.24	118.67	1.95	13.85	0.00	15.26	0.00	10.57	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.2	0.0	0.
481	12.800	29.33	0.48	921.07	115.10	1.88	13.91	0.00	15.49	0.00	11.12	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.8	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
473	13.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
474	13.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
475	13.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	4.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
476	13.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
477	13.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
478	13.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
479	13.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	11.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
480	12.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	13.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
481	12.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

FINAL REPORT BAYOU LIBERTY
 REACH NO. 44 LIBERTY FROM DD20 TO BL03

WATER QUALITY/HYDRAULIC MODEL FOR:
 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
509	UPR RCH	0.01549	29.33	0.48	921.07	115.10	1.88	13.91	0.00	15.49	0.00	11.12	0.10	0.10	0.00	14.80	0.00	0.00
509	TRIB	0.00378	29.33	0.32	626.52	45.77	6.33	4.82	0.00	6.40	0.00	3.20	0.10	0.10	0.00	14.80	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
509	12.80	12.70	0.01928	80.9	0.00462	0.25	1.58	0.47	8.84	417.25	884.00	4.17	88.40	0.001	0.247	0.005
510	12.70	12.60	0.01928	80.9	0.00462	0.25	1.83	0.47	8.84	417.25	884.00	4.17	176.80	0.001	0.247	0.005
TOT AVG					0.0046	0.50		0.47	8.84	834.50	1768.00	4.17				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECA	BOD1 SETT	ABOD1 DECA	BOD1 HYDR	BOD2 DECA	BOD2 SETT	ABOD2 DECA	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECA	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECA	NCM DECA	NCM SETT	
509	12.700	7.63	1.84	0.12	0.13	0.00	0.00	0.00	0.00	0.00	4.50	5.30	5.30	0.03	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
510	12.600	7.63	1.84	0.10	0.13	0.00	0.00	0.00	0.00	0.00	4.50	5.31	5.31	0.02	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			1.55	0.08	0.05	0.00	0.00	0.00	0.00	0.00	2.50			0.03	0.05	0.00	0.00	0.00	0.00	0.00	0.00				0.00	0.00	0.00

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL		
509	12.700	29.33	0.45	875.47	104.37	1.94	12.77	0.00	14.35	0.00	10.65	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.8	0.0	0.
510	12.600	29.33	0.45	875.47	104.37	1.68	12.99	0.00	14.57	0.00	11.04	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.8	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
509	12.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
510	12.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20 DEG C RATE										0.000	0.000	0.000	0.000										0.000	0.000	0.000		

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

FINAL REPORT BAYOU LIBERTY WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 45 LIBERTY FROM BL03 TO HWY 190 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
511	UPR RCH	0.01928	29.33	0.45	875.47	104.37	1.68	12.99	0.00	14.57	0.00	11.04	0.10	0.10	0.00	14.80	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
511	12.60	12.50	0.01928	80.9	0.00462	0.25	2.08	0.47	8.84	417.25	884.00	4.17	265.20	0.002	0.247	0.005
512	12.50	12.40	0.01928	80.9	0.00462	0.25	2.33	0.47	8.84	417.25	884.00	4.17	353.60	0.002	0.247	0.005
513	12.40	12.30	0.01928	80.9	0.00462	0.25	2.58	0.47	8.84	417.25	884.00	4.17	442.00	0.003	0.247	0.005
514	12.30	12.20	0.01928	80.9	0.00462	0.25	2.83	0.47	8.84	417.25	884.00	4.17	530.40	0.004	0.255	0.005
515	12.20	12.10	0.01928	80.9	0.00462	0.25	3.08	0.47	8.84	417.25	884.00	4.17	618.80	0.004	0.274	0.005
516	12.10	12.00	0.01928	80.9	0.00462	0.25	3.34	0.47	8.84	417.25	884.00	4.17	707.20	0.005	0.297	0.006
517	12.00	11.90	0.01928	80.9	0.00462	0.25	3.59	0.47	8.84	417.25	884.00	4.17	795.60	0.005	0.322	0.006
518	11.90	11.80	0.01928	80.9	0.00462	0.25	3.84	0.47	8.84	417.25	884.00	4.17	884.00	0.006	0.348	0.007
519	11.80	11.70	0.01928	80.9	0.00462	0.25	4.09	0.47	8.84	417.25	884.00	4.17	972.40	0.007	0.376	0.007
520	11.70	11.60	0.01928	80.9	0.00462	0.25	4.34	0.47	8.84	417.25	884.00	4.17	1060.80	0.007	0.404	0.008
521	11.60	11.50	0.01928	80.9	0.00462	0.25	4.59	0.47	8.84	417.25	884.00	4.17	1149.20	0.008	0.433	0.008
522	11.50	11.40	0.01928	80.9	0.00462	0.25	4.84	0.47	8.84	417.25	884.00	4.17	1237.60	0.008	0.463	0.009
523	11.40	11.30	0.01928	80.9	0.00462	0.25	5.09	0.47	8.84	417.25	884.00	4.17	1326.00	0.009	0.492	0.009
524	11.30	11.20	0.01928	80.9	0.00462	0.25	5.34	0.47	8.84	417.25	884.00	4.17	1414.40	0.010	0.522	0.010
525	11.20	11.10	0.01928	80.9	0.00462	0.25	5.59	0.47	8.84	417.25	884.00	4.17	1502.80	0.010	0.553	0.010
526	11.10	11.00	0.01928	80.9	0.00462	0.25	5.84	0.47	8.84	417.25	884.00	4.17	1591.20	0.011	0.583	0.011
527	11.00	10.90	0.01928	80.9	0.00462	0.25	6.09	0.47	8.84	417.25	884.00	4.17	1679.60	0.011	0.614	0.011
528	10.90	10.80	0.01928	80.9	0.00462	0.25	6.34	0.47	8.84	417.25	884.00	4.17	1768.00	0.012	0.644	0.012
529	10.80	10.70	0.01928	80.9	0.00462	0.25	6.59	0.47	8.84	417.25	884.00	4.17	1856.40	0.013	0.675	0.013
530	10.70	10.60	0.01928	80.9	0.00462	0.25	6.84	0.47	8.84	417.25	884.00	4.17	1944.80	0.013	0.706	0.013
531	10.60	10.50	0.01928	80.9	0.00462	0.25	7.09	0.47	8.84	417.25	884.00	4.17	2033.20	0.014	0.737	0.014
532	10.50	10.40	0.01928	80.9	0.00462	0.25	7.34	0.47	8.84	417.25	884.00	4.17	2121.60	0.014	0.768	0.014
533	10.40	10.30	0.01928	80.9	0.00462	0.25	7.59	0.47	8.84	417.25	884.00	4.17	2210.00	0.015	0.799	0.015
534	10.30	10.20	0.01928	80.9	0.00462	0.25	7.84	0.47	8.84	417.25	884.00	4.17	2298.40	0.015	0.830	0.016
535	10.20	10.10	0.01928	80.9	0.00462	0.25	8.10	0.47	8.84	417.25	884.00	4.17	2386.80	0.016	0.862	0.016
TOT						6.26				10431.20	22100.00					
AVG					0.0046			0.47	8.84			4.17				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR 1/da	BOD2 DECAT 1/da	BOD2 SETT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAT 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da
511	12.500	7.63	1.84	0.11	0.13	0.00	0.00	0.00	0.00	0.00	3.06	3.88	3.88	0.03	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
512	12.400	7.63	1.84	0.12	0.13	0.00	0.00	0.00	0.00	0.00	3.06	3.89	3.89	0.03	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
513	12.300	7.62	1.84	0.12	0.13	0.00	0.00	0.00	0.00	0.00	3.06	3.90	3.90	0.04	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
514	12.200	7.62	1.85	0.12	0.13	0.00	0.00	0.00	0.00	0.00	3.07	3.91	3.91	0.04	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
515	12.100	7.62	1.86	0.12	0.13	0.00	0.00	0.00	0.00	0.00	3.07	3.91	3.91	0.04	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
516	12.000	7.62	1.87	0.12	0.13	0.00	0.00	0.00	0.00	0.00	3.07	3.92	3.92	0.04	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
517	11.900	7.62	1.89	0.12	0.13	0.00	0.00	0.00	0.00	0.00	3.07	3.93	3.93	0.04	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
518	11.800	7.62	1.91	0.12	0.13	0.00	0.00	0.00	0.00	0.00	3.07	3.93	3.93	0.04	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
519	11.700	7.62	1.93	0.12	0.13	0.00	0.00	0.00	0.00	0.00	3.07	3.94	3.94	0.04	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
520	11.600	7.62	1.95	0.12	0.13	0.00	0.00	0.00	0.00	0.00	3.07	3.95	3.95	0.04	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
521	11.500	7.62	1.97	0.12	0.13	0.00	0.00	0.00	0.00	0.00	3.08	3.95	3.95	0.04	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

532	10.400	29.50	0.48	915.47	118.06	2.78	14.14	0.00	15.72	0.00	5.42	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.8	0.0	0.0
533	10.300	29.50	0.49	939.05	126.12	2.85	13.93	0.00	15.51	0.00	5.21	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.8	0.0	0.0
534	10.200	29.51	0.51	975.10	138.46	2.93	13.58	0.00	15.16	0.00	4.99	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.8	0.0	0.0
535	10.100	29.52	0.54	1029.50	157.07	3.03	12.99	0.00	14.57	0.00	4.72	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.8	0.0	0.0

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
511	12.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
512	12.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
513	12.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
514	12.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
515	12.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
516	12.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
517	11.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
518	11.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
519	11.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
520	11.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
521	11.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
522	11.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
523	11.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
524	11.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
525	11.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
526	11.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
527	10.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
528	10.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
529	10.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
530	10.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
531	10.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
532	10.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
533	10.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
534	10.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
535	10.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT BAYOU LIBERTY WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 47 LIBERTY FROM HWY 190 TO BL04 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
559	UPR RCH	0.01928	29.52	0.54	1029.50	157.07	3.03	12.99	0.00	14.57	0.00	4.72	0.10	0.10	0.00	14.80	0.00	0.00
559	TRIB	0.00094	29.52	0.35	683.37	46.38	5.77	10.06	0.00	11.64	0.00	9.99	0.10	0.10	0.00	14.80	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
559	10.10	10.00	0.02021	80.4	0.00078	1.49	9.59	1.40	18.60	2604.00	1860.00	26.04	2572.80	0.003	0.368	0.003

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

TOT 1.49 2604.00 1860.00
 AVG 0.0008 1.40 18.60 26.04

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT DECAT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR DECAT 1/da	BOD2 DECAT 1/da	BOD2 SETT DECAT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT DECAT 1/da	NH3-N DECAT 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO **	PERIP **	COLI PROD 1/da	NCM DECAT 1/da	NCM SETT 1/da		
559	10.000	7.60	0.60	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.73	1.51	1.51	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.50	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.40				0.03	0.04	0.00	0.00	0.00	0.00	0.00				0.00	0.00	0.00	

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	
559	10.000	29.52	0.57	1074.56	172.49	3.09	12.48	0.00	18.57	0.00	4.54	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	57.1	0.0	0.0
0.00																									

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT P/R 1/da	PHYT RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²													
559	10.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	57.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0													
20 DEG C RATE																								0.000	0.000	0.000	0.000											0.000	0.000	0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT BAYOU LIBERTY WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 48 LIBERTY FROM BL04 TO DD18 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
560	UPR RCH	0.02021	29.52	0.57	1074.56	172.49	3.09	12.48	0.00	18.57	0.00	4.54	0.10	0.10	0.00	57.10	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
560	10.00	9.90	0.02021	80.4	0.00078	1.49	11.08	1.40	18.60	2604.00	1860.00	26.04	2758.80	0.003	0.394	0.003
561	9.90	9.80	0.02021	80.4	0.00078	1.49	12.57	1.40	18.60	2604.00	1860.00	26.04	2944.80	0.003	0.420	0.003
562	9.80	9.70	0.02021	80.4	0.00078	1.49	14.06	1.40	18.60	2604.00	1860.00	26.04	3130.80	0.003	0.447	0.003
563	9.70	9.60	0.02021	80.4	0.00078	1.49	15.55	1.40	18.60	2604.00	1860.00	26.04	3316.80	0.004	0.473	0.004
564	9.60	9.50	0.02021	80.4	0.00078	1.49	17.04	1.40	18.60	2604.00	1860.00	26.04	3502.80	0.004	0.499	0.004
565	9.50	9.40	0.02021	80.4	0.00078	1.49	18.53	1.40	18.60	2604.00	1860.00	26.04	3688.80	0.004	0.526	0.004

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

566	9.40	9.30	0.02021	80.4	0.00078	1.49	20.02	1.40	18.60	2604.00	1860.00	26.04	3874.80	0.004	0.552	0.004
567	9.30	9.20	0.02021	80.4	0.00078	1.49	21.52	1.40	18.60	2604.00	1860.00	26.04	4060.80	0.004	0.578	0.004
568	9.20	9.10	0.02021	80.4	0.00078	1.49	23.01	1.40	18.60	2604.00	1860.00	26.04	4246.80	0.005	0.605	0.005
569	9.10	9.00	0.02021	80.4	0.00078	1.49	24.50	1.40	18.60	2604.00	1860.00	26.04	4432.80	0.005	0.631	0.005
570	9.00	8.90	0.02021	80.4	0.00078	1.49	25.99	1.40	18.60	2604.00	1860.00	26.04	4618.80	0.005	0.658	0.005
571	8.90	8.80	0.02021	80.4	0.00078	1.49	27.48	1.40	18.60	2604.00	1860.00	26.04	4804.80	0.005	0.684	0.005
572	8.80	8.70	0.02021	80.4	0.00078	1.49	28.97	1.40	18.60	2604.00	1860.00	26.04	4990.80	0.005	0.711	0.005
573	8.70	8.60	0.02021	80.4	0.00078	1.49	30.46	1.40	18.60	2604.00	1860.00	26.04	5176.80	0.006	0.737	0.006
574	8.60	8.50	0.02021	80.4	0.00078	1.49	31.95	1.40	18.60	2604.00	1860.00	26.04	5362.80	0.006	0.763	0.006
575	8.50	8.40	0.02021	80.4	0.00078	1.49	33.44	1.40	18.60	2604.00	1860.00	26.04	5548.80	0.006	0.790	0.006
TOT						23.86				41664.00	29760.00					
AVG				0.0008				1.40	18.60			26.04				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECA 1/da	BOD1 SETT 1/da	ABOD1 DECA 1/da	BOD1 HYDR 1/da	BOD2 DECA 1/da	BOD2 SETT 1/da	ABOD2 DECA 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECA 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECA 1/da	NCM DECA 1/da	NCM SETT 1/da		
560	9.900	7.60	0.60	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.60	1.35	1.35	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
561	9.800	7.60	0.60	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.60	1.33	1.33	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
562	9.700	7.59	0.60	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.60	1.31	1.31	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
563	9.600	7.59	0.60	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.60	1.29	1.29	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
564	9.500	7.59	0.60	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.60	1.27	1.27	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
565	9.400	7.59	0.60	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.60	1.26	1.26	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
566	9.300	7.59	0.60	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.60	1.25	1.25	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
567	9.200	7.59	0.60	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.60	1.24	1.24	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
568	9.100	7.58	0.60	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.60	1.23	1.23	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
569	9.000	7.58	0.60	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.60	1.22	1.22	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
570	8.900	7.58	0.60	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.60	1.22	1.22	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
571	8.800	7.58	0.60	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.60	1.21	1.21	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
572	8.700	7.57	0.60	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.60	1.21	1.21	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
573	8.600	7.57	0.60	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.60	1.20	1.20	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
574	8.500	7.57	0.60	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.60	1.20	1.20	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
575	8.400	7.56	0.60	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.60	1.20	1.20	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
AVG	20 DEG C	RATE	0.50	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.33			0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00	
*	g/m ² /d		**		mg/L/day																							

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	
560	9.900	29.52	0.59	1116.93	186.91	3.16	11.99	0.00	17.73	0.00	4.23	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	53.7	0.0	0.
561	9.800	29.52	0.62	1164.65	203.16	3.24	11.59	0.00	16.97	0.00	3.94	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50.4	0.0	0.
562	9.700	29.52	0.65	1218.03	221.33	3.33	11.25	0.00	16.26	0.00	3.69	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	47.0	0.0	0.
563	9.600	29.52	0.68	1277.38	241.54	3.41	10.96	0.00	15.62	0.00	3.47	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	43.6	0.0	0.
564	9.500	29.52	0.72	1342.99	263.87	3.48	10.71	0.00	15.01	0.00	3.27	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	40.3	0.0	0.
565	9.400	29.52	0.76	1415.17	288.45	3.55	10.50	0.00	14.44	0.00	3.09	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	36.9	0.0	0.
566	9.300	29.52	0.80	1494.21	315.36	3.62	10.32	0.00	13.90	0.00	2.93	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.5	0.0	0.
567	9.200	29.52	0.85	1580.42	344.71	3.67	10.17	0.00	13.39	0.00	2.78	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	30.1	0.0	0.
568	9.100	29.52	0.90	1674.10	376.60	3.72	10.04	0.00	12.90	0.00	2.65	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	26.8	0.0	0.

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

569	9.000	29.52	0.96	1775.54	411.13	3.77	9.92	0.00	12.42	0.00	2.53	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	23.4	0.0	0.
570	8.900	29.52	1.02	1885.03	448.41	3.81	9.83	0.00	11.97	0.00	2.42	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.0	0.0	0.
571	8.800	29.52	1.09	2002.88	488.53	3.85	9.74	0.00	11.52	0.00	2.33	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.7	0.0	0.
572	8.700	29.52	1.16	2129.38	531.59	3.88	9.67	0.00	11.09	0.00	2.24	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.3	0.0	0.
573	8.600	29.52	1.23	2264.81	577.70	3.91	9.61	0.00	10.67	0.00	2.16	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.9	0.0	0.
574	8.500	29.52	1.32	2409.48	626.95	3.94	9.55	0.00	10.25	0.00	2.09	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.6	0.0	0.
575	8.400	29.52	1.40	2563.68	679.45	3.97	9.50	0.00	9.85	0.00	2.02	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
560	9.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	53.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
561	9.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	50.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
562	9.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	47.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
563	9.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	43.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
564	9.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	40.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
565	9.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	36.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
566	9.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	33.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
567	9.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	30.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
568	9.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	26.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
569	9.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	23.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
570	8.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	20.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
571	8.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	16.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
572	8.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	13.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
573	8.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
574	8.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
575	8.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT BAYOU LIBERTY WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 50 LIBERTY FROM DD18 TO DD19 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
579	UPR RCH	0.02021	29.52	1.40	2563.68	679.45	3.97	9.50	0.00	9.85	0.00	2.02	0.10	0.10	0.00	3.20	0.00	0.00
579	TRIB	0.00035	29.52	0.29	567.10	18.36	5.81	8.99	0.00	9.33	0.00	8.20	0.10	0.10	0.00	3.20	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
579	8.40	8.30	0.02057	79.3	0.00079	1.47	34.91	1.40	18.60	2604.00	1860.00	26.04	5734.80	0.006	1.225	0.006
580	8.30	8.20	0.02057	79.3	0.00079	1.47	36.37	1.40	18.60	2604.00	1860.00	26.04	5920.80	0.006	1.264	0.006
581	8.20	8.10	0.02057	79.3	0.00079	1.47	37.84	1.40	18.60	2604.00	1860.00	26.04	6106.80	0.007	1.304	0.007
582	8.10	8.00	0.02057	79.3	0.00079	1.47	39.31	1.40	18.60	2604.00	1860.00	26.04	6292.80	0.007	1.344	0.007

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

583	8.00	7.90	0.02057	79.3	0.00079	1.47	40.77	1.40	18.60	2604.00	1860.00	26.04	6478.80	0.007	1.384	0.007
584	7.90	7.80	0.02057	79.3	0.00079	1.47	42.24	1.40	18.60	2604.00	1860.00	26.04	6664.80	0.007	1.424	0.007
TOT						8.79				15624.00	11160.00					
AVG					0.0008			1.40	18.60					26.04		

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECAT	BOD1 SETT	ABOD1 DECAT	BOD1 HYDR	BOD2 DECAT	BOD2 SETT	ABOD2 DECAT	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECAT	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECAT	NCM DECAT	NCM SETT	
		mg/L	1/da	1/da	1/da	1/da	1/da	1/da	1/da	1/da	*	*	*	1/da	1/da	1/da	*	1/da	1/da	1/da	*	**	**	1/da	1/da	1/da	
579	8.300	7.52	0.60	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.19	0.78	0.78	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
580	8.200	7.48	0.60	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.19	0.79	0.79	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
581	8.100	7.44	0.61	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.19	0.80	0.80	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
582	8.000	7.40	0.61	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.20	0.80	0.80	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
583	7.900	7.36	0.61	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.20	0.81	0.81	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
584	7.800	7.32	0.61	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.20	0.82	0.82	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.50	0.08	0.01	0.00	0.00	0.00	0.00	0.00	0.10			0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00				0.00	0.00	0.00

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	
579	8.300	29.82	1.48	2694.45	723.97	3.99	9.47	0.00	9.81	0.00	1.97	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.
580	8.200	30.12	1.54	2810.77	763.55	3.98	9.45	0.00	9.79	0.00	1.92	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.
581	8.100	30.42	1.61	2930.65	804.34	3.95	9.42	0.00	9.76	0.00	1.87	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.
582	8.000	30.71	1.68	3054.08	846.34	3.90	9.40	0.00	9.74	0.00	1.82	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.
583	7.900	31.01	1.75	3181.05	889.54	3.83	9.39	0.00	9.73	0.00	1.76	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.
584	7.800	31.31	1.82	3311.57	933.95	3.74	9.38	0.00	9.72	0.00	1.71	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
579	8.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
580	8.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
581	8.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
582	8.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
583	7.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
584	7.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20 DEG C RATE										0.000	0.000	0.000	0.000										0.000	0.000	0.000		

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT BAYOU LIBERTY
REACH NO. 52 LIBERTY FROM DD19 TO DD04

WATER QUALITY/HYDRAULIC MODEL FOR:
BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

***** REACH INPUTS

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
599	UPR RCH	0.02057	31.31	1.82	3311.57	933.95	3.74	9.38	0.00	9.72	0.00	1.71	0.10	0.10	0.00	3.20	0.00	0.00
599	TRIB	0.00066	31.31	0.33	654.44	39.41	5.91	4.61	0.00	4.95	0.00	4.26	0.10	0.10	0.00	3.20	0.00	0.00

***** HYDRAULIC PARAMETER VALUES

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
599	7.80	7.70	0.02123	78.7	0.00022	5.30	47.54	2.28	42.67	9728.76	4267.00	97.29	7091.50	0.002	0.811	0.002
600	7.70	7.60	0.02123	78.7	0.00022	5.30	52.84	2.28	42.67	9728.76	4267.00	97.29	7518.20	0.002	0.860	0.002
TOT AVG					0.0002	10.61		2.28	42.67	19457.52	8534.00	97.29				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR 1/da	BOD2 DECAT 1/da	BOD2 SETT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAT 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da	
599	7.700	7.32	0.38	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.61	0.61	0.05	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
600	7.600	7.31	0.38	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.61	0.61	0.05	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20	DEG C RATE	0.31	0.08	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
*	g/m²/d		**	mg/L/day																							

***** WATER QUALITY CONSTITUENT VALUES

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL		
599	7.700	31.31	1.87	3398.44	963.51	3.67	9.38	0.00	9.72	0.00	1.67	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.
600	7.600	31.31	1.91	3464.84	986.10	3.64	9.32	0.00	9.66	0.00	1.63	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
599	7.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
600	7.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
20	DEG C RATE									0.000	0.000	0.000	0.000										0.000	0.000	0.000		

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT BAYOU LIBERTY
REACH NO. 54 LIBERTY FROM DD04 TO BL05

WATER QUALITY/HYDRAULIC MODEL FOR:
BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
643	UPR RCH	0.02123	31.31	1.91	3464.84	986.10	3.64	9.32	0.00	9.66	0.00	1.63	0.10	0.10	0.00	3.20	0.00	0.00
643	TRIB	0.01352	31.31	0.31	594.43	52.40	6.23	3.85	0.00	4.19	0.00	2.71	0.10	0.10	0.00	3.20	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
643	7.60	7.50	0.03475	86.2	0.00036	3.24	56.08	2.28	42.67	9728.76	4267.00	97.29	7944.90	0.002	1.136	0.002
644	7.50	7.40	0.03475	86.2	0.00036	3.24	59.32	2.28	42.67	9728.76	4267.00	97.29	8371.60	0.002	1.197	0.002
645	7.40	7.30	0.03475	86.2	0.00036	3.24	62.56	2.28	42.67	9728.76	4267.00	97.29	8798.30	0.003	1.258	0.003
646	7.30	7.20	0.03475	86.2	0.00036	3.24	65.81	2.28	42.67	9728.76	4267.00	97.29	9225.00	0.003	1.319	0.003
647	7.20	7.10	0.03475	86.2	0.00036	3.24	69.05	2.28	42.67	9728.76	4267.00	97.29	9651.70	0.003	1.380	0.003
648	7.10	7.00	0.03475	86.2	0.00036	3.24	72.29	2.28	42.67	9728.76	4267.00	97.29	10078.40	0.003	1.441	0.003
649	7.00	6.90	0.03475	86.2	0.00036	3.24	75.53	2.28	42.67	9728.76	4267.00	97.29	10505.10	0.003	1.502	0.003
TOT AVG					0.0004	22.68		2.28	42.67	68101.31	29869.00	97.29				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR 1/da	BOD2 DECAT 1/da	BOD2 SETT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD 1/da	ORG-N HYDR	ORG-N SETT 1/da	NH3-N DECAT 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da	
643	7.500	7.31	0.38	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.08	0.32	0.32	0.05	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
644	7.400	7.31	0.38	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.08	0.32	0.32	0.05	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
645	7.300	7.31	0.38	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.08	0.32	0.32	0.05	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
646	7.200	7.31	0.38	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.08	0.32	0.32	0.05	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
647	7.100	7.31	0.38	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.08	0.32	0.32	0.05	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
648	7.000	7.30	0.38	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.08	0.32	0.32	0.05	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
649	6.900	7.30	0.38	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.08	0.32	0.32	0.05	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
AVG 20 DEG C RATE			0.31	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.04			0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	
* g/m²/d			**	mg/L/day																							

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL
643	7.500	31.31	1.94	3521.89	1005.50	3.65	9.22	0.00	9.57	0.00	1.60	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.
644	7.400	31.31	1.99	3606.64	1033.82	3.63	9.21	0.00	9.55	0.00	1.57	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.
645	7.300	31.31	2.03	3689.65	1061.56	3.62	9.20	0.00	9.54	0.00	1.55	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.
646	7.200	31.31	2.08	3771.03	1088.75	3.62	9.20	0.00	9.54	0.00	1.53	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.
647	7.100	31.31	2.12	3850.89	1115.44	3.63	9.20	0.00	9.54	0.00	1.52	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.
648	7.000	31.31	2.17	3929.31	1141.64	3.64	9.21	0.00	9.55	0.00	1.52	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

649 6.900 31.31 2.21 4006.37 1167.39 3.65 9.22 0.00 9.56 0.00 1.53 0.10 0.10 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 3.2 0.0 0.0

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
643	7.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
644	7.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
645	7.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
646	7.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
647	7.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
648	7.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
649	6.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20 DEG C RATE										0.000	0.000	0.000	0.000								0.000	0.000	0.000				

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT BAYOU LIBERTY WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 55 LIBERTY FROM BL05 TO RKM 6.3 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
650	UPR RCH	0.03475	31.31	2.21	4006.37	1167.39	3.65	9.22	0.00	9.56	0.00	1.53	0.10	0.10	0.00	3.20	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
650	6.90	6.80	0.03475	86.2	0.00036	3.24	78.77	2.28	42.67	9728.76	4267.00	97.29	10931.80	0.003	1.876	0.003
651	6.80	6.70	0.03475	86.2	0.00036	3.24	82.01	2.28	42.67	9728.76	4267.00	97.29	11358.50	0.003	1.950	0.003
652	6.70	6.60	0.03475	86.2	0.00036	3.24	85.25	2.28	42.67	9728.76	4267.00	97.29	11785.20	0.003	2.023	0.003
653	6.60	6.50	0.03475	86.2	0.00036	3.24	88.49	2.28	42.67	9728.76	4267.00	97.29	12211.90	0.004	2.096	0.004
654	6.50	6.40	0.03475	86.2	0.00036	3.24	91.73	2.28	42.67	9728.76	4267.00	97.29	12638.60	0.004	2.170	0.004
655	6.40	6.30	0.03475	86.2	0.00036	3.24	94.97	2.28	42.67	9728.76	4267.00	97.29	13065.30	0.004	2.243	0.004
TOT AVG					0.0004	19.44		2.28	42.67	58372.55	25602.00	97.29				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECAT	BOD1 SETT 1/da	ABOD1 DECAT	BOD1 HYDR 1/da	BOD2 DECAT	BOD2 SETT 1/da	ABOD2 DECAT	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR	ORG-N SETT 1/da	NH3-N DECAT	NH3-N SRCE *	DENIT RATE	ORG-P HYDR	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI 1/da	NCM DECAT	NCM SETT 1/da	
650	6.800	7.30	0.44	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.20	0.45	0.45	0.05	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
651	6.700	7.30	0.44	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.20	0.45	0.45	0.05	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
652	6.600	7.30	0.44	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.20	0.45	0.45	0.05	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
653	6.500	7.30	0.44	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.20	0.45	0.45	0.05	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
654	6.400	7.30	0.44	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.20	0.45	0.45	0.05	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
655	6.300	7.29	0.44	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.20	0.45	0.45	0.05	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.35	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.10			0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT DECAT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR DECAT 1/da	BOD2 DECAT 1/da	BOD2 SETT DECAT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT DECAT 1/da	NH3-N SRCE *	NH3-N RATE 1/da	DENIT HYDR 1/da	ORG-P SETT 1/da	ORG-P SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da		
656	6.200	7.29	0.58	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.08	0.71	0.71	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
657	6.100	7.29	0.58	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.08	0.72	0.72	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
658	6.000	7.29	0.58	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.08	0.72	0.72	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
AVG 20 DEG C RATE			0.47	0.08	0.01	0.00	0.00	0.00	0.00	0.00	0.04				0.03	0.01	0.00	0.00	0.00	0.00				0.00	0.00	0.00	
* g/m ² /d			** mg/L/day																								

***** WATER QUALITY CONSTITUENT VALUES

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	
656	6.200	31.31	2.45	4437.93	1311.60	3.72	9.60	0.00	9.94	0.00	1.69	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.
657	6.100	31.31	2.49	4509.58	1335.54	3.72	9.70	0.00	10.04	0.00	1.74	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.
658	6.000	31.31	2.53	4580.56	1359.26	3.71	9.78	0.00	10.12	0.00	1.78	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
656	6.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
657	6.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
658	6.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20 DEG C RATE										0.000	0.000	0.000	0.000														

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT BAYOU LIBERTY WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 57 LIBERTY FROM RKM 6.0 TO TRIB 9 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
659	UPR RCH	0.03475	31.31	2.53	4580.56	1359.26	3.71	9.78	0.00	10.12	0.00	1.78	0.10	0.10	0.00	3.20	0.00	0.00

***** HYDRAULIC PARAMETER VALUES

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
659	6.00	5.90	0.03475	86.2	0.00035	3.29	105.00	2.08	47.55	9890.40	4755.00	98.90	14731.50	0.004	2.305	0.004

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

660	5.90	5.80	0.03475	86.2	0.00035	3.29	108.30	2.08	47.55	9890.40	4755.00	98.90	15207.00	0.004	2.380	0.004
661	5.80	5.70	0.03475	86.2	0.00035	3.29	111.59	2.08	47.55	9890.40	4755.00	98.90	15682.50	0.004	2.454	0.004
662	5.70	5.60	0.03475	86.2	0.00035	3.29	114.88	2.08	47.55	9890.40	4755.00	98.90	16158.00	0.005	2.529	0.005
663	5.60	5.50	0.03475	86.2	0.00035	3.29	118.18	2.08	47.55	9890.40	4755.00	98.90	16633.50	0.005	2.604	0.005
664	5.50	5.40	0.03475	86.2	0.00035	3.29	121.47	2.08	47.55	9890.40	4755.00	98.90	17109.00	0.005	2.678	0.005
665	5.40	5.30	0.03475	86.2	0.00035	3.29	124.77	2.08	47.55	9890.40	4755.00	98.90	17584.50	0.005	2.753	0.005
666	5.30	5.20	0.03475	86.2	0.00035	3.29	128.06	2.08	47.55	9890.40	4755.00	98.90	18060.00	0.005	2.827	0.005

TOT						26.35				79123.20	38040.00					
AVG					0.0004			2.08	47.55			98.90				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR 1/da	BOD2 DECAT 1/da	BOD2 SETT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAT 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO **	PERIP **	COLI 1/da	NCM DECAT 1/da	NCM SETT 1/da		
659	5.900	7.28	0.48	0.14	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.65	0.65	0.05	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
660	5.800	7.27	0.48	0.14	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.65	0.65	0.05	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
661	5.700	7.25	0.48	0.14	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.66	0.66	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
662	5.600	7.24	0.48	0.14	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.66	0.66	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
663	5.500	7.23	0.48	0.14	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.67	0.67	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
664	5.400	7.22	0.48	0.14	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.68	0.68	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
665	5.300	7.21	0.48	0.14	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.69	0.69	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
666	5.200	7.20	0.48	0.14	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.69	0.69	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20	DEG C	RATE	0.39	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00	0.00
*	g/m ² /d		**		mg/L/day																							

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL		
659	5.900	31.40	2.57	4644.73	1380.70	3.69	9.85	0.00	10.19	0.00	1.83	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.
660	5.800	31.48	2.60	4703.09	1400.20	3.67	9.91	0.00	10.26	0.00	1.88	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.
661	5.700	31.56	2.63	4760.51	1419.39	3.65	9.99	0.00	10.33	0.00	1.93	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.
662	5.600	31.65	2.66	4817.01	1438.27	3.64	10.06	0.00	10.41	0.00	1.99	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.
663	5.500	31.74	2.70	4872.65	1456.86	3.63	10.15	0.00	10.49	0.00	2.06	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.
664	5.400	31.82	2.73	4927.45	1475.17	3.62	10.24	0.00	10.58	0.00	2.13	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.
665	5.300	31.90	2.76	4981.46	1493.22	3.62	10.34	0.00	10.68	0.00	2.21	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.
666	5.200	31.99	2.79	5034.71	1511.01	3.63	10.45	0.00	10.79	0.00	2.29	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
659	5.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
660	5.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
661	5.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
662	5.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
663	5.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

672	5.100	31.99	2.82	5086.54	1528.33	3.64	10.57	0.00	10.91	0.00	2.38	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.
0.00																									
673	5.000	31.99	2.84	5137.49	1545.35	3.65	10.66	0.00	11.01	0.00	2.46	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.
0.00																									
674	4.900	31.99	2.87	5187.79	1562.16	3.67	10.72	0.00	11.07	0.00	2.53	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.
0.00																									
675	4.800	31.99	2.90	5237.47	1578.76	3.68	10.75	0.00	11.09	0.00	2.59	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.
0.00																									
676	4.700	31.99	2.93	5286.55	1595.16	3.70	10.74	0.00	11.08	0.00	2.64	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.
0.00																									
677	4.600	31.99	2.95	5335.05	1611.37	3.71	10.70	0.00	11.04	0.00	2.69	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.
0.00																									
678	4.500	31.99	2.98	5382.99	1627.39	3.74	10.62	0.00	10.97	0.00	2.73	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.
0.00																									
679	4.400	31.99	3.01	5430.39	1643.23	3.76	10.52	0.00	10.86	0.00	2.76	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.
0.00																									

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
672	5.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
673	5.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
674	4.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
675	4.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
676	4.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
677	4.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
678	4.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
679	4.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE

0.000 0.000 0.000 0.000

0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT BAYOU LIBERTY
 REACH NO. 63 LIBERTY FROM TRIB 6 TO TRIB 10

WATER QUALITY/HYDRAULIC MODEL FOR:
 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
696	UPR RCH	0.03504	31.99	3.01	5430.39	1643.23	3.76	10.52	0.00	10.86	0.00	2.76	0.10	0.10	0.00	3.20	0.00	0.00
696	TRIB	0.00032	31.99	3.03	5472.14	1657.18	3.82	10.22	0.00	10.56	0.00	2.75	0.10	0.10	0.00	3.20	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
696	4.40	4.30	0.03536	84.8	0.00032	3.61	157.80	2.09	52.73	11020.57	5273.00	110.21	23591.30	0.006	3.330	0.006
697	4.30	4.20	0.03536	84.8	0.00032	3.61	161.41	2.09	52.73	11020.57	5273.00	110.21	24118.61	0.006	3.404	0.006
TOT						7.21				22041.14	10546.00					
AVG					0.0003			2.09	52.73			110.21				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECATY	BOD1 SETT	ABOD1 DECATY	BOD1 HYDR	BOD2 DECATY	BOD2 SETT	ABOD2 DECATY	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECATY	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECATY	NCM DECATY	NCM SETT		
		mg/L	1/da	1/da	1/da	1/da	1/da	1/da	1/da	1/da	*	*	*	1/da	1/da	1/da	*	1/da	1/da	1/da	*	**	**	1/da	1/da	1/da		
696	4.300	7.19	0.53	0.14	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.69	0.69	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
697	4.200	7.19	0.53	0.14	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.68	0.68	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
AVG 20 DEG C RATE			0.43	0.08	0.01	0.00	0.00	0.00	0.00	0.00	0.00				0.03	0.01	0.00	0.00	0.00	0.00	0.00				0.00	0.00	0.00	
* g/m ² /d			** mg/L/day																									

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	
696	4.300	31.99	3.03	5476.37	1658.59	3.79	10.38	0.00	10.72	0.00	2.78	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.
697	4.200	31.99	3.06	5521.42	1673.64	3.81	10.27	0.00	10.61	0.00	2.80	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
696	4.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
697	4.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20 DEG C RATE										0.000	0.000	0.000	0.000														

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT BAYOU LIBERTY WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 66 LIBERTY FROM TRIB 10 TO BL07 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
705	UPR RCH	0.03536	31.99	3.06	5521.42	1673.64	3.81	10.27	0.00	10.61	0.00	2.80	0.10	0.10	0.00	3.20	0.00	0.00
705	TRIB	0.00031	31.99	3.08	5552.90	1684.17	3.89	9.88	0.00	10.23	0.00	2.76	0.10	0.10	0.00	3.20	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
705	4.20	4.10	0.03567	84.1	0.00032	3.62	165.03	2.14	52.12	11153.68	5212.00	111.54	24899.80	0.006	3.542	0.006
706	4.10	4.00	0.03567	84.1	0.00032	3.62	168.65	2.14	52.12	11153.68	5212.00	111.54	25421.00	0.006	3.616	0.006
707	4.00	3.90	0.03567	84.1	0.00032	3.62	172.27	2.14	52.12	11153.68	5212.00	111.54	25942.20	0.007	3.690	0.007
708	3.90	3.80	0.03567	84.1	0.00032	3.62	175.89	2.14	52.12	11153.68	5212.00	111.54	26463.40	0.007	3.765	0.007
709	3.80	3.70	0.03567	84.1	0.00032	3.62	179.51	2.14	52.12	11153.68	5212.00	111.54	26984.60	0.007	3.839	0.007
710	3.70	3.60	0.03567	84.1	0.00032	3.62	183.12	2.14	52.12	11153.68	5212.00	111.54	27505.80	0.007	3.913	0.007
711	3.60	3.50	0.03567	84.1	0.00032	3.62	186.74	2.14	52.12	11153.68	5212.00	111.54	28027.00	0.007	3.987	0.007
712	3.50	3.40	0.03567	84.1	0.00032	3.62	190.36	2.14	52.12	11153.68	5212.00	111.54	28548.20	0.007	4.062	0.007

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

713	3.40	3.30	0.03567	84.1	0.00032	3.62	193.98	2.14	52.12	11153.68	5212.00	111.54	29069.40	0.007	4.136	0.007
TOT										100383.12	46908.00					
AVG					0.0003				2.14	52.12		111.54				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAEER RATE 1/da	BOD1 DECAy 1/da	BOD1 SETT 1/da	ABOD1 DECAy 1/da	BOD1 HYDR 1/da	BOD2 DECAy 1/da	BOD2 SETT 1/da	ABOD2 DECAy 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAy 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAy 1/da	NCM DECAy 1/da	NCM SETT 1/da	
705	4.100	7.18	0.53	0.14	0.03	0.00	0.00	0.00	0.00	0.00	0.45	0.72	0.72	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
706	4.000	7.18	0.53	0.14	0.03	0.00	0.00	0.00	0.00	0.00	0.45	0.71	0.71	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
707	3.900	7.18	0.53	0.14	0.03	0.00	0.00	0.00	0.00	0.00	0.45	0.71	0.71	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
708	3.800	7.18	0.53	0.14	0.03	0.00	0.00	0.00	0.00	0.00	0.45	0.71	0.71	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
709	3.700	7.18	0.53	0.14	0.03	0.00	0.00	0.00	0.00	0.00	0.45	0.70	0.70	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
710	3.600	7.18	0.53	0.14	0.03	0.00	0.00	0.00	0.00	0.00	0.45	0.70	0.70	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
711	3.500	7.18	0.53	0.14	0.03	0.00	0.00	0.00	0.00	0.00	0.45	0.69	0.69	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
712	3.400	7.18	0.53	0.14	0.03	0.00	0.00	0.00	0.00	0.00	0.45	0.69	0.69	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
713	3.300	7.18	0.53	0.14	0.03	0.00	0.00	0.00	0.00	0.00	0.45	0.68	0.68	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
AVG 20 DEG C RATE			0.43	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.21			0.03	0.00	0.00	0.00	0.00	0.00	0.00				0.00	0.00	0.00	

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	
705	4.100	31.99	3.08	5565.23	1688.28	3.84	10.15	0.00	11.23	0.00	2.80	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.1	0.0	0.
706	4.000	31.99	3.11	5608.28	1702.67	3.87	10.03	0.00	11.85	0.00	2.80	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17.0	0.0	0.
707	3.900	31.99	3.13	5650.83	1716.88	3.91	9.90	0.00	12.45	0.00	2.80	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	23.9	0.0	0.
708	3.800	31.99	3.15	5692.89	1730.94	3.95	9.75	0.00	13.04	0.00	2.80	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	30.8	0.0	0.
709	3.700	31.99	3.18	5734.48	1744.84	3.99	9.59	0.00	13.61	0.00	2.79	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	37.6	0.0	0.
710	3.600	31.99	3.20	5775.62	1758.58	4.04	9.42	0.00	14.17	0.00	2.78	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	44.5	0.0	0.
711	3.500	31.99	3.22	5816.33	1772.18	4.09	9.22	0.00	14.72	0.00	2.76	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	51.4	0.0	0.
712	3.400	31.99	3.25	5856.60	1785.64	4.14	9.01	0.00	15.24	0.00	2.75	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	58.3	0.0	0.
713	3.300	31.99	3.27	5896.45	1798.96	4.19	8.79	0.00	15.75	0.00	2.73	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	65.2	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P N&P LIM	PERI SPC TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²	
705	4.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.1	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
706	4.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	17.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
707	3.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	23.9	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
708	3.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	30.8	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
709	3.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	37.6	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
710	3.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	44.5	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
711	3.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	51.4	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
712	3.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	58.3	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

FINAL REPORT BAYOU LIBERTY
 REACH NO. 70 LIBERTY FROM TRIB 8 TO M1

WATER QUALITY/HYDRAULIC MODEL FOR:
 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
721	UPR RCH	0.03567	31.99	3.29	5935.91	1812.14	4.25	8.55	0.00	15.51	0.00	2.70	0.10	0.10	0.00	65.20	0.00	0.00
721	TRIB	0.00029	31.99	3.30	5949.94	1816.85	4.37	8.17	0.00	15.13	0.00	2.61	0.10	0.10	0.00	65.20	0.00	0.00
723	WSTLD	0.00013	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
721	3.20	3.10	0.03596	83.5	0.00032	3.59	201.19	2.14	52.12	11153.68	5212.00	111.54	30211.80	0.008	4.299	0.008
722	3.10	3.00	0.03596	83.5	0.00032	3.59	204.78	2.14	52.12	11153.68	5212.00	111.54	30733.00	0.008	4.373	0.008
723	3.00	2.90	0.03609	83.5	0.00032	3.58	208.36	2.14	52.12	11153.68	5212.00	111.54	31254.20	0.008	4.447	0.008
724	2.90	2.80	0.03609	83.5	0.00032	3.58	211.94	2.14	52.12	11153.68	5212.00	111.54	31775.39	0.008	4.522	0.008
725	2.80	2.70	0.03609	83.5	0.00032	3.58	215.51	2.14	52.12	11153.68	5212.00	111.54	32296.59	0.008	4.596	0.008
726	2.70	2.60	0.03609	83.5	0.00032	3.58	219.09	2.14	52.12	11153.68	5212.00	111.54	32817.79	0.008	4.670	0.008
TOT AVG					0.0003	21.49		2.14	52.12	66922.09	31272.00	111.54				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECAT	BOD1 DECAT	ABOD1 DECAT	BOD1 HYDR DECAT	BOD2 HYDR DECAT	ABOD2 DECAT	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT DECAT	NH3-N DECAT	NH3-N SRCR	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCR	PHYTO PROD	PERIP PROD	COLI DECAT	NCM DECAT	NCM SETT	
721	3.100	7.18	0.53	0.14	0.03	0.00	0.00	0.00	0.00	0.43	0.43	0.43	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
722	3.000	7.17	0.53	0.14	0.03	0.00	0.00	0.00	0.00	0.43	0.43	0.43	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
723	2.900	7.17	0.53	0.14	0.03	0.00	0.00	0.00	0.00	0.43	0.43	0.43	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
724	2.800	7.17	0.53	0.14	0.03	0.00	0.00	0.00	0.00	0.43	0.43	0.43	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
725	2.700	7.17	0.53	0.14	0.03	0.00	0.00	0.00	0.00	0.43	0.43	0.43	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
726	2.600	7.17	0.53	0.14	0.03	0.00	0.00	0.00	0.00	0.43	0.43	0.43	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20	DEG C	RATE	0.43	0.08	0.00	0.00	0.00	0.00	0.00	0.20			0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	
*	g/m²/d		**	mg/L/day																						

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL	
721	3.100	31.99	3.31	5974.90	1825.17	4.31	8.35	0.00	14.27	0.00	2.65	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	55.5	0.0	0.
722	3.000	31.99	3.33	6013.78	1838.16	4.37	8.18	0.00	13.07	0.00	2.59	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	45.7	0.0	0.
723	2.900	31.99	3.36	6052.29	1851.03	4.43	8.04	0.00	11.89	0.00	2.54	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	36.0	0.0	0.
724	2.800	31.99	3.38	6090.58	1863.82	4.48	7.93	0.00	10.74	0.00	2.48	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	26.3	0.0	0.

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

725	2.700	31.99	3.40	6128.51	1876.49	4.54	7.84	0.00	9.61	0.00	2.43	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.5	0.0	0.0
726	2.600	31.99	3.42	6166.10	1889.05	4.60	7.78	0.00	8.51	0.00	2.38	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.8	0.0	0.0

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
721	3.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	55.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
722	3.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	45.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
723	2.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	36.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
724	2.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	26.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
725	2.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	16.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
726	2.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT BAYOU LIBERTY WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 72 LIBERTY FROM M1 TO M2 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
729	UPR RCH	0.03609	31.99	3.42	6166.10	1889.05	4.60	7.78	0.00	8.51	0.00	2.38	0.10	0.10	0.00	6.80	0.00	0.00
729	TRIB	0.00028	31.99	3.43	6191.63	1897.59	4.49	7.21	0.00	7.93	0.00	2.25	0.10	0.10	0.00	6.80	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
729	2.60	2.50	0.03638	82.9	0.00030	3.85	222.94	2.14	56.54	12099.56	5654.00	121.00	34023.19	0.008	4.464	0.008
TOT AVG					0.0003	3.85		2.14	56.54	12099.56	5654.00	121.00				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR 1/da	BOD2 DECAT 1/da	BOD2 SETT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAT 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da	
729	2.500	7.17	0.53	0.14	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.43	0.08	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL	
729	2.500	31.99	3.44	6202.97	1901.37	4.65	7.74	0.00	8.47	0.00	2.33	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.8	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
729	2.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT BAYOU LIBERTY WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 74 LIBERTY FROM M2 TO B PAQUET BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
748	UPR RCH	0.03638	31.99	3.44	6202.97	1901.37	4.65	7.74	0.00	8.47	0.00	2.33	0.10	0.10	0.00	6.80	0.00	0.00
748	TRIB	0.00032	31.99	3.46	6235.22	1912.15	4.66	7.43	0.00	8.15	0.00	2.23	0.10	0.10	0.00	6.80	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
748	2.50	2.40	0.03670	82.3	0.00028	4.10	227.03	2.13	60.96	12984.48	6096.00	129.84	40392.79	0.009	4.920	0.009
749	2.40	2.30	0.03670	82.3	0.00028	4.10	231.13	2.13	60.96	12984.48	6096.00	129.84	41002.39	0.009	4.994	0.009
750	2.30	2.20	0.03670	82.3	0.00028	4.10	235.22	2.13	60.96	12984.48	6096.00	129.84	41612.00	0.009	5.069	0.009
751	2.20	2.10	0.03670	82.3	0.00028	4.10	239.32	2.13	60.96	12984.48	6096.00	129.84	42221.60	0.009	5.143	0.009
752	2.10	2.00	0.03670	82.3	0.00028	4.10	243.42	2.13	60.96	12984.48	6096.00	129.84	42831.20	0.009	5.218	0.009
753	2.00	1.90	0.03670	82.3	0.00028	4.10	247.51	2.13	60.96	12984.48	6096.00	129.84	43440.80	0.009	5.292	0.009
754	1.90	1.80	0.03670	82.3	0.00028	4.10	251.61	2.13	60.96	12984.48	6096.00	129.84	44050.40	0.010	5.366	0.010
755	1.80	1.70	0.03670	82.3	0.00028	4.10	255.70	2.13	60.96	12984.48	6096.00	129.84	44660.00	0.010	5.441	0.010
756	1.70	1.60	0.03670	82.3	0.00028	4.10	259.80	2.13	60.96	12984.48	6096.00	129.84	45269.61	0.010	5.515	0.010
757	1.60	1.50	0.03670	82.3	0.00028	4.10	263.89	2.13	60.96	12984.48	6096.00	129.84	45879.21	0.010	5.589	0.010
758	1.50	1.40	0.03670	82.3	0.00028	4.10	267.99	2.13	60.96	12984.48	6096.00	129.84	46488.81	0.010	5.664	0.010
759	1.40	1.30	0.03670	82.3	0.00028	4.10	272.08	2.13	60.96	12984.48	6096.00	129.84	47098.41	0.010	5.738	0.010
760	1.30	1.20	0.03670	82.3	0.00028	4.10	276.18	2.13	60.96	12984.48	6096.00	129.84	47708.01	0.010	5.813	0.010
761	1.20	1.10	0.03670	82.3	0.00028	4.10	280.27	2.13	60.96	12984.48	6096.00	129.84	48317.61	0.010	5.887	0.010
TOT AVG						57.34				181782.75	85344.00					
				0.0003				2.13	60.96				129.84			

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE mg/L	BOD1 DECA 1/da	BOD1 SETT 1/da	ABOD1 DECA 1/da	BOD1 HYDR 1/da	BOD2 DECA 1/da	BOD2 SETT 1/da	ABOD2 DECA 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECA 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECA 1/da	NCM DECA 1/da	NCM SETT 1/da	
748	2.400	7.18	0.53	0.14	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

755	1.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
756	1.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
757	1.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
758	1.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
759	1.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
760	1.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
761	1.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT BAYOU LIBERTY WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 90 LIBERTY FROM PAQUET TO BONFOUCA BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
888	UPR RCH	0.03670	30.44	3.68	6623.17	2041.78	5.29	8.06	0.00	8.78	0.00	2.03	0.10	0.10	0.00	6.80	0.00	0.00
888	TRIB	0.00633	30.44	3.68	6633.12	2045.05	5.24	9.04	0.00	9.77	0.00	2.26	0.10	0.10	0.00	6.80	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
888	1.10	1.00	0.04302	81.6	0.00033	3.49	283.77	2.13	60.96	12984.48	6096.00	129.84	59525.01	0.013	7.253	0.013
889	1.00	0.90	0.04302	81.6	0.00033	3.49	287.26	2.13	60.96	12984.48	6096.00	129.84	60134.61	0.013	7.327	0.013
890	0.90	0.80	0.04302	81.6	0.00033	3.49	290.75	2.13	60.96	12984.48	6096.00	129.84	60744.21	0.013	7.402	0.013
891	0.80	0.70	0.04302	81.6	0.00033	3.49	294.25	2.13	60.96	12984.48	6096.00	129.84	61353.82	0.013	7.476	0.013
892	0.70	0.60	0.04302	81.6	0.00033	3.49	297.74	2.13	60.96	12984.48	6096.00	129.84	61963.42	0.013	7.550	0.013
893	0.60	0.50	0.04302	81.6	0.00033	3.49	301.23	2.13	60.96	12984.48	6096.00	129.84	62573.02	0.014	7.625	0.014
894	0.50	0.40	0.04302	81.6	0.00033	3.49	304.73	2.13	60.96	12984.48	6096.00	129.84	63182.62	0.014	7.699	0.014
895	0.40	0.30	0.04302	81.6	0.00033	3.49	308.22	2.13	60.96	12984.48	6096.00	129.84	63792.22	0.014	7.774	0.014
896	0.30	0.20	0.04302	81.6	0.00033	3.49	311.71	2.13	60.96	12984.48	6096.00	129.84	64401.82	0.014	7.848	0.014
897	0.20	0.10	0.04302	81.6	0.00033	3.49	315.21	2.13	60.96	12984.48	6096.00	129.84	65011.43	0.014	7.922	0.014
898	0.10	0.00	0.04302	81.6	0.00033	3.49	318.70	2.13	60.96	12984.48	6096.00	129.84	65621.02	0.014	7.997	0.014
TOT						38.43				142829.30	67056.00					
AVG				0.0003				2.13	60.96			129.84				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECAY	BOD1 SETT	ABOD1 DECAY	BOD1 HYDR	BOD2 DECAY	BOD2 SETT	ABOD2 DECAY	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECAY	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECAY	NCM DECAY	NCM SETT	
888	1.000	7.35	0.52	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
889	0.900	7.36	0.52	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
890	0.800	7.36	0.52	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
891	0.700	7.36	0.51	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
892	0.600	7.36	0.51	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
893	0.500	7.36	0.51	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
894	0.400	7.37	0.51	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
895	0.300	7.37	0.51	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
896	0.200	7.37	0.51	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
897	0.100	7.37	0.51	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
898	0.000	7.37	0.51	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG			0.43	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL
888	1.000	30.42	3.69	6648.46	2050.23	5.33	8.14	0.00	8.87	0.00	2.04	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.9	0.0	0.
889	0.900	30.40	3.70	6675.37	2059.23	5.40	7.98	0.00	8.72	0.00	1.99	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.9	0.0	0.
890	0.800	30.38	3.72	6702.14	2068.19	5.46	7.83	0.00	8.57	0.00	1.94	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.0	0.0	0.
891	0.700	30.36	3.73	6728.75	2077.09	5.53	7.68	0.00	8.43	0.00	1.90	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.0	0.0	0.
892	0.600	30.34	3.75	6755.21	2085.95	5.60	7.53	0.00	8.29	0.00	1.86	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.1	0.0	0.
893	0.500	30.32	3.76	6781.54	2094.76	5.67	7.39	0.00	8.15	0.00	1.82	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.1	0.0	0.
894	0.400	30.30	3.78	6807.72	2103.52	5.74	7.25	0.00	8.02	0.00	1.78	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.2	0.0	0.
895	0.300	30.28	3.79	6833.75	2112.23	5.82	7.11	0.00	7.88	0.00	1.75	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.2	0.0	0.
896	0.200	30.26	3.81	6859.66	2120.90	5.90	6.97	0.00	7.75	0.00	1.72	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.3	0.0	0.
897	0.100	30.24	3.82	6885.42	2129.53	5.98	6.84	0.00	7.62	0.00	1.69	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.3	0.0	0.
898	0.000	30.22	3.84	6911.05	2138.10	6.07	6.71	0.00	7.50	0.00	1.67	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.4	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
888	1.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
889	0.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
890	0.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
891	0.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
892	0.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
893	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
894	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
895	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
896	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
897	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
898	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE

0.000 0.000 0.000 0.000

0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT TRIBUTARY 1
 REACH NO. 39 TRIBUTARY 1

WATER QUALITY/HYDRAULIC MODEL FOR:
 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
439	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	2.20	0.00	2.20	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

439	WSTLD	0.00000	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00
442	WSTLD	0.00000	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
439	2.40	2.30	0.00028	0.4	0.00567	0.20	0.20	0.05	1.00	5.01	100.10	0.05	0.00	0.000	0.000	0.006
440	2.30	2.20	0.00028	0.4	0.00567	0.20	0.41	0.05	1.00	5.01	100.10	0.05	0.00	0.000	0.000	0.006
441	2.20	2.10	0.00028	0.4	0.00567	0.20	0.61	0.05	1.00	5.01	100.10	0.05	0.00	0.000	0.000	0.006
442	2.10	2.00	0.00029	1.0	0.00568	0.20	0.82	0.05	1.00	5.03	100.27	0.05	0.00	0.000	0.000	0.006
443	2.00	1.90	0.00029	1.0	0.00568	0.20	1.02	0.05	1.00	5.03	100.27	0.05	0.00	0.000	0.000	0.006
444	1.90	1.80	0.00029	1.0	0.00568	0.20	1.22	0.05	1.00	5.03	100.27	0.05	0.00	0.000	0.000	0.006
445	1.80	1.70	0.00029	1.0	0.00568	0.20	1.43	0.05	1.00	5.03	100.27	0.05	0.00	0.000	0.000	0.006
446	1.70	1.60	0.00029	1.0	0.00568	0.20	1.63	0.05	1.00	5.03	100.27	0.05	0.00	0.000	0.000	0.006
447	1.60	1.50	0.00029	1.0	0.00568	0.20	1.83	0.05	1.00	5.03	100.27	0.05	0.00	0.000	0.000	0.006
448	1.50	1.40	0.00029	1.0	0.00568	0.20	2.04	0.05	1.00	5.03	100.27	0.05	0.00	0.000	0.000	0.006
449	1.40	1.30	0.00029	1.0	0.00568	0.20	2.24	0.05	1.00	5.03	100.27	0.05	0.00	0.000	0.000	0.006
450	1.30	1.20	0.00029	1.0	0.00568	0.20	2.45	0.05	1.00	5.03	100.27	0.05	0.00	0.000	0.000	0.006
451	1.20	1.10	0.00029	1.0	0.00568	0.20	2.65	0.05	1.00	5.03	100.27	0.05	0.00	0.000	0.000	0.006
452	1.10	1.00	0.00029	1.0	0.00568	0.20	2.85	0.05	1.00	5.03	100.27	0.05	0.00	0.000	0.000	0.006
453	1.00	0.90	0.00029	1.0	0.00568	0.20	3.06	0.05	1.00	5.03	100.27	0.05	0.00	0.000	0.000	0.006
454	0.90	0.80	0.00029	1.0	0.00568	0.20	3.26	0.05	1.00	5.03	100.27	0.05	0.00	0.000	0.000	0.006
455	0.80	0.70	0.00029	1.0	0.00568	0.20	3.46	0.05	1.00	5.03	100.27	0.05	0.00	0.000	0.000	0.006
456	0.70	0.60	0.00029	1.0	0.00568	0.20	3.67	0.05	1.00	5.03	100.27	0.05	0.00	0.000	0.000	0.006
457	0.60	0.50	0.00029	1.0	0.00568	0.20	3.87	0.05	1.00	5.03	100.27	0.05	0.00	0.000	0.000	0.006
458	0.50	0.40	0.00029	1.0	0.00568	0.20	4.08	0.05	1.00	5.03	100.27	0.05	0.00	0.000	0.000	0.006
459	0.40	0.30	0.00029	1.0	0.00568	0.20	4.28	0.05	1.00	5.03	100.27	0.05	0.00	0.000	0.000	0.006
460	0.30	0.20	0.00029	1.0	0.00568	0.20	4.48	0.05	1.00	5.03	100.27	0.05	0.00	0.000	0.000	0.006
461	0.20	0.10	0.00029	1.0	0.00568	0.20	4.69	0.05	1.00	5.03	100.27	0.05	0.00	0.000	0.000	0.006
462	0.10	0.00	0.00029	1.0	0.00568	0.20	4.89	0.05	1.00	5.03	100.27	0.05	0.00	0.000	0.000	0.006
TOT						4.89				120.68	2406.05					
AVG					0.0057			0.05	1.00			0.05				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR 1/da	BOD2 DECAT 1/da	BOD2 SETT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N SRCE 1/da	NH3-N RATE 1/da	DENIT HYDR 1/da	ORG-P SETT 1/da	ORG-P SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da	
439	2.300	7.55	17.89	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.94	1.09	1.09	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
440	2.200	7.55	17.88	0.13	1.26	0.00	0.00	0.00	0.00	0.00	0.94	1.08	1.08	0.06	1.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
441	2.100	7.56	17.87	0.13	1.26	0.00	0.00	0.00	0.00	0.00	0.93	1.08	1.08	0.06	1.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
442	2.000	7.56	17.83	0.13	1.26	0.00	0.00	0.00	0.00	0.00	0.93	1.09	1.09	0.06	1.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
443	1.900	7.57	17.82	0.13	1.26	0.00	0.00	0.00	0.00	0.00	0.93	1.08	1.08	0.06	1.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
444	1.800	7.57	17.81	0.13	1.26	0.00	0.00	0.00	0.00	0.00	0.93	1.08	1.08	0.06	1.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
445	1.700	7.57	17.80	0.13	1.26	0.00	0.00	0.00	0.00	0.00	0.93	1.07	1.07	0.06	1.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
446	1.600	7.58	17.80	0.13	1.26	0.00	0.00	0.00	0.00	0.00	0.93	1.07	1.07	0.06	1.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
447	1.500	7.58	17.79	0.13	1.26	0.00	0.00	0.00	0.00	0.00	0.92	1.06	1.06	0.06	1.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
448	1.400	7.58	17.78	0.13	1.26	0.00	0.00	0.00	0.00	0.00	0.92	1.06	1.06	0.06	1.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
449	1.300	7.59	17.77	0.12	1.25	0.00	0.00	0.00	0.00	0.00	0.92	1.06	1.06	0.06	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
450	1.200	7.59	17.76	0.12	1.25	0.00	0.00	0.00	0.00	0.00	0.92	1.06	1.06	0.06	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
451	1.100	7.60	17.75	0.12	1.25	0.00	0.00	0.00	0.00	0.00	0.92	1.05	1.05	0.06	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
452	1.000	7.60	17.74	0.12	1.25	0.00	0.00	0.00	0.00	0.00	0.92	1.05	1.05	0.06	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
453	0.900	7.60	17.74	0.12	1.25	0.00	0.00	0.00	0.00	0.00	0.91	1.05	1.05	0.06	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
454	0.800	7.61	17.73	0.12	1.25	0.00	0.00	0.00	0.00	0.00	0.91	1.05	1.05	0.06	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
455	0.700	7.61	17.72	0.12	1.25	0.00	0.00	0.00	0.00	0.00	0.91	1.04	1.04	0.06	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
456	0.600	7.61	17.71	0.12	1.25	0.00	0.00	0.00	0.00	0.00	0.91	1.04	1.04	0.06	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
457	0.500	7.62	17.70	0.12	1.25	0.00	0.00	0.00	0.00	0.00	0.91	1.04	1.04	0.05	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
458	0.400	7.62	17.69	0.12	1.25	0.00	0.00	0.00	0.00	0.00	0.91	1.04	1.04	0.05	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
459	0.300	7.62	17.68	0.12	1.25	0.00	0.00	0.00	0.00	0.00	0.90	1.04	1.04	0.05	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
460	0.200	7.63	17.68	0.12	1.25	0.00	0.00	0.00	0.00	0.00	0.90	1.04	1.04	0.05	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
461	0.100	7.63	17.67	0.12	1.24	0.00	0.00	0.00	0.00	0.00	0.90	1.03	1.03	0.05	1.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

462 0.000 7.64 17.66 0.12 1.24 0.00 0.00 0.00 0.00 0.00 0.90 1.03 1.03 0.05 1.24 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
 AVG 20 DEG C RATE 14.86 0.08 0.04 0.00 0.00 0.00 0.00 0.00 0.50 0.03 0.04 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	
439	2.300	29.97	0.26	521.80	7.45	6.25	2.38	0.00	2.38	0.00	1.20	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
440	2.200	29.94	0.26	521.80	7.45	6.31	2.32	0.00	2.32	0.00	1.15	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
441	2.100	29.92	0.26	521.80	7.45	6.33	2.27	0.00	2.27	0.00	1.11	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
442	2.000	29.89	0.26	523.18	7.78	6.31	2.54	0.00	2.54	0.00	1.40	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
443	1.900	29.86	0.26	523.18	7.78	6.33	2.45	0.00	2.45	0.00	1.31	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
444	1.800	29.83	0.26	523.18	7.78	6.34	2.37	0.00	2.37	0.00	1.24	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
445	1.700	29.80	0.26	523.18	7.78	6.35	2.31	0.00	2.31	0.00	1.18	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
446	1.600	29.78	0.26	523.18	7.78	6.36	2.27	0.00	2.27	0.00	1.14	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
447	1.500	29.75	0.26	523.18	7.78	6.37	2.23	0.00	2.23	0.00	1.10	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
448	1.400	29.72	0.26	523.18	7.78	6.37	2.21	0.00	2.21	0.00	1.08	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
449	1.300	29.69	0.26	523.18	7.78	6.38	2.19	0.00	2.19	0.00	1.05	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
450	1.200	29.67	0.26	523.18	7.78	6.39	2.17	0.00	2.17	0.00	1.04	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
451	1.100	29.64	0.26	523.18	7.78	6.39	2.16	0.00	2.16	0.00	1.02	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
452	1.000	29.61	0.26	523.18	7.78	6.40	2.15	0.00	2.15	0.00	1.01	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
453	0.900	29.58	0.26	523.18	7.78	6.40	2.14	0.00	2.14	0.00	1.01	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
454	0.800	29.55	0.26	523.18	7.78	6.41	2.14	0.00	2.14	0.00	1.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
455	0.700	29.53	0.26	523.18	7.78	6.41	2.14	0.00	2.14	0.00	1.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
456	0.600	29.50	0.26	523.18	7.78	6.42	2.13	0.00	2.13	0.00	0.99	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
457	0.500	29.47	0.26	523.18	7.78	6.43	2.13	0.00	2.13	0.00	0.99	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
458	0.400	29.44	0.26	523.18	7.78	6.43	2.13	0.00	2.13	0.00	0.99	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
459	0.300	29.41	0.26	523.18	7.78	6.44	2.13	0.00	2.13	0.00	0.99	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
460	0.200	29.39	0.26	523.18	7.78	6.44	2.13	0.00	2.13	0.00	0.98	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
461	0.100	29.36	0.26	523.18	7.78	6.45	2.13	0.00	2.13	0.00	0.98	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
462	0.000	29.33	0.26	523.18	7.78	6.45	2.13	0.00	2.13	0.00	0.98	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
----------	-------------	-----------------	----------------	-------------	--------------	------------	------------	--------------	--------------	----------------	----------------	-----------------	----------------	----------------	------------	-------------	--------------	------------	------------	--------------	--------------	--------------	----------------	----------------	-----------------	----------------	------------------------

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

AVG 20 DEG C RATE 4.91 0.08 0.09 0.00 0.00 0.00 0.00 0.00 0.00 0.50 0.03 0.09 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	
470	0.200	29.78	0.54	1040.83	146.74	5.24	9.75	0.00	9.75	0.00	2.91	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
471	0.100	29.55	0.54	1040.83	146.74	5.44	9.53	0.00	9.53	0.00	2.85	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
472	0.000	29.33	0.54	1040.83	146.74	5.60	9.31	0.00	9.31	0.00	2.80	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
470	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
471	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
472	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT DRAINAGE DITCH 20
 REACH NO. 43 DD20

WATER QUALITY/HYDRAULIC MODEL FOR:
 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
482	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	2.20	0.00	2.20	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
482	WSTLD	0.00019	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00	0.00
494	WSTLD	0.00018	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00	0.00
495	WSTLD	0.00004	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00	0.00
498	WSTLD	0.00309	30.00	0.32	619.50	47.00	7.40	6.20	0.00	6.20	0.00	2.80	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
482	2.70	2.60	0.00047	40.2	0.00674	0.17	0.17	0.06	1.17	7.02	116.64	0.07	0.00	0.000	0.000	0.007
483	2.60	2.50	0.00047	40.2	0.00674	0.17	0.34	0.06	1.17	7.02	116.64	0.07	0.00	0.000	0.000	0.007
484	2.50	2.40	0.00047	40.2	0.00674	0.17	0.51	0.06	1.17	7.02	116.64	0.07	0.00	0.000	0.000	0.007
485	2.40	2.30	0.00047	40.2	0.00674	0.17	0.69	0.06	1.17	7.02	116.64	0.07	0.00	0.000	0.000	0.007
486	2.30	2.20	0.00047	40.2	0.00674	0.17	0.86	0.06	1.17	7.02	116.64	0.07	0.00	0.000	0.000	0.007
487	2.20	2.10	0.00047	40.2	0.00674	0.17	1.03	0.06	1.17	7.02	116.64	0.07	0.00	0.000	0.000	0.007
488	2.10	2.00	0.00047	40.2	0.00674	0.17	1.20	0.06	1.17	7.02	116.64	0.07	0.00	0.000	0.000	0.007
489	2.00	1.90	0.00047	40.2	0.00674	0.17	1.37	0.06	1.17	7.02	116.64	0.07	0.00	0.000	0.000	0.007
490	1.90	1.80	0.00047	40.2	0.00674	0.17	1.54	0.06	1.17	7.02	116.64	0.07	0.00	0.000	0.000	0.007

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

491	1.80	1.70	0.00047	40.2	0.00674	0.17	1.72	0.06	1.17	7.02	116.64	0.07	0.00	0.000	0.000	0.007
492	1.70	1.60	0.00047	40.2	0.00674	0.17	1.89	0.06	1.17	7.02	116.64	0.07	0.00	0.000	0.000	0.007
493	1.60	1.50	0.00047	40.2	0.00674	0.17	2.06	0.06	1.17	7.02	116.64	0.07	0.00	0.000	0.000	0.007
494	1.50	1.40	0.00065	56.3	0.00751	0.15	2.21	0.07	1.28	8.64	128.20	0.09	0.00	0.000	0.000	0.008
495	1.40	1.30	0.00069	58.9	0.00766	0.15	2.37	0.07	1.31	8.99	130.57	0.09	0.00	0.000	0.000	0.008
496	1.30	1.20	0.00069	58.9	0.00766	0.15	2.52	0.07	1.31	8.99	130.57	0.09	0.00	0.000	0.000	0.008
497	1.20	1.10	0.00069	58.9	0.00766	0.15	2.67	0.07	1.31	8.99	130.57	0.09	0.00	0.000	0.000	0.008
498	1.10	1.00	0.00378	92.5	0.01367	0.08	2.75	0.13	2.18	27.67	217.62	0.28	0.00	0.000	0.000	0.014
499	1.00	0.90	0.00378	92.5	0.01367	0.08	2.84	0.13	2.18	27.67	217.62	0.28	0.00	0.000	0.000	0.014
500	0.90	0.80	0.00378	92.5	0.01367	0.08	2.92	0.13	2.18	27.67	217.62	0.28	0.00	0.000	0.000	0.014
501	0.80	0.70	0.00378	92.5	0.01367	0.08	3.01	0.13	2.18	27.67	217.62	0.28	0.00	0.000	0.000	0.014
502	0.70	0.60	0.00378	92.5	0.01367	0.08	3.09	0.13	2.18	27.67	217.62	0.28	0.00	0.000	0.000	0.014
503	0.60	0.50	0.00378	92.5	0.01367	0.08	3.18	0.13	2.18	27.67	217.62	0.28	0.00	0.000	0.000	0.014
504	0.50	0.40	0.00378	92.5	0.01367	0.08	3.26	0.13	2.18	27.67	217.62	0.28	0.00	0.000	0.000	0.014
505	0.40	0.30	0.00378	92.5	0.01367	0.08	3.34	0.13	2.18	27.67	217.62	0.28	0.00	0.000	0.000	0.014
506	0.30	0.20	0.00378	92.5	0.01367	0.08	3.43	0.13	2.18	27.67	217.62	0.28	0.00	0.000	0.000	0.014
507	0.20	0.10	0.00378	92.5	0.01367	0.08	3.51	0.13	2.18	27.67	217.62	0.28	0.00	0.000	0.000	0.014
508	0.10	0.00	0.00378	92.5	0.01367	0.08	3.60	0.13	2.18	27.67	217.62	0.28	0.00	0.000	0.000	0.014
TOT							3.60			424.12	4313.40					
AVG					0.0087			0.09	1.60				0.16			

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECA	BOD1 SETT	ABOD1 DECA	BOD1 HYDR	BOD2 DECA	BOD2 SETT	ABOD2 DECA	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECA	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECA	NCM DECA	NCM SETT								
482	2.600	7.55	15.20	0.13	1.05	0.00	0.00	0.00	0.00	0.00	0.94	2.49	2.49	0.05	1.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
483	2.500	7.55	15.19	0.13	1.05	0.00	0.00	0.00	0.00	0.00	0.94	2.24	2.24	0.05	1.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
484	2.400	7.56	15.18	0.13	1.05	0.00	0.00	0.00	0.00	0.00	0.93	2.04	2.04	0.05	1.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
485	2.300	7.56	15.18	0.13	1.05	0.00	0.00	0.00	0.00	0.00	0.93	1.87	1.87	0.05	1.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
486	2.200	7.56	15.17	0.13	1.05	0.00	0.00	0.00	0.00	0.00	0.93	1.73	1.73	0.05	1.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
487	2.100	7.56	15.16	0.13	1.05	0.00	0.00	0.00	0.00	0.00	0.93	1.61	1.61	0.05	1.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
488	2.000	7.57	15.16	0.13	1.05	0.00	0.00	0.00	0.00	0.00	0.93	1.52	1.52	0.06	1.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
489	1.900	7.57	15.15	0.13	1.05	0.00	0.00	0.00	0.00	0.00	0.93	1.43	1.43	0.06	1.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
490	1.800	7.57	15.15	0.13	1.05	0.00	0.00	0.00	0.00	0.00	0.93	1.37	1.37	0.06	1.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
491	1.700	7.58	15.14	0.13	1.05	0.00	0.00	0.00	0.00	0.00	0.92	1.31	1.31	0.06	1.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
492	1.600	7.58	15.13	0.13	1.05	0.00	0.00	0.00	0.00	0.00	0.92	1.26	1.26	0.06	1.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
493	1.500	7.59	15.12	0.12	1.05	0.00	0.00	0.00	0.00	0.00	0.92	1.22	1.22	0.06	1.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
494	1.400	7.59	13.69	0.12	0.93	0.00	0.00	0.00	0.00	0.00	0.92	2.13	2.13	0.05	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
495	1.300	7.59	13.43	0.12	0.91	0.00	0.00	0.00	0.00	0.00	0.92	2.14	2.14	0.05	0.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
496	1.200	7.59	13.42	0.12	0.91	0.00	0.00	0.00	0.00	0.00	0.92	1.98	1.98	0.05	0.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
497	1.100	7.60	13.42	0.12	0.91	0.00	0.00	0.00	0.00	0.00	0.92	1.85	1.85	0.05	0.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
498	1.000	7.60	8.07	0.12	0.49	0.00	0.00	0.00	0.00	0.00	0.91	1.38	1.38	0.06	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
499	0.900	7.60	8.07	0.12	0.49	0.00	0.00	0.00	0.00	0.00	0.91	1.36	1.36	0.06	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
500	0.800	7.61	8.06	0.12	0.49	0.00	0.00	0.00	0.00	0.00	0.91	1.34	1.34	0.06	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
501	0.700	7.61	8.06	0.12	0.49	0.00	0.00	0.00	0.00	0.00	0.91	1.32	1.32	0.05	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
502	0.600	7.61	8.06	0.12	0.49	0.00	0.00	0.00	0.00	0.00	0.91	1.30	1.30	0.05	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
503	0.500	7.62	8.05	0.12	0.49	0.00	0.00	0.00	0.00	0.00	0.91	1.28	1.28	0.05	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
504	0.400	7.62	8.05	0.12	0.49	0.00	0.00	0.00	0.00	0.00	0.91	1.26	1.26	0.05	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
505	0.300	7.62	8.05	0.12	0.49	0.00	0.00	0.00	0.00	0.00	0.90	1.25	1.25	0.05	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
506	0.200	7.63	8.04	0.12	0.49	0.00	0.00	0.00	0.00	0.00	0.90	1.23	1.23	0.05	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
507	0.100	7.63	8.04	0.12	0.49	0.00	0.00	0.00	0.00	0.00	0.90	1.22	1.22	0.05	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
508	0.000	7.63	8.04	0.12	0.49	0.00	0.00	0.00	0.00	0.00	0.90	1.20	1.20	0.05	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
AVG 20	DEG C	RATE	10.04	0.08	0.02	0.00	0.00	0.00	0.00	0.00	0.50			0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00								
*	g/m ² /d		**		mg/L/day																													

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL
--------------	-------------	------------	----------	------	----	---------	-----------	-----------	------------	------------	------------	------------	------------	------------	-------------	-------------	------------	------------	------------	-------------	-------------	------------	------------------------	--------------

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

489	1.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	4.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
490	1.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	4.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
491	1.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	5.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
492	1.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
493	1.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
494	1.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
495	1.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
496	1.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
497	1.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
498	1.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
499	0.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
500	0.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
501	0.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	11.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
502	0.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	11.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
503	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	12.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
504	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	12.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
505	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	13.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
506	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	13.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
507	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
508	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT HIGHWAY 190 WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 46 HWY 190 (DRAINAGE DITCH 14) BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
536	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	2.20	0.00	2.20	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
536	WSTLD	0.00013	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00
544	WSTLD	0.00035	30.00	0.39	753.60	63.30	2.00	39.10	0.00	39.10	0.00	39.10	0.00	0.00	0.00	0.00	0.00	0.00
546	WSTLD	0.00000	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00	0.00
548	WSTLD	0.00006	30.00	0.39	753.60	63.30	2.00	56.93	0.00	56.93	0.00	56.93	0.00	0.00	0.00	0.00	0.00	0.00
550	WSTLD	0.00001	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00	0.00
551	WSTLD	0.00001	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00	0.00
552	WSTLD	0.00000	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00	0.00
553	WSTLD	0.00001	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00	0.00
555	WSTLD	0.00002	30.00	0.39	753.60	63.30	2.00	57.39	0.00	57.39	0.00	57.39	0.00	0.00	0.00	0.00	0.00	0.00
556	WSTLD	0.00000	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00	0.00
557	WSTLD	0.00006	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRS N m²/s	MEAN VELO m/s
536	2.30	2.20	0.00041	31.0	0.00642	0.18	0.18	0.06	1.12	6.38	111.74	0.06	0.00	0.000	0.000	0.006
537	2.20	2.10	0.00041	31.0	0.00642	0.18	0.36	0.06	1.12	6.38	111.74	0.06	0.00	0.000	0.000	0.006
538	2.10	2.00	0.00041	31.0	0.00642	0.18	0.54	0.06	1.12	6.38	111.74	0.06	0.00	0.000	0.000	0.006
539	2.00	1.90	0.00041	31.0	0.00642	0.18	0.72	0.06	1.12	6.38	111.74	0.06	0.00	0.000	0.000	0.006
540	1.90	1.80	0.00041	31.0	0.00642	0.18	0.90	0.06	1.12	6.38	111.74	0.06	0.00	0.000	0.000	0.006
541	1.80	1.70	0.00041	31.0	0.00642	0.18	1.08	0.06	1.12	6.38	111.74	0.06	0.00	0.000	0.000	0.006
542	1.70	1.60	0.00041	31.0	0.00642	0.18	1.26	0.06	1.12	6.38	111.74	0.06	0.00	0.000	0.000	0.006
543	1.60	1.50	0.00041	31.0	0.00642	0.18	1.44	0.06	1.12	6.38	111.74	0.06	0.00	0.000	0.000	0.006
544	1.50	1.40	0.00076	62.5	0.00790	0.15	1.59	0.07	1.34	9.55	134.20	0.10	0.00	0.000	0.000	0.008
545	1.40	1.30	0.00076	62.5	0.00790	0.15	1.73	0.07	1.34	9.55	134.20	0.10	0.00	0.000	0.000	0.008
546	1.30	1.20	0.00076	62.6	0.00791	0.15	1.88	0.07	1.34	9.57	134.29	0.10	0.00	0.000	0.000	0.008
547	1.20	1.10	0.00076	62.6	0.00791	0.15	2.03	0.07	1.34	9.57	134.29	0.10	0.00	0.000	0.000	0.008
548	1.10	1.00	0.00082	65.3	0.00812	0.14	2.17	0.07	1.37	10.06	137.40	0.10	0.00	0.000	0.000	0.008

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

549	1.00	0.90	0.00082	65.3	0.00812	0.14	2.31	0.07	1.37	10.06	137.40	0.10	0.00	0.000	0.000	0.008
550	0.90	0.80	0.00083	65.9	0.00816	0.14	2.45	0.07	1.38	10.17	138.06	0.10	0.00	0.000	0.000	0.008
551	0.80	0.70	0.00084	66.1	0.00818	0.14	2.60	0.07	1.38	10.22	138.36	0.10	0.00	0.000	0.000	0.008
552	0.70	0.60	0.00084	66.2	0.00819	0.14	2.74	0.07	1.38	10.23	138.45	0.10	0.00	0.000	0.000	0.008
553	0.60	0.50	0.00085	66.6	0.00822	0.14	2.88	0.07	1.39	10.31	138.92	0.10	0.00	0.000	0.000	0.008
554	0.50	0.40	0.00085	66.6	0.00822	0.14	3.02	0.07	1.39	10.31	138.92	0.10	0.00	0.000	0.000	0.008
555	0.40	0.30	0.00087	67.5	0.00830	0.14	3.16	0.07	1.40	10.51	140.13	0.11	0.00	0.000	0.000	0.008
556	0.30	0.20	0.00088	67.7	0.00832	0.14	3.30	0.08	1.40	10.54	140.34	0.11	0.00	0.000	0.000	0.008
557	0.20	0.10	0.00094	69.8	0.00851	0.14	3.43	0.08	1.43	11.02	143.22	0.11	0.00	0.000	0.000	0.009
558	0.10	0.00	0.00094	69.8	0.00851	0.14	3.57	0.08	1.43	11.02	143.22	0.11	0.00	0.000	0.000	0.009
TOT							3.57				203.73					2965.32
AVG				0.0075				0.07	1.29					0.09		

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECA 1/da	BOD1 SETT 1/da	ABOD1 DECA 1/da	BOD1 HYDR 1/da	BOD2 DECA 1/da	BOD2 SETT 1/da	ABOD2 DECA 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECA 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECA 1/da	NCM DECA 1/da	NCM SETT 1/da	
536	2.200	7.55	15.90	0.13	1.11	0.00	0.00	0.00	0.00	0.00	0.94	2.15	2.15	0.05	1.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
537	2.100	7.55	15.90	0.13	1.11	0.00	0.00	0.00	0.00	0.00	0.94	1.95	1.95	0.05	1.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
538	2.000	7.55	15.89	0.13	1.11	0.00	0.00	0.00	0.00	0.00	0.93	1.78	1.78	0.05	1.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
539	1.900	7.56	15.89	0.13	1.11	0.00	0.00	0.00	0.00	0.00	0.93	1.65	1.65	0.05	1.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
540	1.800	7.56	15.88	0.13	1.11	0.00	0.00	0.00	0.00	0.00	0.93	1.54	1.54	0.06	1.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
541	1.700	7.56	15.88	0.13	1.11	0.00	0.00	0.00	0.00	0.00	0.93	1.45	1.45	0.06	1.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
542	1.600	7.57	15.87	0.13	1.11	0.00	0.00	0.00	0.00	0.00	0.93	1.37	1.37	0.06	1.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
543	1.500	7.57	15.87	0.13	1.11	0.00	0.00	0.00	0.00	0.00	0.93	1.31	1.31	0.06	1.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
544	1.400	7.57	13.09	0.13	0.89	0.00	0.00	0.00	0.00	0.00	0.93	2.10	2.10	0.05	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
545	1.300	7.57	13.08	0.13	0.89	0.00	0.00	0.00	0.00	0.00	0.93	1.96	1.96	0.05	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
546	1.200	7.57	13.07	0.13	0.88	0.00	0.00	0.00	0.00	0.00	0.93	1.85	1.85	0.05	0.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
547	1.100	7.58	13.06	0.13	0.88	0.00	0.00	0.00	0.00	0.00	0.92	1.74	1.74	0.05	0.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
548	1.000	7.58	12.75	0.13	0.86	0.00	0.00	0.00	0.00	0.00	0.92	1.83	1.83	0.05	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
549	0.900	7.58	12.75	0.12	0.86	0.00	0.00	0.00	0.00	0.00	0.92	1.73	1.73	0.05	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
550	0.800	7.59	12.68	0.12	0.85	0.00	0.00	0.00	0.00	0.00	0.92	1.69	1.69	0.05	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
551	0.700	7.59	12.65	0.12	0.85	0.00	0.00	0.00	0.00	0.00	0.92	1.63	1.63	0.05	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
552	0.600	7.59	12.64	0.12	0.85	0.00	0.00	0.00	0.00	0.00	0.92	1.56	1.56	0.05	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
553	0.500	7.59	12.59	0.12	0.85	0.00	0.00	0.00	0.00	0.00	0.92	1.53	1.53	0.05	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
554	0.400	7.60	12.58	0.12	0.85	0.00	0.00	0.00	0.00	0.00	0.92	1.46	1.46	0.05	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
555	0.300	7.60	12.47	0.12	0.84	0.00	0.00	0.00	0.00	0.00	0.91	1.48	1.48	0.05	0.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
556	0.200	7.60	12.44	0.12	0.84	0.00	0.00	0.00	0.00	0.00	0.91	1.44	1.44	0.05	0.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
557	0.100	7.60	12.18	0.12	0.81	0.00	0.00	0.00	0.00	0.00	0.91	1.61	1.61	0.05	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
558	0.000	7.61	12.18	0.12	0.81	0.00	0.00	0.00	0.00	0.00	0.91	1.54	1.54	0.05	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
AVG 20	DEG C	RATE	11.52	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.50			0.03	0.03	0.00	0.00	0.00	0.00	0.00				0.00	0.00	0.00	

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EOG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EOG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	
536	2.200	29.98	0.30	592.98	24.60	4.92	19.06	0.00	19.13	0.00	18.39	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.6	0.0	0.
537	2.100	29.96	0.30	592.98	24.60	5.15	15.93	0.00	16.07	0.00	15.36	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.3	0.0	0.
538	2.000	29.94	0.30	592.98	24.60	5.37	13.38	0.00	13.58	0.00	12.85	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.9	0.0	0.
539	1.900	29.92	0.30	592.98	24.60	5.55	11.28	0.00	11.56	0.00	10.77	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.6	0.0	0.
540	1.800	29.90	0.30	592.98	24.60	5.70	9.57	0.00	9.92	0.00	9.06	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.
541	1.700	29.87	0.30	592.98	24.60	5.83	8.17	0.00	8.59	0.00	7.64	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.9	0.0	0.

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

542	1.600	29.85	0.30	592.98	24.60	5.93	7.03	0.00	7.51	0.00	6.47	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.5	0.0	0.0
0.00																									
543	1.500	29.83	0.30	592.98	24.60	6.02	6.09	0.00	6.64	0.00	5.50	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.1	0.0	0.0
0.00																									
544	1.400	29.81	0.34	666.38	42.28	4.76	18.64	0.00	19.26	0.00	18.42	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.8	0.0	0.0
0.00																									
545	1.300	29.79	0.34	666.38	42.28	5.07	16.43	0.00	17.12	0.00	16.28	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.4	0.0	0.0
0.00																									
546	1.200	29.77	0.34	666.57	42.33	5.28	14.62	0.00	15.37	0.00	14.50	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.1	0.0	0.0
0.00																									
547	1.100	29.75	0.34	666.57	42.33	5.45	12.93	0.00	13.76	0.00	12.84	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.7	0.0	0.0
0.00																									
548	1.000	29.73	0.34	672.97	43.87	5.34	14.36	0.00	15.25	0.00	14.30	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.4	0.0	0.0
0.00																									
549	0.900	29.71	0.34	672.97	43.87	5.48	12.77	0.00	13.73	0.00	12.74	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.0	0.0	0.0
0.00																									
550	0.800	29.69	0.35	674.24	44.18	5.54	12.17	0.00	13.21	0.00	12.15	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.7	0.0	0.0
0.00																									
551	0.700	29.67	0.35	674.82	44.32	5.63	11.24	0.00	12.34	0.00	11.22	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.3	0.0	0.0
0.00																									
552	0.600	29.65	0.35	674.98	44.36	5.72	10.16	0.00	11.33	0.00	10.13	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.9	0.0	0.0
0.00																									
553	0.500	29.62	0.35	675.87	44.57	5.77	9.70	0.00	10.94	0.00	9.66	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.6	0.0	0.0
0.00																									
554	0.400	29.60	0.35	675.87	44.57	5.86	8.71	0.00	10.02	0.00	8.65	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.2	0.0	0.0
0.00																									
555	0.300	29.58	0.35	678.09	45.11	5.83	9.08	0.00	10.46	0.00	9.01	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.9	0.0	0.0
0.00																									
556	0.200	29.56	0.35	678.46	45.19	5.89	8.44	0.00	9.89	0.00	8.35	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.5	0.0	0.0
0.00																									
557	0.100	29.54	0.35	683.37	46.38	5.69	11.16	0.00	12.67	0.00	11.09	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.2	0.0	0.0
0.00																									
558	0.000	29.52	0.35	683.37	46.38	5.77	10.06	0.00	11.64	0.00	9.99	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.8	0.0	0.0
0.00																									

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
536	2.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
537	2.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
538	2.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
539	1.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
540	1.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
541	1.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
542	1.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	4.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
543	1.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	5.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
544	1.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	5.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
545	1.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
546	1.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
547	1.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
548	1.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
549	0.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
550	0.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
551	0.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
552	0.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
553	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	11.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
554	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	12.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
555	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	12.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
556	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	13.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
557	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
558	0.000	0.00	Inf</																								

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

FINAL REPORT DRAINAGE DITCH 18
 REACH NO. 49 DD18

WATER QUALITY/HYDRAULIC MODEL FOR:
 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
576	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	2.20	0.00	2.20	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
576	WSTLD	0.00007	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
576	0.30	0.20	0.00035	19.9	0.00610	0.19	0.19	0.05	1.07	5.78	106.84	0.06	0.00	0.000	0.000	0.006
577	0.20	0.10	0.00035	19.9	0.00610	0.19	0.38	0.05	1.07	5.78	106.84	0.06	0.00	0.000	0.000	0.006
578	0.10	0.00	0.00035	19.9	0.00610	0.19	0.57	0.05	1.07	5.78	106.84	0.06	0.00	0.000	0.000	0.006
TOT AVG					0.0061	0.57		0.05	1.07	17.35	320.53	0.06				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR 1/da	BOD2 DECAT 1/da	BOD2 SETT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAT 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da	
576	0.200	7.57	16.64	0.13	1.17	0.00	0.00	0.00	0.00	0.00	0.93	1.74	1.74	0.05	1.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
577	0.100	7.59	16.60	0.12	1.16	0.00	0.00	0.00	0.00	0.92	1.59	1.59	0.05	1.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
578	0.000	7.61	16.55	0.12	1.16	0.00	0.00	0.00	0.00	0.91	1.47	1.47	0.05	1.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20	DEG C RATE	13.88	0.08	0.31	0.00	0.00	0.00	0.00	0.00	0.50			0.03	0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL	
576	0.200	29.84	0.29	567.10	18.36	5.43	12.81	0.00	12.92	0.00	11.94	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.1	0.0
577	0.100	29.68	0.29	567.10	18.36	5.64	10.69	0.00	10.91	0.00	9.87	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.1	0.0
578	0.000	29.52	0.29	567.10	18.36	5.81	8.99	0.00	9.33	0.00	8.20	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
576	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

AVG 20 DEG C RATE 11.36 0.08 0.05 0.00 0.00 0.00 0.00 0.00 0.50 0.03 0.05 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	
585	1.300	30.09	0.33	654.44	39.41	4.30	23.74	0.00	23.76	0.00	23.41	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.2	0.0	0.
586	1.200	30.19	0.33	654.44	39.41	4.65	20.64	0.00	20.69	0.00	20.43	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.5	0.0	0.
587	1.100	30.28	0.33	654.44	39.41	4.90	17.97	0.00	18.04	0.00	17.83	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.7	0.0	0.
588	1.000	30.37	0.33	654.44	39.41	5.09	15.67	0.00	15.77	0.00	15.57	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.9	0.0	0.
589	0.900	30.47	0.33	654.44	39.41	5.25	13.68	0.00	13.81	0.00	13.61	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.1	0.0	0.
590	0.800	30.56	0.33	654.44	39.41	5.39	11.98	0.00	12.12	0.00	11.90	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.4	0.0	0.
591	0.700	30.65	0.33	654.44	39.41	5.50	10.51	0.00	10.68	0.00	10.42	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.6	0.0	0.
592	0.600	30.75	0.33	654.44	39.41	5.60	9.24	0.00	9.44	0.00	9.13	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.8	0.0	0.
593	0.500	30.84	0.33	654.44	39.41	5.68	8.15	0.00	8.37	0.00	8.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.1	0.0	0.
594	0.400	30.94	0.33	654.44	39.41	5.74	7.21	0.00	7.46	0.00	7.03	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.3	0.0	0.
595	0.300	31.03	0.33	654.44	39.41	5.80	6.41	0.00	6.68	0.00	6.19	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.5	0.0	0.
596	0.200	31.12	0.33	654.44	39.41	5.84	5.72	0.00	6.01	0.00	5.45	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.7	0.0	0.
597	0.100	31.22	0.33	654.44	39.41	5.88	5.12	0.00	5.44	0.00	4.82	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.0	0.0	0.
598	0.000	31.31	0.33	654.44	39.41	5.91	4.61	0.00	4.95	0.00	4.26	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
585	1.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
586	1.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
587	1.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
588	1.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
589	0.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
590	0.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
591	0.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
592	0.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
593	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
594	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
595	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
596	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
597	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
598	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE

0.000 0.000 0.000 0.000

0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

REACH NO. 53 DD04

BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
601	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	2.20	0.00	2.20	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
601	WSTLD	0.00004	30.00	0.39	753.60	63.30	2.00	145.48	0.00	145.48	0.00	145.48	0.00	0.00	0.00	0.00	0.00	0.00
602	WSTLD	0.00001	30.00	0.39	753.60	63.30	2.00	20.70	0.00	20.70	0.00	20.70	0.00	0.00	0.00	0.00	0.00	0.00
611	WSTLD	0.00000	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00	0.00
614	WSTLD	0.00001	30.00	0.39	753.60	63.30	2.00	57.50	0.00	57.50	0.00	57.50	0.00	0.00	0.00	0.00	0.00	0.00
615	WSTLD	0.00002	30.00	0.39	753.60	63.30	2.00	21.85	0.00	21.85	0.00	21.85	0.00	0.00	0.00	0.00	0.00	0.00
616	WSTLD	0.00069	30.00	0.39	753.60	63.30	2.00	36.57	0.00	36.57	0.00	36.57	0.00	0.00	0.00	0.00	0.00	0.00
617	WSTLD	0.00000	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00	0.00
619	WSTLD	0.00009	30.00	0.39	753.60	63.30	2.00	11.50	0.00	11.50	0.00	11.50	0.00	0.00	0.00	0.00	0.00	0.00
620	WSTLD	0.00018	30.00	0.39	753.60	63.30	2.00	16.10	0.00	16.10	0.00	16.10	0.00	0.00	0.00	0.00	0.00	0.00
621	WSTLD	0.00002	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00	0.00
625	WSTLD	0.00000	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00	0.00
633	WSTLD	0.01218	30.00	0.30	582.30	52.50	7.10	4.68	0.00	4.68	0.00	3.01	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
601	4.20	4.10	0.00032	11.7	0.00591	0.20	0.20	0.05	1.04	5.43	103.79	0.05	0.00	0.000	0.000	0.006
602	4.10	4.00	0.00033	13.1	0.00594	0.19	0.39	0.05	1.04	5.49	104.29	0.05	0.00	0.000	0.000	0.006
603	4.00	3.90	0.00033	13.1	0.00594	0.19	0.59	0.05	1.04	5.49	104.29	0.05	0.00	0.000	0.000	0.006
604	3.90	3.80	0.00033	13.1	0.00594	0.19	0.78	0.05	1.04	5.49	104.29	0.05	0.00	0.000	0.000	0.006
605	3.80	3.70	0.00033	13.1	0.00594	0.19	0.98	0.05	1.04	5.49	104.29	0.05	0.00	0.000	0.000	0.006
606	3.70	3.60	0.00033	13.1	0.00594	0.19	1.17	0.05	1.04	5.49	104.29	0.05	0.00	0.000	0.000	0.006
607	3.60	3.50	0.00033	13.1	0.00594	0.19	1.37	0.05	1.04	5.49	104.29	0.05	0.00	0.000	0.000	0.006
608	3.50	3.40	0.00033	13.1	0.00594	0.19	1.56	0.05	1.04	5.49	104.29	0.05	0.00	0.000	0.000	0.006
609	3.40	3.30	0.00033	13.1	0.00594	0.19	1.75	0.05	1.04	5.49	104.29	0.05	0.00	0.000	0.000	0.006
610	3.30	3.20	0.00033	13.1	0.00594	0.19	1.95	0.05	1.04	5.49	104.29	0.05	0.00	0.000	0.000	0.006
611	3.20	3.10	0.00033	13.6	0.00595	0.19	2.14	0.05	1.04	5.50	104.46	0.06	0.00	0.000	0.000	0.006
612	3.10	3.00	0.00033	13.6	0.00595	0.19	2.34	0.05	1.04	5.50	104.46	0.06	0.00	0.000	0.000	0.006
613	3.00	2.90	0.00033	13.6	0.00595	0.19	2.53	0.05	1.04	5.50	104.46	0.06	0.00	0.000	0.000	0.006
614	2.90	2.80	0.00034	15.8	0.00600	0.19	2.73	0.05	1.05	5.60	105.28	0.06	0.00	0.000	0.000	0.006
615	2.80	2.70	0.00035	19.6	0.00610	0.19	2.92	0.05	1.07	5.77	106.73	0.06	0.00	0.000	0.000	0.006
616	2.70	2.60	0.00104	72.9	0.00883	0.13	3.05	0.08	1.48	11.83	147.91	0.12	0.00	0.000	0.000	0.009
617	2.60	2.50	0.00104	72.9	0.00883	0.13	3.18	0.08	1.48	11.84	147.94	0.12	0.00	0.000	0.000	0.009
618	2.50	2.40	0.00104	72.9	0.00883	0.13	3.31	0.08	1.48	11.84	147.94	0.12	0.00	0.000	0.000	0.009
619	2.40	2.30	0.00113	75.0	0.00907	0.13	3.44	0.08	1.52	12.48	151.54	0.12	0.00	0.000	0.000	0.009
620	2.30	2.20	0.00131	78.5	0.00954	0.12	3.56	0.09	1.58	13.77	158.46	0.14	0.00	0.000	0.000	0.010
621	2.20	2.10	0.00134	78.8	0.00960	0.12	3.68	0.09	1.59	13.93	159.31	0.14	0.00	0.000	0.000	0.010
622	2.10	2.00	0.00134	78.8	0.00960	0.12	3.80	0.09	1.59	13.93	159.31	0.14	0.00	0.000	0.000	0.010
623	2.00	1.90	0.00134	78.8	0.00960	0.12	3.92	0.09	1.59	13.93	159.31	0.14	0.00	0.000	0.000	0.010
624	1.90	1.80	0.00134	78.8	0.00960	0.12	4.04	0.09	1.59	13.93	159.31	0.14	0.00	0.000	0.000	0.010
625	1.80	1.70	0.00134	78.9	0.00961	0.12	4.16	0.09	1.59	13.96	159.46	0.14	0.00	0.000	0.000	0.010
626	1.70	1.60	0.00134	78.9	0.00961	0.12	4.28	0.09	1.59	13.96	159.46	0.14	0.00	0.000	0.000	0.010
627	1.60	1.50	0.00134	78.9	0.00961	0.12	4.40	0.09	1.59	13.96	159.46	0.14	0.00	0.000	0.000	0.010
628	1.50	1.40	0.00134	78.9	0.00961	0.12	4.52	0.09	1.59	13.96	159.46	0.14	0.00	0.000	0.000	0.010
629	1.40	1.30	0.00134	78.9	0.00961	0.12	4.64	0.09	1.59	13.96	159.46	0.14	0.00	0.000	0.000	0.010
630	1.30	1.20	0.00134	78.9	0.00961	0.12	4.76	0.09	1.59	13.96	159.46	0.14	0.00	0.000	0.000	0.010
631	1.20	1.10	0.00134	78.9	0.00961	0.12	4.88	0.09	1.59	13.96	159.46	0.14	0.00	0.000	0.000	0.010
632	1.10	1.00	0.00134	78.9	0.00961	0.12	5.00	0.09	1.59	13.96	159.46	0.14	0.00	0.000	0.000	0.010
633	1.00	0.90	0.01352	97.9	0.02108	0.05	5.06	0.20	3.19	64.14	318.92	0.64	0.00	0.000	0.000	0.021
634	0.90	0.80	0.01352	97.9	0.02108	0.05	5.11	0.20	3.19	64.14	318.92	0.64	0.00	0.000	0.000	0.021
635	0.80	0.70	0.01352	97.9	0.02108	0.05	5.17	0.20	3.19	64.14	318.92	0.64	0.00	0.000	0.000	0.021
636	0.70	0.60	0.01352	97.9	0.02108	0.05	5.22	0.20	3.19	64.14	318.92	0.64	0.00	0.000	0.000	0.021
637	0.60	0.50	0.01352	97.9	0.02108	0.05	5.28	0.20	3.19	64.14	318.92	0.64	0.00	0.000	0.000	0.021
638	0.50	0.40	0.01352	97.9	0.02108	0.05	5.33	0.20	3.19	64.14	318.92	0.64	0.00	0.000	0.000	0.021
639	0.40	0.30	0.01352	97.9	0.02108	0.05	5.39	0.20	3.19	64.14	318.92	0.64	0.00	0.000	0.000	0.021

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

640	0.30	0.20	0.01352	97.9	0.02108	0.05	5.44	0.20	3.19	64.14	318.92	0.64	0.00	0.000	0.000	0.021
641	0.20	0.10	0.01352	97.9	0.02108	0.05	5.50	0.20	3.19	64.14	318.92	0.64	0.00	0.000	0.000	0.021
642	0.10	0.00	0.01352	97.9	0.02108	0.05	5.55	0.20	3.19	64.14	318.92	0.64	0.00	0.000	0.000	0.021

TOT						5.55				953.18	7423.73					
AVG				0.0088			0.10	1.77				0.23				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAy 1/da	BOD1 SETT 1/da	ABOD1 DECAy 1/da	BOD1 HYDR 1/da	BOD2 DECAy 1/da	BOD2 SETT 1/da	ABOD2 DECAy 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAy 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAy 1/da	NCM DECAy 1/da	NCM SETT 1/da	
601	4.100	7.54	17.22	0.13	1.21	0.00	0.00	0.00	0.00	0.00	0.94	1.92	1.92	0.05	1.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
602	4.000	7.54	17.15	0.13	1.21	0.00	0.00	0.00	0.00	0.00	0.94	1.75	1.75	0.06	1.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
603	3.900	7.53	17.15	0.13	1.21	0.00	0.00	0.00	0.00	0.00	0.94	1.62	1.62	0.06	1.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
604	3.800	7.53	17.16	0.13	1.21	0.00	0.00	0.00	0.00	0.00	0.95	1.51	1.51	0.06	1.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
605	3.700	7.53	17.17	0.13	1.21	0.00	0.00	0.00	0.00	0.00	0.95	1.42	1.42	0.06	1.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
606	3.600	7.52	17.18	0.13	1.21	0.00	0.00	0.00	0.00	0.00	0.95	1.35	1.35	0.06	1.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
607	3.500	7.52	17.19	0.13	1.21	0.00	0.00	0.00	0.00	0.00	0.95	1.30	1.30	0.06	1.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
608	3.400	7.51	17.20	0.13	1.21	0.00	0.00	0.00	0.00	0.00	0.95	1.26	1.26	0.06	1.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
609	3.300	7.51	17.21	0.13	1.21	0.00	0.00	0.00	0.00	0.00	0.96	1.22	1.22	0.06	1.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
610	3.200	7.51	17.22	0.13	1.21	0.00	0.00	0.00	0.00	0.00	0.96	1.20	1.20	0.06	1.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
611	3.100	7.50	17.20	0.13	1.21	0.00	0.00	0.00	0.00	0.00	0.96	1.19	1.19	0.06	1.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
612	3.000	7.50	17.21	0.13	1.21	0.00	0.00	0.00	0.00	0.00	0.96	1.17	1.17	0.06	1.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
613	2.900	7.49	17.22	0.13	1.21	0.00	0.00	0.00	0.00	0.00	0.96	1.16	1.16	0.06	1.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
614	2.800	7.49	17.08	0.13	1.20	0.00	0.00	0.00	0.00	0.00	0.96	1.22	1.22	0.06	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
615	2.700	7.49	16.84	0.13	1.19	0.00	0.00	0.00	0.00	0.00	0.97	1.24	1.24	0.06	1.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
616	2.600	7.48	11.98	0.13	0.80	0.00	0.00	0.00	0.00	0.00	0.97	2.44	2.44	0.06	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
617	2.500	7.48	11.99	0.13	0.80	0.00	0.00	0.00	0.00	0.00	0.97	2.30	2.30	0.06	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
618	2.400	7.47	11.99	0.13	0.80	0.00	0.00	0.00	0.00	0.00	0.97	2.17	2.17	0.06	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
619	2.300	7.47	11.71	0.13	0.78	0.00	0.00	0.00	0.00	0.00	0.97	2.02	2.02	0.06	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
620	2.200	7.46	11.20	0.13	0.74	0.00	0.00	0.00	0.00	0.00	0.98	1.93	1.93	0.06	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
621	2.100	7.46	11.14	0.13	0.74	0.00	0.00	0.00	0.00	0.00	0.98	1.91	1.91	0.06	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
622	2.000	7.45	11.15	0.13	0.74	0.00	0.00	0.00	0.00	0.00	0.98	1.83	1.83	0.06	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
623	1.900	7.45	11.16	0.13	0.74	0.00	0.00	0.00	0.00	0.00	0.98	1.76	1.76	0.06	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
624	1.800	7.45	11.16	0.13	0.74	0.00	0.00	0.00	0.00	0.00	0.98	1.69	1.69	0.06	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
625	1.700	7.44	11.16	0.13	0.74	0.00	0.00	0.00	0.00	0.00	0.99	1.65	1.65	0.06	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
626	1.600	7.44	11.16	0.13	0.74	0.00	0.00	0.00	0.00	0.00	0.99	1.60	1.60	0.06	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
627	1.500	7.44	11.17	0.13	0.74	0.00	0.00	0.00	0.00	0.00	0.99	1.55	1.55	0.06	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
628	1.400	7.43	11.18	0.13	0.74	0.00	0.00	0.00	0.00	0.00	0.99	1.50	1.50	0.06	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
629	1.300	7.43	11.18	0.13	0.74	0.00	0.00	0.00	0.00	0.00	0.99	1.47	1.47	0.06	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
630	1.200	7.42	11.19	0.13	0.74	0.00	0.00	0.00	0.00	0.00	1.00	1.43	1.43	0.06	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
631	1.100	7.42	11.19	0.13	0.74	0.00	0.00	0.00	0.00	0.00	1.00	1.40	1.40	0.06	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
632	1.000	7.42	11.20	0.13	0.74	0.00	0.00	0.00	0.00	0.00	1.00	1.37	1.37	0.06	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
633	0.900	7.41	5.88	0.13	0.32	0.00	0.00	0.00	0.00	0.00	1.00	1.31	1.31	0.06	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
634	0.800	7.41	5.88	0.13	0.32	0.00	0.00	0.00	0.00	0.00	1.00	1.30	1.30	0.06	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
635	0.700	7.41	5.88	0.13	0.32	0.00	0.00	0.00	0.00	0.00	1.01	1.30	1.30	0.06	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
636	0.600	7.40	5.89	0.13	0.32	0.00	0.00	0.00	0.00	0.00	1.01	1.29	1.29	0.06	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
637	0.500	7.40	5.89	0.13	0.32	0.00	0.00	0.00	0.00	0.00	1.01	1.29	1.29	0.06	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
638	0.400	7.39	5.89	0.13	0.32	0.00	0.00	0.00	0.00	0.00	1.01	1.28	1.28	0.06	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
639	0.300	7.39	5.89	0.13	0.32	0.00	0.00	0.00	0.00	0.00	1.01	1.28	1.28	0.06	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
640	0.200	7.39	5.90	0.13	0.32	0.00	0.00	0.00	0.00	0.00	1.02	1.28	1.28	0.06	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
641	0.100	7.38	5.90	0.13	0.32	0.00	0.00	0.00	0.00	0.00	1.02	1.27	1.27	0.06	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
642	0.000	7.38	5.90	0.13	0.33	0.00	0.00	0.00	0.00	0.00	1.02	1.27	1.27	0.06	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

AVG 20 DEG C RATE	9.99	
-------------------	------	--

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

601	4.100	30.03	0.28	548.19	13.81	5.31	15.48	0.00	15.49	0.00	14.56	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.1	0.0	0.
0.00																								
602	4.000	30.06	0.28	551.47	14.60	5.41	12.78	0.00	12.80	0.00	11.96	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.2	0.0	0.
0.00																								
603	3.900	30.09	0.28	551.47	14.60	5.58	10.57	0.00	10.59	0.00	9.78	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.2	0.0	0.
0.00																								
604	3.800	30.12	0.28	551.47	14.60	5.73	8.81	0.00	8.85	0.00	8.04	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.3	0.0	0.
0.00																								
605	3.700	30.16	0.28	551.47	14.60	5.84	7.42	0.00	7.46	0.00	6.63	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.4	0.0	0.
0.00																								
606	3.600	30.19	0.28	551.47	14.60	5.93	6.31	0.00	6.36	0.00	5.51	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.5	0.0	0.
0.00																								
607	3.500	30.22	0.28	551.47	14.60	6.01	5.43	0.00	5.49	0.00	4.60	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.5	0.0	0.
0.00																								
608	3.400	30.25	0.28	551.47	14.60	6.06	4.73	0.00	4.80	0.00	3.88	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.6	0.0	0.
0.00																								
609	3.300	30.28	0.28	551.47	14.60	6.11	4.18	0.00	4.25	0.00	3.30	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.7	0.0	0.
0.00																								
610	3.200	30.31	0.28	551.47	14.60	6.14	3.74	0.00	3.82	0.00	2.83	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.0	0.
0.00																								
611	3.100	30.34	0.28	552.52	14.85	6.14	3.66	0.00	3.74	0.00	2.73	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.0	0.
0.00																								
612	3.000	30.37	0.28	552.52	14.85	6.16	3.32	0.00	3.42	0.00	2.38	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.9	0.0	0.
0.00																								
613	2.900	30.41	0.28	552.52	14.85	6.18	3.06	0.00	3.16	0.00	2.09	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.0	0.
0.00																								
614	2.800	30.44	0.28	557.72	16.10	6.10	3.97	0.00	4.08	0.00	3.02	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.1	0.0	0.
0.00																								
615	2.700	30.47	0.29	566.46	18.21	6.04	4.21	0.00	4.33	0.00	3.30	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.1	0.0	0.
0.00																								
616	2.600	30.50	0.35	690.53	48.10	4.11	23.02	0.00	23.15	0.00	22.87	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.2	0.0	0.
0.00																								
617	2.500	30.53	0.35	690.58	48.11	4.51	20.69	0.00	20.83	0.00	20.65	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.3	0.0	0.
0.00																								
618	2.400	30.56	0.35	690.58	48.11	4.76	18.59	0.00	18.73	0.00	18.63	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.4	0.0	0.
0.00																								
619	2.300	30.59	0.36	695.43	49.28	4.89	16.30	0.00	16.46	0.00	16.40	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.4	0.0	0.
0.00																								
620	2.200	30.62	0.36	703.47	51.22	4.92	14.84	0.00	15.00	0.00	14.97	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.5	0.0	0.
0.00																								
621	2.100	30.65	0.36	704.36	51.43	5.09	14.42	0.00	14.59	0.00	14.59	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.6	0.0	0.
0.00																								
622	2.000	30.69	0.36	704.36	51.43	5.24	13.17	0.00	13.35	0.00	13.36	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.7	0.0	0.
0.00																								
623	1.900	30.72	0.36	704.36	51.43	5.36	12.04	0.00	12.23	0.00	12.25	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.8	0.0	0.
0.00																								
624	1.800	30.75	0.36	704.36	51.43	5.45	11.02	0.00	11.22	0.00	11.23	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.8	0.0	0.
0.00																								
625	1.700	30.78	0.36	704.51	51.47	5.52	10.26	0.00	10.47	0.00	10.47	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.9	0.0	0.
0.00																								
626	1.600	30.81	0.36	704.51	51.47	5.59	9.41	0.00	9.62	0.00	9.60	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.0	0.0	0.
0.00																								
627	1.500	30.84	0.36	704.51	51.47	5.66	8.63	0.00	8.85	0.00	8.81	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.1	0.0	0.
0.00																								
628	1.400	30.87	0.36	704.51	51.47	5.71	7.93	0.00	8.16	0.00	8.09	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.1	0.0	0.
0.00																								
629	1.300	30.90	0.36	704.51	51.47	5.77	7.30	0.00	7.53	0.00	7.43	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.2	0.0	0.
0.00																								
630	1.200	30.94	0.36	704.51	51.47	5.81	6.72	0.00	6.96	0.00	6.83	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.3	0.0	0.
0.00																								
631	1.100	30.97	0.36	704.51	51.47	5.85	6.20	0.00	6.45	0.00	6.28	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.4	0.0	0.
0.00																								
632	1.000	31.00	0.36	704.51	51.47	5.89	5.73	0.00	5.99	0.00	5.78	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.4	0.0	0.
0.00																								
633	0.900	31.03	0.31	594.43	52.40	6.78	4.68	0.00	4.95	0.00	3.22	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.5	0.0	0.
0.00																								
634	0.800	31.06	0.31	594.43	52.40	6.63	4.58	0.00	4.85	0.00	3.16	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.6	0.0	0.
0.00																								
635	0.700	31.09	0.31	594.43	52.40	6.52	4.48	0.00	4.76	0.00	3.10	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.7	0.0	0.
0.00																								

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

636	0.600	31.12	0.31	594.43	52.40	6.44	4.38	0.00	4.67	0.00	3.04	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.7	0.0	0.
0.00																								
637	0.500	31.15	0.31	594.43	52.40	6.38	4.29	0.00	4.59	0.00	2.99	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.8	0.0	0.
0.00																								
638	0.400	31.19	0.31	594.43	52.40	6.33	4.19	0.00	4.50	0.00	2.93	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.9	0.0	0.
0.00																								
639	0.300	31.22	0.31	594.43	52.40	6.29	4.10	0.00	4.42	0.00	2.87	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.0	0.0	0.
0.00																								
640	0.200	31.25	0.31	594.43	52.40	6.27	4.02	0.00	4.34	0.00	2.82	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.0	0.0	0.
0.00																								
641	0.100	31.28	0.31	594.43	52.40	6.25	3.93	0.00	4.26	0.00	2.77	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.1	0.0	0.
0.00																								
642	0.000	31.31	0.31	594.43	52.40	6.23	3.85	0.00	4.19	0.00	2.71	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.
0.00																								

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT					PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI					PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²	
				N LIT	N LIM	P LIM	N&P LIM	SPC LIM								TOT LIM	N LIT	N LIM	P LIM	N&P LIM						
601	4.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
602	4.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
603	3.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
604	3.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
605	3.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
606	3.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
607	3.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
608	3.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
609	3.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
610	3.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
611	3.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
612	3.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
613	2.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
614	2.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
615	2.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
616	2.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
617	2.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
618	2.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
619	2.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
620	2.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
621	2.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
622	2.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
623	1.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
624	1.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
625	1.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
626	1.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
627	1.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
628	1.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
629	1.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
630	1.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
631	1.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
632	1.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
633	0.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
634	0.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
635	0.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
636	0.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
637	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.																		

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

FINAL REPORT TRIBUTARY 9
 REACH NO. 58 DRAINAGE DITCH 3 - UPLAND

WATER QUALITY/HYDRAULIC MODEL FOR:
 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
667	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	2.20	0.00	2.20	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
667	WSTLD	0.00001	30.00	0.39	753.60	63.30	2.00	46.00	0.00	46.00	0.00	46.00	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
667	0.50	0.40	0.00029	2.7	0.00571	0.20	0.20	0.05	1.01	5.09	100.80	0.05	0.00	0.000	0.000	0.006
668	0.40	0.30	0.00029	2.7	0.00571	0.20	0.41	0.05	1.01	5.09	100.80	0.05	0.00	0.000	0.000	0.006
TOT AVG					0.0057	0.41		0.05	1.01	10.18	201.60	0.05				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECA	BOD1 SETT	ABOD1 DECA	BOD1 HYDR	BOD2 DECA	BOD2 SETT	ABOD2 DECA	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECA	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECA	NCM DECA	NCM SETT	
667	0.400	7.55	17.76	0.13	1.26	0.00	0.00	0.00	0.00	0.00	0.94	1.14	1.14	0.06	1.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
668	0.300	7.45	17.75	0.13	1.26	0.00	0.00	0.00	0.00	0.00	0.94	1.35	1.35	0.05	1.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE		14.77	0.08	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.50			0.03	0.50	0.00	0.00	0.00	0.00	0.00	0.00				0.00	0.00	0.00

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL	
667	0.400	30.00	0.26	527.14	8.73	6.18	3.10	0.00	3.10	0.00	1.95	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
668	0.300	30.00	2.53	4579.50	1359.34	4.92	6.50	0.00	6.50	0.00	1.93	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
667	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
668	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20 DEG C RATE										0.000	0.000	0.000	0.000										0.000	0.000	0.000		

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

FINAL REPORT TRIBUTARY 9 WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 59 TRIBUTARY 9 - TIDAL BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
669	UPR RCH	0.00029	30.00	2.53	4579.50	1359.34	4.92	6.50	0.00	6.50	0.00	1.93	0.10	0.10	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
669	0.30	0.20	0.00029	2.7	0.00002	50.95	51.35	0.80	16.00	1280.00	1600.00	12.80	160.00	0.000	0.058	0.000
670	0.20	0.10	0.00029	2.7	0.00002	50.95	102.30	0.80	16.00	1280.00	1600.00	12.80	320.00	0.001	0.117	0.001
671	0.10	0.00	0.00029	2.7	0.00002	50.95	153.24	0.80	16.00	1280.00	1600.00	12.80	480.00	0.001	0.175	0.001
TOT AVG					0.0000	152.84		0.80	16.00	3840.00	4800.00	12.80				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DEGR	BOD1 SETT	ABOD1 DEGR	BOD1 HYDR	BOD2 DEGR	BOD2 SETT	ABOD2 DEGR	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DEGR	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DEGR	NCM DEGR	NCM SETT		
669	0.200	7.36	1.06	0.13	0.08	0.00	0.00	0.00	0.00	0.00	0.98	1.42	1.42	0.06	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
670	0.100	7.28	1.08	0.13	0.08	0.00	0.00	0.00	0.00	0.00	1.02	1.56	1.56	0.06	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
671	0.000	7.19	1.09	0.14	0.08	0.00	0.00	0.00	0.00	0.00	1.06	1.74	1.74	0.06	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20	DEG C RATE	0.88	0.08	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.50			0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00		
*	g/m²/d		**	mg/L/day																								

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL	
669	0.200	30.66	2.71	4895.77	1464.75	4.54	6.86	0.00	6.97	0.00	1.95	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.1	0.0	0.
670	0.100	31.33	2.77	5009.32	1502.59	4.12	8.29	0.00	8.51	0.00	2.12	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.1	0.0	0.
671	0.000	31.99	2.81	5079.17	1525.87	3.70	10.22	0.00	10.56	0.00	2.34	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
669	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
670	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO	BOD1	BOD2	EBOD1	EBOD2	ORG-N	NH3-N	NO3-N	TOT-N	EORG-N	ETOT-N	ORG-P	PO4-P	TOT-P	EORG-P	ETOT-P	CHL A	PERIP	COLI	
680	1.500	30.00	0.27	546.51	13.40	5.99	4.78	0.00	4.78	0.00	3.74	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
681	1.400	30.00	0.27	546.51	13.40	6.13	4.21	0.00	4.21	0.00	3.18	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
682	1.300	30.00	0.27	546.51	13.40	6.19	3.76	0.00	3.76	0.00	2.73	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
683	1.200	30.00	0.27	546.51	13.40	6.22	3.40	0.00	3.40	0.00	2.38	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
684	1.100	30.00	0.27	546.51	13.40	6.25	3.12	0.00	3.12	0.00	2.09	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
685	1.000	30.00	0.27	546.51	13.40	6.27	2.89	0.00	2.89	0.00	1.86	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
686	0.900	30.00	0.27	546.51	13.40	6.28	2.71	0.00	2.71	0.00	1.68	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
687	0.800	30.00	0.27	546.51	13.40	6.30	2.57	0.00	2.57	0.00	1.53	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
688	0.700	30.00	0.27	546.51	13.40	6.31	2.46	0.00	2.46	0.00	1.41	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
689	0.600	30.00	2.40	4344.16	1280.75	5.70	3.97	0.00	3.97	0.00	1.60	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²	
680	1.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	0.0
681	1.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	0.0
682	1.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	0.0
683	1.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	0.0
684	1.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	0.0
685	1.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	0.0
686	0.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	0.0
687	0.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	0.0
688	0.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	0.0
689	0.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	0.0

20 DEG C RATE 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT TRIBUTARY 6 WATER QUALITY/HYDRAULIC MODEL FOR: BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

REACH NO. 62 TRIBUTARY 6 - TIDAL

***** REACH INPUTS

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO	BOD1	BOD2	EBOD1	EBOD2	ORG-N	NH3-N	NO3-N	PO4-P	CHL A	COLI	NCM
690	UPR RCH	0.00032	30.00	2.40	4344.16	1280.75	5.70	3.97	0.00	3.97	0.00	1.60	0.10	0.10	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
690	0.60	0.50	0.00032	11.0	0.00004	26.21	28.17	0.60	12.00	720.00	1200.00	7.20	120.00	0.000	0.061	0.000

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

691	0.50	0.40	0.00032	11.0	0.00004	26.21	54.38	0.60	12.00	720.00	1200.00	7.20	240.00	0.001	0.122	0.001
692	0.40	0.30	0.00032	11.0	0.00004	26.21	80.58	0.60	12.00	720.00	1200.00	7.20	360.00	0.001	0.184	0.001
693	0.30	0.20	0.00032	11.0	0.00004	26.21	106.79	0.60	12.00	720.00	1200.00	7.20	480.00	0.002	0.245	0.002
694	0.20	0.10	0.00032	11.0	0.00004	26.21	132.99	0.60	12.00	720.00	1200.00	7.20	600.00	0.002	0.306	0.002
695	0.10	0.00	0.00032	11.0	0.00004	26.21	159.20	0.60	12.00	720.00	1200.00	7.20	720.00	0.003	0.367	0.003

TOT						157.23				4320.00	7200.00					
AVG					0.0000			0.60	12.00			7.20				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR 1/da	BOD2 DECAT 1/da	BOD2 SETT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAT 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI 1/da	NCM DECAT 1/da	NCM SETT 1/da		
690	0.500	7.40	1.41	0.13	0.11	0.00	0.00	0.00	0.00	0.00	0.96	1.23	1.23	0.06	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
691	0.400	7.36	1.42	0.13	0.11	0.00	0.00	0.00	0.00	0.00	0.98	1.30	1.30	0.06	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
692	0.300	7.31	1.43	0.13	0.11	0.00	0.00	0.00	0.00	0.00	1.00	1.38	1.38	0.06	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
693	0.200	7.27	1.43	0.13	0.11	0.00	0.00	0.00	0.00	0.00	1.02	1.48	1.48	0.06	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
694	0.100	7.23	1.44	0.14	0.11	0.00	0.00	0.00	0.00	0.00	1.04	1.60	1.60	0.06	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
695	0.000	7.19	1.45	0.14	0.11	0.00	0.00	0.00	0.00	0.00	1.06	1.74	1.74	0.06	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20	DEG C RATE		1.17	0.08	0.01	0.00	0.00	0.00	0.00	0.00	0.50			0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00	0.00

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL	
690	0.500	30.33	2.71	4893.76	1464.16	5.42	4.27	0.00	4.32	0.00	1.65	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.5	0.0	0.
691	0.400	30.66	2.82	5103.28	1534.08	5.19	4.97	0.00	5.08	0.00	1.80	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.1	0.0	0.
692	0.300	30.99	2.90	5234.92	1578.01	4.92	5.91	0.00	6.08	0.00	1.98	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.6	0.0	0.
693	0.200	31.33	2.95	5331.62	1610.29	4.60	7.07	0.00	7.30	0.00	2.20	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.1	0.0	0.
694	0.100	31.66	3.00	5408.36	1635.89	4.24	8.50	0.00	8.78	0.00	2.46	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.7	0.0	0.
695	0.000	31.99	3.03	5472.14	1657.18	3.82	10.22	0.00	10.56	0.00	2.75	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
690	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.5	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
691	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.1	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
692	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.6	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
693	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.1	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
694	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.7	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
695	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20	DEG C RATE								0.000	0.000	0.000	0.000									0.000	0.000	0.000		

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT TRIBUTARY 10

WATER QUALITY/HYDRAULIC MODEL FOR:

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

REACH NO. 64 TRIBUTARY 10 - UPLAND

BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
698	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	2.20	0.00	2.20	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
698	WSTLD	0.00002	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
698	0.70	0.60	0.00031	8.1	0.00583	0.20	0.20	0.05	1.03	5.28	102.54	0.05	0.00	0.000	0.000	0.006
699	0.60	0.50	0.00031	8.1	0.00583	0.20	0.40	0.05	1.03	5.28	102.54	0.05	0.00	0.000	0.000	0.006
700	0.50	0.40	0.00031	8.1	0.00583	0.20	0.60	0.05	1.03	5.28	102.54	0.05	0.00	0.000	0.000	0.006
701	0.40	0.30	0.00031	8.1	0.00583	0.20	0.79	0.05	1.03	5.28	102.54	0.05	0.00	0.000	0.000	0.006
702	0.30	0.20	0.00031	8.1	0.00583	0.20	0.99	0.05	1.03	5.28	102.54	0.05	0.00	0.000	0.000	0.006
TOT AVG					0.0058	0.99		0.05	1.03	26.42	512.70	0.05				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECAT	BOD1 SETT	ABOD1 DECAT	BOD1 HYDR	BOD2 DECAT	BOD2 SETT	ABOD2 DECAT	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECAT	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECAT	NCM DECAT	NCM SETT	
698	0.600	7.55	17.44	0.13	1.23	0.00	0.00	0.00	0.00	0.00	0.94	1.35	1.35	0.06	1.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
699	0.500	7.55	17.44	0.13	1.23	0.00	0.00	0.00	0.00	0.00	0.94	1.29	1.29	0.06	1.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
700	0.400	7.55	17.44	0.13	1.23	0.00	0.00	0.00	0.00	0.00	0.94	1.24	1.24	0.06	1.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
701	0.300	7.55	17.44	0.13	1.23	0.00	0.00	0.00	0.00	0.00	0.94	1.20	1.20	0.06	1.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
702	0.200	7.45	17.42	0.13	1.23	0.00	0.00	0.00	0.00	0.00	0.94	1.41	1.41	0.05	1.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20	DEG C	RATE	14.50	0.08	0.19	0.00	0.00	0.00	0.00	0.00	0.50			0.03	0.19	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	
*	g/m²/d		**	mg/L/day																							

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL	
698	0.600	30.00	0.27	539.72	11.76	5.92	6.43	0.00	6.43	0.00	5.37	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
699	0.500	30.00	0.27	539.72	11.76	6.03	5.50	0.00	5.50	0.00	4.48	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.	
700	0.400	30.00	0.27	539.72	11.76	6.10	4.77	0.00	4.77	0.00	3.76	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.	
701	0.300	30.00	0.27	539.72	11.76	6.15	4.20	0.00	4.20	0.00	3.20	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.	
702	0.200	30.00	2.68	4838.68	1445.90	4.94	7.40	0.00	7.40	0.00	2.52	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.	

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYT µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
698	0.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
699	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
700	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
701	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
702	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20 DEG C RATE										0.000	0.000	0.000	0.000														

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT TRIBUTARY 10 WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 65 TRIBUTARY 10 - TIDAL BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
703	UPR RCH	0.00031	30.00	2.68	4838.68	1445.90	4.94	7.40	0.00	7.40	0.00	2.52	0.10	0.10	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
703	0.20	0.10	0.00031	8.1	0.00004	31.76	32.76	0.65	13.00	845.00	1300.00	8.45	130.00	0.000	0.060	0.000
704	0.10	0.00	0.00031	8.1	0.00004	31.76	64.52	0.65	13.00	845.00	1300.00	8.45	260.00	0.001	0.121	0.001
TOT AVG					0.0000	63.53		0.65	13.00	1690.00	2600.00	8.45				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR 1/da	BOD2 DECAT 1/da	BOD2 SETT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAT 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 PROD *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da	
703	0.100	7.31	1.32	0.13	0.10	0.00	0.00	0.00	0.00	0.00	1.00	1.52	1.52	0.06	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
704	0.000	7.18	1.34	0.14	0.10	0.00	0.00	0.00	0.00	0.00	1.06	1.72	1.72	0.06	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			1.08	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.50			0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00						
* g/m²/d			** mg/L/day																								

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL	
703	0.100	30.99	2.97	5358.75	1619.40	4.43	7.96	0.00	8.13	0.00	2.49	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.6	0.0	0.
704	0.000	31.99	3.08	5552.90	1684.17	3.89	9.88	0.00	10.23	0.00	2.76	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

***** PHYTOPLANKTON AND PERIPHYTON DATA

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
703	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
704	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20 DEG C RATE										0.000	0.000	0.000	0.000								0.000	0.000	0.000				

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT TRIBUTARY 8 WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 68 TRIBUTARY 8 - UPLAND BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
715	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	2.20	0.00	2.20	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
715	WSTLD	0.00001	30.00	0.39	753.60	63.30	2.00	25.30	0.00	25.30	0.00	25.30	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
715	0.60	0.50	0.00029	3.0	0.00572	0.20	0.20	0.05	1.01	5.10	100.89	0.05	0.00	0.000	0.000	0.006
716	0.50	0.40	0.00029	3.0	0.00572	0.20	0.40	0.05	1.01	5.10	100.89	0.05	0.00	0.000	0.000	0.006
717	0.40	0.30	0.00029	3.0	0.00572	0.20	0.61	0.05	1.01	5.10	100.89	0.05	0.00	0.000	0.000	0.006
718	0.30	0.20	0.00029	3.0	0.00572	0.20	0.81	0.05	1.01	5.10	100.89	0.05	0.00	0.000	0.000	0.006
719	0.20	0.10	0.00029	3.0	0.00572	0.20	1.01	0.05	1.01	5.10	100.89	0.05	0.00	0.000	0.000	0.006
TOT AVG					0.0057	1.01		0.05	1.01	25.50	504.46	0.05				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR 1/da	BOD2 DECAT 1/da	BOD2 SETT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAT 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da	
715	0.500	7.55	17.75	0.13	1.25	0.00	0.00	0.00	0.00	0.00	0.94	1.11	1.11	0.06	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
716	0.400	7.55	17.75	0.13	1.25	0.00	0.00	0.00	0.00	0.00	0.94	1.10	1.10	0.06	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
717	0.300	7.55	17.75	0.13	1.25	0.00	0.00	0.00	0.00	0.00	0.94	1.10	1.10	0.06	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
718	0.200	7.55	17.75	0.13	1.25	0.00	0.00	0.00	0.00	0.00	0.94	1.09	1.09	0.06	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
719	0.100	7.44	17.73	0.13	1.25	0.00	0.00	0.00	0.00	0.00	0.94	1.39	1.39	0.05	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE		14.76	0.08	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.50			0.03	0.20	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	
* g/m²/d			** mg/L/day																								

***** WATER QUALITY CONSTITUENT VALUES

ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL	

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

715	0.500	30.00	0.26	527.84	8.90	6.20	2.72	0.00	2.72	0.00	1.57	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																									
716	0.400	30.00	0.26	527.84	8.90	6.27	2.58	0.00	2.58	0.00	1.45	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																									
717	0.300	30.00	0.26	527.84	8.90	6.30	2.48	0.00	2.48	0.00	1.35	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																									
718	0.200	30.00	0.26	527.84	8.90	6.31	2.40	0.00	2.40	0.00	1.28	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																									
719	0.100	30.00	2.82	5101.66	1533.99	5.09	7.05	0.00	7.05	0.00	2.35	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																									

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
715	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
716	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
717	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
718	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
719	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20 DEG C RATE										0.000	0.000	0.000	0.000									0.000	0.000	0.000			

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT TRIBUTARY 8 WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 69 TRIBUTARY 8 - TIDAL BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
720	UPR RCH	0.00029	30.00	2.82	5101.66	1533.99	5.09	7.05	0.00	7.05	0.00	2.35	0.10	0.10	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
720	0.10	0.00	0.00029	3.0	0.00006	19.84	20.85	0.50	10.00	500.00	1000.00	5.00	100.00	0.001	0.063	0.001
TOT AVG					0.0001	19.84		0.50	10.00	500.00	1000.00	5.00				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECAT	BOD1 SETT	ABOD1 DECAT	BOD1 HYDR	BOD2 DECAT	BOD2 SETT	ABOD2 DECAT	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECAT	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECAT	NCM DECAT	NCM SETT			
720	0.000	7.18	1.74	0.14	0.13	0.00	0.00	0.00	0.00	0.00	1.06	1.61	1.61	0.06	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
AVG 20 DEG C RATE				1.40	0.08	0.10	0.00	0.00	0.00	0.00	0.50			0.03	0.10	0.00	0.00	0.00	0.00	0.00	0.00				0.00	0.00	0.00		
* g/m²/d			** mg/L/day																										

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

***** WATER QUALITY CONSTITUENT VALUES

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL	
720	0.000	31.99	3.30	5949.94	1816.85	4.37	8.17	0.00	15.13	0.00	2.61	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	65.2	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
720	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	65.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20 DEG C RATE										0.000	0.000	0.000	0.000									0.000	0.000	0.000			

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT MARINA 1 WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 71 MARINA 1 - TIDAL BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
727	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	2.20	0.00	2.20	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
728	WSTLD	0.00000	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
727	0.20	0.10	0.00028	0.0	0.00001	157.05	157.05	1.20	32.00	3840.00	3200.00	38.40	320.00	0.000	0.054	0.000
728	0.10	0.00	0.00028	0.3	0.00001	156.60	313.65	1.20	32.00	3840.00	3200.00	38.40	640.00	0.000	0.109	0.000
TOT AVG					0.0000	313.65		1.20	32.00	7680.00	6400.00	38.40				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT DECAT 1/da	ABOD1 1/da	BOD1 HYDR DECAT 1/da	BOD2 DECAT 1/da	BOD2 SETT DECAT 1/da	ABOD2 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAT 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da	
727	0.100	7.29	0.71	0.13	0.05	0.00	0.00	0.00	0.00	0.00	1.00	1.40	1.40	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
728	0.000	7.17	0.72	0.14	0.06	0.00	0.00	0.00	0.00	0.00	1.06	1.54	1.54	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG	20 DEG C RATE	0.58	0.08	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.50			0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	

* g/m²/d ** mg/L/day

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL	
727	0.100	30.99	3.41	6140.97	1880.71	4.43	6.16	0.00	6.52	0.00	2.08	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.4	0.0	0.
728	0.000	31.99	3.43	6191.63	1897.59	4.49	7.21	0.00	7.93	0.00	2.25	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.8	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
727	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
728	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20 DEG C RATE										0.000	0.000	0.000	0.000									0.000	0.000	0.000			

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT MARINA 2
REACH NO. 73 MARINA02 - TIDAL

WATER QUALITY/HYDRAULIC MODEL FOR:
BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
730	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	2.20	0.00	2.20	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
746	WSTLD	0.00004	30.00	0.39	753.60	63.30	2.00	128.80	0.00	128.80	0.00	128.80	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
730	1.80	1.70	0.00028	0.0	0.00001	157.05	157.05	1.20	32.00	3840.00	3200.00	38.40	320.00	0.000	0.054	0.000
731	1.70	1.60	0.00028	0.0	0.00001	157.05	314.10	1.20	32.00	3840.00	3200.00	38.40	640.00	0.000	0.109	0.000
732	1.60	1.50	0.00028	0.0	0.00001	157.05	471.14	1.20	32.00	3840.00	3200.00	38.40	960.00	0.001	0.164	0.001
733	1.50	1.40	0.00028	0.0	0.00001	157.05	628.19	1.20	32.00	3840.00	3200.00	38.40	1280.00	0.001	0.218	0.001
734	1.40	1.30	0.00028	0.0	0.00001	157.05	785.24	1.20	32.00	3840.00	3200.00	38.40	1600.00	0.001	0.273	0.001
735	1.30	1.20	0.00028	0.0	0.00001	157.05	942.29	1.20	32.00	3840.00	3200.00	38.40	1920.00	0.001	0.327	0.001
736	1.20	1.10	0.00028	0.0	0.00001	157.05	1099.33	1.20	32.00	3840.00	3200.00	38.40	2240.00	0.002	0.382	0.002
737	1.10	1.00	0.00028	0.0	0.00001	157.05	1256.38	1.20	32.00	3840.00	3200.00	38.40	2560.00	0.002	0.437	0.002
738	1.00	0.90	0.00028	0.0	0.00001	157.05	1413.43	1.20	32.00	3840.00	3200.00	38.40	2880.00	0.002	0.491	0.002
739	0.90	0.80	0.00028	0.0	0.00001	157.05	1570.47	1.20	32.00	3840.00	3200.00	38.40	3200.00	0.002	0.546	0.002
740	0.80	0.70	0.00028	0.0	0.00001	157.05	1727.52	1.20	32.00	3840.00	3200.00	38.40	3520.00	0.003	0.600	0.003
741	0.70	0.60	0.00028	0.0	0.00001	157.05	1884.57	1.20	32.00	3840.00	3200.00	38.40	3840.00	0.003	0.655	0.003
742	0.60	0.50	0.00028	0.0	0.00001	157.05	2041.62	1.20	32.00	3840.00	3200.00	38.40	4160.00	0.003	0.709	0.003
743	0.50	0.40	0.00028	0.0	0.00001	157.05	2198.67	1.20	32.00	3840.00	3200.00	38.40	4480.00	0.003	0.764	0.003
744	0.40	0.30	0.00028	0.0	0.00001	157.05	2355.71	1.20	32.00	3840.00	3200.00	38.40	4800.00	0.004	0.819	0.004
745	0.30	0.20	0.00028	0.0	0.00001	157.05	2512.76	1.20	32.00	3840.00	3200.00	38.40	5120.00	0.004	0.873	0.004
746	0.20	0.10	0.00032	11.7	0.00001	138.63	2651.39	1.20	32.00	3840.00	3200.00	38.40	5440.00	0.004	0.928	0.004
747	0.10	0.00	0.00032	11.7	0.00001	138.63	2790.02	1.20	32.00	3840.00	3200.00	38.40	5760.00	0.004	0.982	0.004
TOT AVG						2790.02		1.20	32.00	69120.01	57600.00	38.40				

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR 1/da	BOD2 DECAT 1/da	BOD2 SETT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR	ORG-N SETT 1/da	NH3-N DECAT 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da		
730	1.700	7.41	0.70	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.95	1.11	1.11	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
731	1.600	7.39	0.70	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.95	1.12	1.12	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
732	1.500	7.38	0.70	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.96	1.13	1.13	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
733	1.400	7.36	0.71	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.97	1.14	1.14	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
734	1.300	7.35	0.71	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.97	1.16	1.16	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
735	1.200	7.33	0.71	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.98	1.17	1.17	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
736	1.100	7.32	0.71	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.99	1.19	1.19	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
737	1.000	7.31	0.71	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.99	1.21	1.21	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
738	0.900	7.29	0.71	0.13	0.05	0.00	0.00	0.00	0.00	0.00	1.00	1.23	1.23	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
739	0.800	7.28	0.71	0.13	0.05	0.00	0.00	0.00	0.00	0.00	1.01	1.25	1.25	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
740	0.700	7.26	0.72	0.13	0.05	0.00	0.00	0.00	0.00	0.00	1.01	1.28	1.28	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
741	0.600	7.25	0.72	0.13	0.05	0.00	0.00	0.00	0.00	0.00	1.02	1.31	1.31	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
742	0.500	7.24	0.72	0.14	0.05	0.00	0.00	0.00	0.00	0.00	1.03	1.34	1.34	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
743	0.400	7.22	0.72	0.14	0.05	0.00	0.00	0.00	0.00	0.00	1.03	1.37	1.37	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
744	0.300	7.21	0.72	0.14	0.05	0.00	0.00	0.00	0.00	0.00	1.04	1.41	1.41	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
745	0.200	7.20	0.72	0.14	0.06	0.00	0.00	0.00	0.00	0.00	1.05	1.46	1.46	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
746	0.100	7.18	0.72	0.14	0.06	0.00	0.00	0.00	0.00	0.00	1.06	1.51	1.51	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
747	0.000	7.17	0.72	0.14	0.06	0.00	0.00	0.00	0.00	0.00	1.06	1.56	1.56	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
AVG 20	DEG C RATE		0.58	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.50			0.03	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00			
*	g/m ² /d		**	mg/L/day																								

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	
730	1.700	30.11	3.34	6018.96	1840.05	5.50	2.53	0.00	2.57	0.00	1.18	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.4	0.0	0.
731	1.600	30.22	3.36	6068.51	1856.57	5.46	2.59	0.00	2.67	0.00	1.20	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.0	0.
732	1.500	30.33	3.38	6098.50	1866.57	5.41	2.66	0.00	2.78	0.00	1.23	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.1	0.0	0.
733	1.400	30.44	3.39	6120.03	1873.75	5.36	2.76	0.00	2.92	0.00	1.26	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.5	0.0	0.
734	1.300	30.55	3.40	6136.84	1879.35	5.30	2.87	0.00	3.07	0.00	1.29	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.9	0.0	0.
735	1.200	30.66	3.41	6150.63	1883.95	5.23	3.00	0.00	3.24	0.00	1.33	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.3	0.0	0.
736	1.100	30.77	3.42	6162.33	1887.85	5.16	3.16	0.00	3.44	0.00	1.37	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.6	0.0	0.
737	1.000	30.88	3.42	6172.49	1891.24	5.09	3.34	0.00	3.66	0.00	1.42	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.0	0.0	0.
738	0.900	30.99	3.43	6181.47	1894.23	5.01	3.55	0.00	3.91	0.00	1.47	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.4	0.0	0.
739	0.800	31.11	3.43	6189.52	1896.91	4.93	3.80	0.00	4.20	0.00	1.53	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.8	0.0	0.
740	0.700	31.22	3.44	6196.81	1899.34	4.85	4.08	0.00	4.52	0.00	1.60	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.2	0.0	0.
741	0.600	31.33	3.44	6203.48	1901.57	4.77	4.40	0.00	4.88	0.00	1.67	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.5	0.0	0.
742	0.500	31.44	3.44	6209.62	1903.61	4.69	4.76	0.00	5.28	0.00	1.74	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.9	0.0	0.
743	0.400	31.55	3.45	6215.31	1905.51	4.63	5.17	0.00	5.74	0.00	1.83	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.3	0.0	0.
744	0.300	31.66	3.45	6220.62	1907.28	4.59	5.64	0.00	6.25	0.00	1.92	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.7	0.0	0.

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

745	0.200	31.77	3.45	6225.58	1908.93	4.57	6.17	0.00	6.82	0.00	2.02	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.0	0.0	0.0
746	0.100	31.88	3.46	6230.25	1910.49	4.59	6.77	0.00	7.45	0.00	2.13	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.4	0.0	0.0
747	0.000	31.99	3.46	6235.22	1912.15	4.66	7.43	0.00	8.15	0.00	2.23	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.8	0.0	0.0

***** PHYTOPLANKTON AND PERIPHYTON DATA

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
730	1.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
731	1.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.8	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
732	1.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.1	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
733	1.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.5	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
734	1.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.9	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
735	1.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.3	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
736	1.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.6	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
737	1.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
738	0.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.4	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
739	0.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.8	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
740	0.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	4.2	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
741	0.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	4.5	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
742	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	4.9	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
743	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	5.3	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
744	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	5.7	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
745	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
746	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.4	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
747	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.8	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT BAYOU PAQUET WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 75 HWY 190 (DD13-PAQUET HEADWATERS) BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
762	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	2.20	0.00	2.20	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
762	WSTLD	0.00002	30.00	0.39	753.60	63.30	2.00	27.60	0.00	27.60	0.00	27.60	0.00	0.00	0.00	0.00	0.00	0.00
763	WSTLD	0.00001	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00	0.00
767	WSTLD	0.00010	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
762	8.60	8.50	0.00030	7.2	0.00581	0.20	0.20	0.05	1.02	5.25	102.24	0.05	0.00	0.000	0.000	0.006
763	8.50	8.40	0.00031	9.5	0.00586	0.20	0.40	0.05	1.03	5.34	103.02	0.05	0.00	0.000	0.000	0.006
764	8.40	8.30	0.00031	9.5	0.00586	0.20	0.59	0.05	1.03	5.34	103.02	0.05	0.00	0.000	0.000	0.006
765	8.30	8.20	0.00031	9.5	0.00586	0.20	0.79	0.05	1.03	5.34	103.02	0.05	0.00	0.000	0.000	0.006
766	8.20	8.10	0.00031	9.5	0.00586	0.20	0.99	0.05	1.03	5.34	103.02	0.05	0.00	0.000	0.000	0.006
767	8.10	8.00	0.00041	31.5	0.00644	0.18	1.17	0.06	1.12	6.42	112.02	0.06	0.00	0.000	0.000	0.006
768	8.00	7.90	0.00041	31.5	0.00644	0.18	1.35	0.06	1.12	6.42	112.02	0.06	0.00	0.000	0.000	0.006
769	7.90	7.80	0.00041	31.5	0.00644	0.18	1.53	0.06	1.12	6.42	112.02	0.06	0.00	0.000	0.000	0.006

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

770	7.80	7.70	0.00041	31.5	0.00644	0.18	1.71	0.06	1.12	6.42	112.02	0.06	0.00	0.000	0.000	0.006
771	7.70	7.60	0.00041	31.5	0.00644	0.18	1.89	0.06	1.12	6.42	112.02	0.06	0.00	0.000	0.000	0.006
772	7.60	7.50	0.00041	31.5	0.00644	0.18	2.07	0.06	1.12	6.42	112.02	0.06	0.00	0.000	0.000	0.006
773	7.50	7.40	0.00041	31.5	0.00644	0.18	2.25	0.06	1.12	6.42	112.02	0.06	0.00	0.000	0.000	0.006
774	7.40	7.30	0.00041	31.5	0.00644	0.18	2.43	0.06	1.12	6.42	112.02	0.06	0.00	0.000	0.000	0.006
775	7.30	7.20	0.00041	31.5	0.00644	0.18	2.61	0.06	1.12	6.42	112.02	0.06	0.00	0.000	0.000	0.006
TOT						2.61				84.37	1522.46					
AVG			0.0062					0.06	1.09			0.06				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECAT	BOD1 SETT	ABOD1 DECAT	BOD1 HYDR	BOD2 DECAT	BOD2 SETT	ABOD2 DECAT	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECAT	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECAT	NCM DECAT	NCM SETT
		mg/L	1/da	1/da	1/da	1/da	1/da	1/da	1/da	1/da	*	*	*	1/da	1/da	1/da	1/da	1/da	1/da	1/da	*	**	**	1/da	1/da	1/da
762	8.500	7.53	17.54	0.13	1.24	0.00	0.00	0.00	0.00	0.00	0.95	1.18	1.18	0.06	1.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
763	8.400	7.51	17.44	0.13	1.23	0.00	0.00	0.00	0.00	0.00	0.96	1.25	1.25	0.06	1.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
764	8.300	7.49	17.49	0.13	1.24	0.00	0.00	0.00	0.00	0.00	0.97	1.22	1.22	0.06	1.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
765	8.200	7.47	17.53	0.13	1.24	0.00	0.00	0.00	0.00	0.00	0.97	1.21	1.21	0.06	1.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
766	8.100	7.45	17.58	0.13	1.24	0.00	0.00	0.00	0.00	0.00	0.98	1.20	1.20	0.06	1.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
767	8.000	7.43	16.11	0.13	1.13	0.00	0.00	0.00	0.00	0.00	0.99	2.03	2.03	0.06	1.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
768	7.900	7.41	16.16	0.13	1.13	0.00	0.00	0.00	0.00	0.00	1.00	1.88	1.88	0.06	1.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
769	7.800	7.39	16.20	0.13	1.14	0.00	0.00	0.00	0.00	0.00	1.01	1.75	1.75	0.06	1.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
770	7.700	7.38	16.24	0.13	1.14	0.00	0.00	0.00	0.00	0.00	1.02	1.64	1.64	0.06	1.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
771	7.600	7.36	16.28	0.14	1.15	0.00	0.00	0.00	0.00	0.00	1.03	1.56	1.56	0.06	1.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
772	7.500	7.34	16.32	0.14	1.15	0.00	0.00	0.00	0.00	0.00	1.04	1.50	1.50	0.06	1.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
773	7.400	7.32	16.36	0.14	1.15	0.00	0.00	0.00	0.00	0.00	1.05	1.44	1.44	0.06	1.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
774	7.300	7.30	16.40	0.14	1.16	0.00	0.00	0.00	0.00	0.00	1.06	1.40	1.40	0.06	1.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
775	7.200	7.28	16.44	0.14	1.16	0.00	0.00	0.00	0.00	0.00	1.07	1.37	1.37	0.06	1.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20	DEG C	RATE	13.64	0.08	0.06	0.00	0.00	0.00	0.00	0.00	0.50			0.03	0.06	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00
*	g/m ² /d		**	mg/L/day																						

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	
762	8.500	30.15	0.27	537.61	11.26	6.08	3.61	0.00	3.61	0.00	2.52	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
763	8.400	30.30	0.27	543.00	12.56	6.06	4.58	0.00	4.58	0.00	3.54	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
764	8.300	30.45	0.27	543.00	12.56	6.09	4.05	0.00	4.05	0.00	3.02	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
765	8.200	30.59	0.27	543.00	12.56	6.10	3.62	0.00	3.62	0.00	2.61	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
766	8.100	30.74	0.27	543.00	12.56	6.11	3.29	0.00	3.29	0.00	2.28	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
767	8.000	30.89	0.30	594.30	24.92	5.06	16.08	0.00	16.08	0.00	15.43	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
768	7.900	31.04	0.30	594.30	24.92	5.19	13.44	0.00	13.44	0.00	12.87	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
769	7.800	31.19	0.30	594.30	24.92	5.33	11.29	0.00	11.29	0.00	10.75	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
770	7.700	31.34	0.30	594.30	24.92	5.45	9.52	0.00	9.52	0.00	9.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
771	7.600	31.49	0.30	594.30	24.92	5.55	8.09	0.00	8.09	0.00	7.56	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
772	7.500	31.63	0.30	594.30	24.92	5.63	6.91	0.00	6.91	0.00	6.36	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
773	7.400	31.78	0.30	594.30	24.92	5.69	5.95	0.00	5.95	0.00	5.38	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

792	5.60	5.50	0.00325	91.3	0.02636	0.04	3.35	0.08	1.56	12.31	156.28	0.12	0.00	0.000	0.000	0.026
793	5.50	5.40	0.00325	91.3	0.02636	0.04	3.40	0.08	1.56	12.31	156.28	0.12	0.00	0.000	0.000	0.026
794	5.40	5.30	0.00325	91.3	0.02636	0.04	3.44	0.08	1.56	12.31	156.28	0.12	0.00	0.000	0.000	0.026
795	5.30	5.20	0.00325	91.3	0.02636	0.04	3.49	0.08	1.56	12.31	156.28	0.12	0.00	0.000	0.000	0.026
796	5.20	5.10	0.00325	91.3	0.02636	0.04	3.53	0.08	1.56	12.31	156.28	0.12	0.00	0.000	0.000	0.026

TOT						0.92				258.56	3281.83					
AVG					0.0264			0.08	1.56			0.12				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAR RATE	BOD1 DECA	BOD1 SETT	ABOD1 DECA	BOD1 HYDR	BOD2 DECA	BOD2 SETT	ABOD2 DECA	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECA	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECA	NCM DECA	NCM SETT
		mg/L	1/da	1/da	1/da	1/da	1/da	1/da	1/da	1/da	*	*	*	1/da	1/da	1/da	*	1/da	1/da	1/da	*	**	**	1/da	1/da	1/da
776	7.100	7.28	16.46	0.14	0.85	0.00	0.00	0.00	0.00	0.00	1.07	1.23	1.23	0.07	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
777	7.000	7.28	16.46	0.14	0.85	0.00	0.00	0.00	0.00	0.00	1.07	1.23	1.23	0.07	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
778	6.900	7.28	16.46	0.14	0.85	0.00	0.00	0.00	0.00	0.00	1.07	1.23	1.23	0.07	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
779	6.800	7.28	16.46	0.14	0.85	0.00	0.00	0.00	0.00	0.00	1.07	1.23	1.23	0.07	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
780	6.700	7.28	16.46	0.14	0.85	0.00	0.00	0.00	0.00	0.00	1.07	1.23	1.23	0.07	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
781	6.600	7.28	16.46	0.14	0.85	0.00	0.00	0.00	0.00	0.00	1.07	1.23	1.23	0.07	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
782	6.500	7.28	16.46	0.14	0.85	0.00	0.00	0.00	0.00	0.00	1.07	1.23	1.23	0.07	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
783	6.400	7.28	16.46	0.14	0.85	0.00	0.00	0.00	0.00	0.00	1.07	1.23	1.23	0.07	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
784	6.300	7.28	16.46	0.14	0.85	0.00	0.00	0.00	0.00	0.00	1.07	1.23	1.23	0.07	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
785	6.200	7.28	16.46	0.14	0.85	0.00	0.00	0.00	0.00	0.00	1.07	1.23	1.23	0.07	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
786	6.100	7.28	16.46	0.14	0.85	0.00	0.00	0.00	0.00	0.00	1.07	1.23	1.23	0.07	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
787	6.000	7.28	16.46	0.14	0.85	0.00	0.00	0.00	0.00	0.00	1.07	1.23	1.23	0.07	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
788	5.900	7.28	16.46	0.14	0.85	0.00	0.00	0.00	0.00	0.00	1.07	1.23	1.23	0.07	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
789	5.800	7.28	16.46	0.14	0.85	0.00	0.00	0.00	0.00	0.00	1.07	1.23	1.23	0.07	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
790	5.700	7.28	16.46	0.14	0.85	0.00	0.00	0.00	0.00	0.00	1.07	1.23	1.23	0.07	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
791	5.600	7.28	16.46	0.14	0.85	0.00	0.00	0.00	0.00	0.00	1.07	1.23	1.23	0.07	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
792	5.500	7.28	16.46	0.14	0.85	0.00	0.00	0.00	0.00	0.00	1.07	1.23	1.23	0.07	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
793	5.400	7.28	16.46	0.14	0.85	0.00	0.00	0.00	0.00	0.00	1.07	1.23	1.23	0.07	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
794	5.300	7.28	16.46	0.14	0.85	0.00	0.00	0.00	0.00	0.00	1.07	1.23	1.23	0.07	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
795	5.200	7.28	16.46	0.14	0.85	0.00	0.00	0.00	0.00	0.00	1.07	1.23	1.23	0.07	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
796	5.100	7.28	16.46	0.14	0.85	0.00	0.00	0.00	0.00	0.00	1.07	1.23	1.23	0.07	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

AVG 20 DEG C RATE	13.21	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.50				0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00
-------------------	-------	------	------	------	------	------	------	------	------	------	--	--	--	------	------	------	------	------	------	------	------	--	--	------	------	------

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO	BOD1	BOD2	EBOD1	EBOD2	ORG-N	NH3-N	NO3-N	TOT-N	EORG-N	ETOT-N	ORG-P	PO4-P	TOT-P	EORG-P	ETOT-P	CHL A	PERIP	COLI	
						mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	g/m ²	#/100mL
776	7.100	32.08	0.27	530.25	9.48	6.38	2.46	0.00	2.46	0.00	1.32	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
777	7.000	32.08	0.27	530.25	9.48	6.35	2.45	0.00	2.45	0.00	1.31	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
778	6.900	32.08	0.27	530.25	9.48	6.33	2.45	0.00	2.45	0.00	1.30	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
779	6.800	32.08	0.27	530.25	9.48	6.32	2.45	0.00	2.45	0.00	1.29	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
780	6.700	32.08	0.27	530.25	9.48	6.32	2.44	0.00	2.44	0.00	1.28	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
781	6.600	32.08	0.27	530.25	9.48	6.31	2.44	0.00	2.44	0.00	1.28	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
782	6.500	32.08	0.27	530.25	9.48	6.31	2.44	0.00	2.44	0.00	1.27	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
783	6.400	32.08	0.27	530.25	9.48	6.31	2.43	0.00	2.43	0.00	1.26	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
784	6.300	32.08	0.27	530.25	9.48	6.31	2.43	0.00	2.43	0.00	1.25	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

806	UPR	RCH	0.00325	32.08	0.27	530.25	9.48	6.31	2.40	0.00	2.40	0.00	1.19	0.10	0.10	0.00	0.00	0.00	0.00
806	TRIB		0.00029	32.08	0.26	523.02	7.74	5.97	2.12	0.00	2.12	0.00	0.98	0.10	0.10	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
806	5.10	5.00	0.00353	84.0	0.02713	0.04	3.57	0.08	1.60	13.02	160.28	0.13	0.00	0.000	0.000	0.027
807	5.00	4.90	0.00353	84.0	0.02713	0.04	3.61	0.08	1.60	13.02	160.28	0.13	0.00	0.000	0.000	0.027
808	4.90	4.80	0.00353	84.0	0.02713	0.04	3.66	0.08	1.60	13.02	160.28	0.13	0.00	0.000	0.000	0.027
809	4.80	4.70	0.00353	84.0	0.02713	0.04	3.70	0.08	1.60	13.02	160.28	0.13	0.00	0.000	0.000	0.027
810	4.70	4.60	0.00353	84.0	0.02713	0.04	3.74	0.08	1.60	13.02	160.28	0.13	0.00	0.000	0.000	0.027
811	4.60	4.50	0.00353	84.0	0.02713	0.04	3.79	0.08	1.60	13.02	160.28	0.13	0.00	0.000	0.000	0.027
812	4.50	4.40	0.00353	84.0	0.02713	0.04	3.83	0.08	1.60	13.02	160.28	0.13	0.00	0.000	0.000	0.027
813	4.40	4.30	0.00353	84.0	0.02713	0.04	3.87	0.08	1.60	13.02	160.28	0.13	0.00	0.000	0.000	0.027
814	4.30	4.20	0.00353	84.0	0.02713	0.04	3.91	0.08	1.60	13.02	160.28	0.13	0.00	0.000	0.000	0.027
815	4.20	4.10	0.00353	84.0	0.02713	0.04	3.96	0.08	1.60	13.02	160.28	0.13	0.00	0.000	0.000	0.027
816	4.10	4.00	0.00353	84.0	0.02713	0.04	4.00	0.08	1.60	13.02	160.28	0.13	0.00	0.000	0.000	0.027
817	4.00	3.90	0.00353	84.0	0.02713	0.04	4.04	0.08	1.60	13.02	160.28	0.13	0.00	0.000	0.000	0.027
818	3.90	3.80	0.00353	84.0	0.02713	0.04	4.08	0.08	1.60	13.02	160.28	0.13	0.00	0.000	0.000	0.027
TOT AVG					0.0271	0.55		0.08	1.60	169.22	2083.67	0.13				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECAY	BOD1 SETT	ABOD1 DECAY	BOD1 HYDR	BOD2 DECAY	BOD2 SETT	ABOD2 DECAY	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECAY	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECAY	NCM DECAY	NCM SETT			
806	5.000	7.28	16.14	0.14	0.82	0.00	0.00	0.00	0.00	0.00	1.07	1.23	1.23	0.07	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
807	4.900	7.28	16.14	0.14	0.82	0.00	0.00	0.00	0.00	0.00	1.07	1.23	1.23	0.07	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
808	4.800	7.28	16.14	0.14	0.82	0.00	0.00	0.00	0.00	0.00	1.07	1.23	1.23	0.07	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
809	4.700	7.28	16.14	0.14	0.82	0.00	0.00	0.00	0.00	0.00	1.07	1.23	1.23	0.07	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
810	4.600	7.28	16.14	0.14	0.82	0.00	0.00	0.00	0.00	0.00	1.07	1.23	1.23	0.07	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
811	4.500	7.28	16.14	0.14	0.82	0.00	0.00	0.00	0.00	0.00	1.07	1.23	1.23	0.07	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
812	4.400	7.28	16.14	0.14	0.82	0.00	0.00	0.00	0.00	0.00	1.07	1.23	1.23	0.07	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
813	4.300	7.28	16.14	0.14	0.82	0.00	0.00	0.00	0.00	0.00	1.07	1.23	1.23	0.07	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
814	4.200	7.28	16.14	0.14	0.82	0.00	0.00	0.00	0.00	0.00	1.07	1.23	1.23	0.07	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
815	4.100	7.28	16.14	0.14	0.82	0.00	0.00	0.00	0.00	0.00	1.07	1.23	1.23	0.07	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
816	4.000	7.28	16.14	0.14	0.82	0.00	0.00	0.00	0.00	0.00	1.07	1.23	1.23	0.07	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
817	3.900	7.28	16.14	0.14	0.82	0.00	0.00	0.00	0.00	0.00	1.07	1.23	1.23	0.07	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
818	3.800	7.28	16.14	0.14	0.82	0.00	0.00	0.00	0.00	0.00	1.07	1.23	1.23	0.07	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
AVG 20	DEG C	RATE	12.95	0.08	0.05	0.00	0.00	0.00	0.00	0.00	0.50			0.03	0.05	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00		
*	g/m ² /d		**	mg/L/day																									

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO	BOD1	BOD2	EBOD1	EBOD2	ORG-N	NH3-N	NO3-N	TOT-N	EORG-N	ETOT-N	ORG-P	PO4-P	TOT-P	EORG-P	ETOT-P	CHL A	PERIP	COLI
806	5.000	32.08	0.26	529.66	9.34	6.30	2.38	0.00	2.38	0.00	1.16	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
807	4.900	32.08	0.26	529.66	9.34	6.31	2.38	0.00	2.38	0.00	1.16	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
808	4.800	32.08	0.26	529.66	9.34	6.31	2.39	0.00	2.39	0.00	1.15	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
809	4.700	32.08	0.26	529.66	9.34	6.32	2.39	0.00	2.39	0.00	1.14	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

839	3.50	3.40	0.00576	85.3	0.03203	0.04	4.23	0.10	1.86	17.98	185.62	0.18	0.00	0.000	0.000	0.032
TOT										71.91	742.48	0.18				
AVG				0.0320				0.10	1.86							

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECA	BOD1 SETT	ABOD1 DECA	BOD1 HYDR	BOD2 DECA	BOD2 SETT	ABOD2 DECA	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECA	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECA	NCM DECA	NCM SETT	
		mg/L	1/da	1/da	1/da	1/da	1/da	1/da	1/da	1/da	*	*	*	1/da	1/da	1/da	*	1/da	1/da	1/da	*	**	**	1/da	1/da	1/da	
836	3.700	7.28	14.43	0.14	0.69	0.00	0.00	0.00	0.00	0.00	1.07	1.72	1.72	0.06	0.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
837	3.600	7.28	14.43	0.14	0.69	0.00	0.00	0.00	0.00	0.00	1.07	1.70	1.70	0.06	0.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
838	3.500	7.28	14.43	0.14	0.69	0.00	0.00	0.00	0.00	0.00	1.07	1.69	1.69	0.06	0.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
839	3.400	7.27	14.43	0.14	0.69	0.00	0.00	0.00	0.00	0.00	1.07	1.94	1.94	0.06	0.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20	DEG C	RATE	11.58	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.50			0.03	0.13	0.00	0.00	0.00	0.00	0.00	0.00				0.00	0.00	0.00
*	g/m ² /d		**	mg/L/day																							

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO	BOD1	BOD2	EBOD1	EBOD2	ORG-N	NH3-N	NO3-N	TOT-N	EORG-N	ETOT-N	ORG-P	PO4-P	TOT-P	EORG-P	ETOT-P	CHL A	PERIP	COLI		
		deg C	ppt		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	g/m ²	#/100mL	
836	3.700	32.08	0.33	642.39	20.13	5.70	9.78	0.00	10.17	0.00	1.07	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.7	0.0	0.
837	3.600	32.08	0.33	642.39	20.13	5.79	9.54	0.00	10.32	0.00	1.07	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.3	0.0	0.
838	3.500	32.08	0.33	642.39	20.13	5.86	9.30	0.00	10.47	0.00	1.07	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.0	0.0	0.
839	3.400	32.08	0.72	1352.56	260.21	4.43	13.00	0.00	14.56	0.00	2.68	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.6	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE	SECCHI DEPTH	PHYT N	PHYT LIT	PHYT N	PHYT P	PHYT N&P	PHYT TOT	PHYT GROW	PHYT RESP	PHYT DEATH	PHYT SETT	PHYT P/R	PHYTO	PERI N	PERI LIT	PERI N	PERI P	PERI N&P	PERI SPC	PERI TOT	PERI GROW	PERI RESP	PERI DEATH	PERI P/R	PERIP
		frac	m	PREF	LIM	LIM	LIM	LIM	LIM	1/da	1/da	1/da	1/da	RATIO	µg/L	PREF	LIM	LIM	LIM	LIM	LIM	LIM	1/da	1/da	1/da	RATIO	g/m ²
836	3.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
837	3.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
838	3.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	11.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
839	3.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20	DEG C	RATE								0.000	0.000	0.000	0.000										0.000	0.000	0.000		

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT BAYOU PAQUET
REACH NO. 81 PAQUET TIDAL REACH TO BP02

WATER QUALITY/HYDRAULIC MODEL FOR:
BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO	BOD1	BOD2	EBOD1	EBOD2	ORG-N	NH3-N	NO3-N	PO4-P	CHL A	COLI	NCM
							mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	#/100mL	
840	UPR RCH	0.00576	32.08	0.72	1352.56	260.21	4.43	13.00	0.00	14.56	0.00	2.68	0.10	0.10	0.00	14.60	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
840	3.40	3.30	0.00576	85.3	0.00028	4.18	8.41	1.10	18.90	2079.00	1890.00	20.79	189.00	0.000	0.067	0.000
841	3.30	3.20	0.00576	85.3	0.00028	4.18	12.58	1.10	18.90	2079.00	1890.00	20.79	378.00	0.001	0.114	0.001
842	3.20	3.10	0.00576	85.3	0.00028	4.18	16.76	1.10	18.90	2079.00	1890.00	20.79	567.00	0.001	0.167	0.001
843	3.10	3.00	0.00576	85.3	0.00028	4.18	20.94	1.10	18.90	2079.00	1890.00	20.79	756.00	0.001	0.221	0.001
844	3.00	2.90	0.00576	85.3	0.00028	4.18	25.12	1.10	18.90	2079.00	1890.00	20.79	945.00	0.001	0.276	0.001
845	2.90	2.80	0.00576	85.3	0.00028	4.18	29.30	1.10	18.90	2079.00	1890.00	20.79	1134.00	0.002	0.331	0.002
846	2.80	2.70	0.00576	85.3	0.00028	4.18	33.47	1.10	18.90	2079.00	1890.00	20.79	1323.00	0.002	0.386	0.002
847	2.70	2.60	0.00576	85.3	0.00028	4.18	37.65	1.10	18.90	2079.00	1890.00	20.79	1512.00	0.002	0.441	0.002
848	2.60	2.50	0.00576	85.3	0.00028	4.18	41.83	1.10	18.90	2079.00	1890.00	20.79	1701.00	0.002	0.496	0.002
849	2.50	2.40	0.00576	85.3	0.00028	4.18	46.01	1.10	18.90	2079.00	1890.00	20.79	1890.00	0.003	0.551	0.003
TOT AVG					0.0003	41.78		1.10	18.90	20790.00	18900.00	20.79				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECAT	BOD1 SETT	ABOD1 DECAT	BOD1 HYDR	BOD2 DECAT	BOD2 SETT	ABOD2 DECAT	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECAT	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECAT	NCM DECAT	NCM SETT	
840	3.300	7.25	0.79	0.14	0.06	0.00	0.00	0.00	0.00	0.00	0.68	1.77	1.77	0.05	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
841	3.200	7.24	0.79	0.14	0.06	0.00	0.00	0.00	0.00	0.00	0.68	1.86	1.86	0.05	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
842	3.100	7.24	0.79	0.13	0.06	0.00	0.00	0.00	0.00	0.00	0.68	1.90	1.90	0.04	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
843	3.000	7.23	0.79	0.13	0.06	0.00	0.00	0.00	0.00	0.00	0.68	1.93	1.93	0.04	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
844	2.900	7.23	0.79	0.13	0.06	0.00	0.00	0.00	0.00	0.00	0.68	1.93	1.93	0.03	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
845	2.800	7.22	0.79	0.13	0.06	0.00	0.00	0.00	0.00	0.00	0.68	1.92	1.92	0.03	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
846	2.700	7.22	0.79	0.13	0.06	0.00	0.00	0.00	0.00	0.00	0.68	1.90	1.90	0.04	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
847	2.600	7.21	0.79	0.13	0.06	0.00	0.00	0.00	0.00	0.00	0.68	1.88	1.88	0.04	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
848	2.500	7.21	0.79	0.14	0.06	0.00	0.00	0.00	0.00	0.00	0.68	1.84	1.84	0.04	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
849	2.400	7.20	0.79	0.14	0.06	0.00	0.00	0.00	0.00	0.00	0.68	1.80	1.80	0.05	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.64	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.32			0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00
* g/m ² /d				** mg/L/day																							

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL
840	3.300	32.08	1.05	1937.40	457.91	2.69	16.33	0.00	17.89	0.00	4.04	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.6	0.0	0.
841	3.200	32.08	1.27	2332.12	591.35	2.14	17.63	0.00	19.19	0.00	4.65	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.6	0.0	0.
842	3.100	32.08	1.46	2664.32	703.65	1.93	18.31	0.00	19.87	0.00	5.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.6	0.0	0.
843	3.000	32.08	1.62	2952.46	801.06	1.86	18.63	0.00	20.19	0.00	5.19	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.6	0.0	0.
844	2.900	32.08	1.76	3209.71	888.02	1.84	18.70	0.00	20.26	0.00	5.28	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.6	0.0	0.
845	2.800	32.08	1.90	3444.03	967.23	1.84	18.58	0.00	20.14	0.00	5.27	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.6	0.0	0.
846	2.700	32.08	2.02	3660.54	1040.42	1.86	18.30	0.00	19.86	0.00	5.21	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.6	0.0	0.
847	2.600	32.08	2.13	3862.72	1108.77	1.90	17.89	0.00	19.45	0.00	5.10	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.6	0.0	0.
848	2.500	32.08	2.24	4053.06	1173.12	1.95	17.36	0.00	18.92	0.00	4.94	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.6	0.0	0.
849	2.400	32.08	2.34	4244.34	1244.44	2.00	16.77	0.00	17.89	0.00	4.74	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.6	0.0	0.

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

849 2.400 32.08 2.34 4233.41 1234.09 2.02 16.73 0.00 18.29 0.00 4.76 0.10 0.10 0.00 0.00 0.00 0.00 0.00 0.00 0.00 14.6 0.0 0.0

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
840	3.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
841	3.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
842	3.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
843	3.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
844	2.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
845	2.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
846	2.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
847	2.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
848	2.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
849	2.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT BAYOU PAQUET WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 82 PAQUET FROM BP02 TO BP03 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
850	UPR RCH	0.00576	32.08	2.34	4233.41	1234.09	2.02	16.73	0.00	18.29	0.00	4.76	0.10	0.10	0.00	14.60	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
850	2.40	2.30	0.00576	85.3	0.00031	3.68	49.68	1.00	18.29	1829.00	1829.00	18.29	2072.90	0.003	0.635	0.003
851	2.30	2.20	0.00576	85.3	0.00031	3.68	53.36	1.00	18.29	1829.00	1829.00	18.29	2255.80	0.003	0.691	0.003
852	2.20	2.10	0.00576	85.3	0.00031	3.68	57.04	1.00	18.29	1829.00	1829.00	18.29	2438.70	0.004	0.747	0.004
853	2.10	2.00	0.00576	85.3	0.00031	3.68	60.71	1.00	18.29	1829.00	1829.00	18.29	2621.60	0.004	0.804	0.004
854	2.00	1.90	0.00576	85.3	0.00031	3.68	64.39	1.00	18.29	1829.00	1829.00	18.29	2804.50	0.004	0.860	0.004
855	1.90	1.80	0.00576	85.3	0.00031	3.68	68.06	1.00	18.29	1829.00	1829.00	18.29	2987.40	0.005	0.916	0.005
856	1.80	1.70	0.00576	85.3	0.00031	3.68	71.74	1.00	18.29	1829.00	1829.00	18.29	3170.30	0.005	0.972	0.005
857	1.70	1.60	0.00576	85.3	0.00031	3.68	75.41	1.00	18.29	1829.00	1829.00	18.29	3353.20	0.005	1.028	0.005
TOT AVG						29.41				14632.00	14632.00					
				0.0003				1.00	18.29			18.29				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR 1/da	BOD2 DECAT 1/da	BOD2 SETT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAT 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da	
850	2.300	7.20	1.00	0.14	0.07	0.00	0.00	0.00	0.00	0.00	1.63	2.69	2.69	0.05	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
851	2.200	7.20	1.00	0.14	0.07	0.00	0.00	0.00	0.00	0.00	1.63	2.65	2.65	0.05	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
852	2.100	7.19	1.00	0.14	0.07	0.00	0.00	0.00	0.00	0.00	1.63	2.61	2.61	0.05	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
858	1.60	1.50	0.00576	85.3	0.00018	6.43	81.85	1.50	21.34	3201.00	2134.00	32.01	3566.60	0.003	0.876	0.003
859	1.50	1.40	0.00576	85.3	0.00018	6.43	88.28	1.50	21.34	3201.00	2134.00	32.01	3780.00	0.003	0.929	0.003
860	1.40	1.30	0.00576	85.3	0.00018	6.43	94.71	1.50	21.34	3201.00	2134.00	32.01	3993.40	0.004	0.981	0.004
TOT AVG					0.0002	19.30		1.50	21.34	9603.00	6402.00	32.01				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECAT	BOD1 SETT	ABOD1 DECAT	BOD1 HYDR	BOD2 DECAT	BOD2 SETT	ABOD2 DECAT	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECAT	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECAT	NCM DECAT	NCM SETT		
858	1.500	7.17	0.75	0.14	0.04	0.00	0.00	0.00	0.00	0.00	1.28	2.16	2.16	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
859	1.400	7.17	0.75	0.14	0.04	0.00	0.00	0.00	0.00	0.00	1.28	2.15	2.15	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
860	1.300	7.17	0.75	0.14	0.04	0.00	0.00	0.00	0.00	0.00	1.28	2.15	2.15	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20	DEG C RATE	0.61	0.08	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.60			0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00		

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	
858	1.500	32.07	3.15	5676.57	1721.95	2.83	13.19	0.00	14.72	0.00	4.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.3	0.0	0.
859	1.400	32.07	3.20	5776.92	1755.87	2.93	13.09	0.00	14.58	0.00	4.01	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.9	0.0	0.
860	1.300	32.07	3.26	5873.65	1788.57	3.07	13.00	0.00	14.46	0.00	4.02	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.6	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²	
858	1.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0
859	1.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	13.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0
860	1.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	13.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	
20	DEG C RATE									0.000	0.000	0.000	0.000														

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT BAYOU PAQUET WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 85 PAQUET FROM TRIB 24 TO TRIB 25 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM	TYPE	FLOW	TEMP	SALN	COND	CL	DO	BOD1	BOD2	EBOD1	EBOD2	ORG-N	NH3-N	NO3-N	PO4-P	CHL A	COLI	NCM
------	------	------	------	------	------	----	----	------	------	-------	-------	-------	-------	-------	-------	-------	------	-----

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

NO.		deg C	ppt	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	#/100mL		
865	UPR RCH	0.00576	32.07	3.26	5873.65	1788.57	3.07	13.00	0.00	14.46	0.00	4.02	0.10	0.10	0.00	13.60	0.00	0.00
865	TRIB	0.00028	32.07	3.30	5948.50	1813.93	3.32	12.20	0.00	13.66	0.00	3.88	0.10	0.10	0.00	13.60	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
865	1.30	1.20	0.00604	81.3	0.00019	6.13	100.85	1.50	21.34	3201.00	2134.00	32.01	5010.80	0.004	1.232	0.004
866	1.20	1.10	0.00604	81.3	0.00019	6.13	106.98	1.50	21.34	3201.00	2134.00	32.01	5224.20	0.005	1.284	0.005
867	1.10	1.00	0.00604	81.3	0.00019	6.13	113.11	1.50	21.34	3201.00	2134.00	32.01	5437.60	0.005	1.337	0.005
TOT AVG					0.0002	18.39		1.50	21.34	9603.00	6402.00	32.01				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECA	BOD1 SETT	ABOD1 DECA	BOD1 HYDR	BOD2 DECA	BOD2 SETT	ABOD2 DECA	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N NH3-N SETT	NH3-N NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECA	NCM DECA	NCM SETT		
865	1.200	7.14	0.76	0.14	0.04	0.00	0.00	0.00	0.00	0.00	0.65	1.52	1.52	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
866	1.100	7.11	0.76	0.14	0.04	0.00	0.00	0.00	0.00	0.00	0.66	1.54	1.54	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
867	1.000	7.09	0.76	0.14	0.05	0.00	0.00	0.00	0.00	0.00	0.67	1.55	1.55	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.61	0.08	0.01	0.00	0.00	0.00	0.00	0.00	0.30			0.03	0.01	0.00	0.00	0.00	0.00	0.00				0.00	0.00	0.00	

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL	
865	1.200	32.29	3.30	5958.70	1817.32	3.23	12.94	0.00	14.39	0.00	4.03	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.6	0.0	0.
866	1.100	32.50	3.35	6038.54	1844.29	3.34	13.04	0.00	14.49	0.00	4.05	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.6	0.0	0.
867	1.000	32.72	3.39	6116.34	1870.57	3.47	13.03	0.00	14.48	0.00	4.02	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.6	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
865	1.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	13.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
866	1.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	13.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
867	1.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	13.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20 DEG C RATE										0.000	0.000	0.000	0.000										0.000	0.000	0.000		

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT BAYOU PAQUET
REACH NO. 88 PAQUET FROM TRIB 25 TO BP04

WATER QUALITY/HYDRAULIC MODEL FOR:
BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

***** REACH INPUTS

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
878	UPR RCH	0.00604	32.72	3.39	6116.34	1870.57	3.47	13.03	0.00	14.48	0.00	4.02	0.10	0.10	0.00	13.60	0.00	0.00
878	TRIB	0.00028	32.72	3.42	6174.62	1890.29	3.61	12.21	0.00	13.66	0.00	3.82	0.10	0.10	0.00	13.60	0.00	0.00

***** HYDRAULIC PARAMETER VALUES

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
878	1.00	0.90	0.00633	77.6	0.00014	8.37	121.47	1.50	30.48	4572.00	3048.00	45.72	7854.60	0.005	1.353	0.005
879	0.90	0.80	0.00633	77.6	0.00014	8.37	129.84	1.50	30.48	4572.00	3048.00	45.72	8159.40	0.005	1.405	0.005
880	0.80	0.70	0.00633	77.6	0.00014	8.37	138.21	1.50	30.48	4572.00	3048.00	45.72	8464.20	0.005	1.458	0.005
881	0.70	0.60	0.00633	77.6	0.00014	8.37	146.57	1.50	30.48	4572.00	3048.00	45.72	8769.00	0.005	1.511	0.005
882	0.60	0.50	0.00633	77.6	0.00014	8.37	154.94	1.50	30.48	4572.00	3048.00	45.72	9073.80	0.006	1.563	0.006
883	0.50	0.40	0.00633	77.6	0.00014	8.37	163.30	1.50	30.48	4572.00	3048.00	45.72	9378.60	0.006	1.616	0.006
884	0.40	0.30	0.00633	77.6	0.00014	8.37	171.67	1.50	30.48	4572.00	3048.00	45.72	9683.40	0.006	1.668	0.006
885	0.30	0.20	0.00633	77.6	0.00014	8.37	180.04	1.50	30.48	4572.00	3048.00	45.72	9988.20	0.006	1.721	0.006
TOT AVG					0.0001	66.93				36576.00	24384.00					
								1.50	30.48			45.72				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECAT	BOD1 SETT	ABOD1 DECAT	BOD1 HYDR	BOD2 DECAT	BOD2 SETT	ABOD2 DECAT	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECAT	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECAT	NCM DECAT	NCM SETT	
878	0.900	7.08	0.76	0.14	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.87	0.87	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
879	0.800	7.08	0.76	0.14	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.89	0.89	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
880	0.700	7.08	0.76	0.14	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.89	0.89	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
881	0.600	7.08	0.76	0.14	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.88	0.88	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
882	0.500	7.08	0.76	0.14	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.86	0.86	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
883	0.400	7.08	0.76	0.14	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.84	0.84	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
884	0.300	7.08	0.76	0.14	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.81	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
885	0.200	7.08	0.76	0.14	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.77	0.77	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
AVG 20	DEG C RATE	0.61	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	
*	g/m²/d		**	mg/L/day																							

***** WATER QUALITY CONSTITUENT VALUES

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL
878	0.900	32.72	3.43	6179.61	1891.95	3.60	12.94	0.00	14.39	0.00	3.97	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.6	0.0	0.
879	0.800	32.72	3.46	6235.27	1910.74	3.71	13.10	0.00	14.55	0.00	3.95	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.6	0.0	0.
880	0.700	32.72	3.49	6289.42	1929.02	3.82	13.12	0.00	14.57	0.00	3.89	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.6	0.0	0.
881	0.600	32.72	3.52	6342.16	1946.82	3.95	13.02	0.00	14.47	0.00	3.80	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.6	0.0	0.
882	0.500	32.72	3.55	6393.56	1964.18	4.10	12.79	0.00	14.24	0.00	3.66	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.6	0.0	0.

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

883	0.400	32.72	3.57	6443.72	1981.11	4.28	12.45	0.00	13.90	0.00	3.48	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.6	0.0	0.
884	0.300	32.72	3.60	6492.69	1997.64	4.47	11.99	0.00	13.44	0.00	3.27	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.6	0.0	0.
885	0.200	32.72	3.63	6540.54	2013.80	4.70	11.41	0.00	12.86	0.00	3.02	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.6	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
878	0.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	13.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
879	0.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	13.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
880	0.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	13.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
881	0.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	13.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
882	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	13.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
883	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	13.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
884	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	13.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
885	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	13.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT BAYOU PAQUET WATER QUALITY/HYDRAULIC MODEL FOR:
REACH NO. 89 PAQUET FROM BP04 TO LIBERTY BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
886	UPR RCH	0.00633	32.72	3.63	6540.54	2013.80	4.70	11.41	0.00	12.86	0.00	3.02	0.10	0.10	0.00	13.60	0.00	0.00

***** HYDRAULIC PARAMETER VALUES

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
886	0.20	0.10	0.00633	77.6	0.00014	8.37	188.40	1.50	30.48	4572.00	3048.00	45.72	10293.00	0.006	1.773	0.006
887	0.10	0.00	0.00633	77.6	0.00014	8.37	196.77	1.50	30.48	4572.00	3048.00	45.72	10597.80	0.007	1.826	0.007
TOT AVG					0.0001	16.73		1.50	30.48	9144.00	6096.00	45.72				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT DECAT 1/da	ABOD1 1/da	BOD1 HYDR DECAT 1/da	BOD2 DECAT 1/da	BOD2 SETT DECAT 1/da	ABOD2 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR SETT 1/da	ORG-N NH3-N DECAT 1/da	ORG-N NH3-N SRCE RATE 1/da	DENIT RATE 1/da	ORG-P HYDR SETT 1/da	ORG-P SRCE 1/da	PO4 PROD **	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da	
886	0.100	7.21	0.75	0.14	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.71	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
887	0.000	7.35	0.73	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.58	0.58	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.61	0.08	0.02	0.00	0.00	0.00	0.00	0.00	0.00			0.03	0.02	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00		

* g/m²/d ** mg/L/day

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL	
886	0.100	31.58	3.66	6587.34	2029.59	4.96	10.72	0.00	11.81	0.00	2.73	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.2	0.0	0.
887	0.000	30.44	3.68	6633.12	2045.05	5.24	9.04	0.00	9.77	0.00	2.26	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.8	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
886	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
887	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT DRAINAGE DITCH 16
 REACH NO. 77 DD16

WATER QUALITY/HYDRAULIC MODEL FOR:
 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
797	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	2.20	0.00	2.20	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
797	WSTLD	0.00000	30.00	0.39	753.60	63.30	2.00	6.90	0.00	6.90	0.00	6.90	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
797	0.90	0.80	0.00029	0.9	0.00568	0.20	0.20	0.05	1.00	5.03	100.25	0.05	0.00	0.000	0.000	0.006
798	0.80	0.70	0.00029	0.9	0.00568	0.20	0.41	0.05	1.00	5.03	100.25	0.05	0.00	0.000	0.000	0.006
799	0.70	0.60	0.00029	0.9	0.00568	0.20	0.61	0.05	1.00	5.03	100.25	0.05	0.00	0.000	0.000	0.006
800	0.60	0.50	0.00029	0.9	0.00568	0.20	0.82	0.05	1.00	5.03	100.25	0.05	0.00	0.000	0.000	0.006
801	0.50	0.40	0.00029	0.9	0.00568	0.20	1.02	0.05	1.00	5.03	100.25	0.05	0.00	0.000	0.000	0.006
802	0.40	0.30	0.00029	0.9	0.00568	0.20	1.22	0.05	1.00	5.03	100.25	0.05	0.00	0.000	0.000	0.006
803	0.30	0.20	0.00029	0.9	0.00568	0.20	1.43	0.05	1.00	5.03	100.25	0.05	0.00	0.000	0.000	0.006
804	0.20	0.10	0.00029	0.9	0.00568	0.20	1.63	0.05	1.00	5.03	100.25	0.05	0.00	0.000	0.000	0.006
805	0.10	0.00	0.00029	0.9	0.00568	0.20	1.83	0.05	1.00	5.03	100.25	0.05	0.00	0.000	0.000	0.006
TOT AVG						1.83				45.26	902.28		0.05			

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR 1/da	BOD2 DECAT 1/da	BOD2 SETT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAT 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da
----------	-------------	----------	-----------------	-----------------	----------------	------------------	----------------	-----------------	----------------	------------------	------------	------------	------------	-----------------	-----------------	------------------	--------------	-----------------	-----------------	-----------------	------------	---------------	---------------	-----------------	----------------	---------------

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

***** REACH INPUTS

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
819	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	2.20	0.00	2.20	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
819	WSTLD	0.00195	30.00	0.45	864.70	41.60	5.00	85.00	0.00	85.00	0.00	2.41	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
819	1.70	1.60	0.00223	87.3	0.01142	0.10	0.10	0.11	1.86	19.51	185.68	0.20	0.00	0.000	0.000	0.011
820	1.60	1.50	0.00223	87.3	0.01142	0.10	0.20	0.11	1.86	19.51	185.68	0.20	0.00	0.000	0.000	0.011
821	1.50	1.40	0.00223	87.3	0.01142	0.10	0.30	0.11	1.86	19.51	185.68	0.20	0.00	0.000	0.000	0.011
822	1.40	1.30	0.00223	87.3	0.01142	0.10	0.41	0.11	1.86	19.51	185.68	0.20	0.00	0.000	0.000	0.011
823	1.30	1.20	0.00223	87.3	0.01142	0.10	0.51	0.11	1.86	19.51	185.68	0.20	0.00	0.000	0.000	0.011
824	1.20	1.10	0.00223	87.3	0.01142	0.10	0.61	0.11	1.86	19.51	185.68	0.20	0.00	0.000	0.000	0.011
825	1.10	1.00	0.00223	87.3	0.01142	0.10	0.71	0.11	1.86	19.51	185.68	0.20	0.00	0.000	0.000	0.011
826	1.00	0.90	0.00223	87.3	0.01142	0.10	0.81	0.11	1.86	19.51	185.68	0.20	0.00	0.000	0.000	0.011
827	0.90	0.80	0.00223	87.3	0.01142	0.10	0.91	0.11	1.86	19.51	185.68	0.20	0.00	0.000	0.000	0.011
828	0.80	0.70	0.00223	87.3	0.01142	0.10	1.01	0.11	1.86	19.51	185.68	0.20	0.00	0.000	0.000	0.011
829	0.70	0.60	0.00223	87.3	0.01142	0.10	1.11	0.11	1.86	19.51	185.68	0.20	0.00	0.000	0.000	0.011
830	0.60	0.50	0.00223	87.3	0.01142	0.10	1.22	0.11	1.86	19.51	185.68	0.20	0.00	0.000	0.000	0.011
831	0.50	0.40	0.00223	87.3	0.01142	0.10	1.32	0.11	1.86	19.51	185.68	0.20	0.00	0.000	0.000	0.011
832	0.40	0.30	0.00223	87.3	0.01142	0.10	1.42	0.11	1.86	19.51	185.68	0.20	0.00	0.000	0.000	0.011
833	0.30	0.20	0.00223	87.3	0.01142	0.10	1.52	0.11	1.86	19.51	185.68	0.20	0.00	0.000	0.000	0.011
834	0.20	0.10	0.00223	87.3	0.01142	0.10	1.62	0.11	1.86	19.51	185.68	0.20	0.00	0.000	0.000	0.011
835	0.10	0.00	0.00223	87.3	0.01142	0.10	1.72	0.11	1.86	19.51	185.68	0.20	0.00	0.000	0.000	0.011
TOT						1.72				331.69	3156.51					
AVG				0.0114				0.11	1.86			0.20				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECA 1/da	BOD1 SETT 1/da	ABOD1 DECA 1/da	BOD1 HYDR 1/da	BOD2 DECA 1/da	BOD2 SETT 1/da	ABOD2 DECA 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N 1/da	ORG-N SETT 1/da	NH3-N 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECA 1/da	NCM DECA 1/da	NCM SETT 1/da	
819	1.600	7.53	9.49	0.13	0.60	0.00	0.00	0.00	0.00	0.00	0.95	5.36	5.36	0.05	0.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
820	1.500	7.51	9.51	0.13	0.61	0.00	0.00	0.00	0.00	0.00	0.95	5.08	5.08	0.04	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
821	1.400	7.49	9.53	0.13	0.61	0.00	0.00	0.00	0.00	0.00	0.96	4.81	4.81	0.04	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
822	1.300	7.48	9.55	0.13	0.61	0.00	0.00	0.00	0.00	0.00	0.97	4.57	4.57	0.04	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
823	1.200	7.46	9.57	0.13	0.61	0.00	0.00	0.00	0.00	0.00	0.98	4.34	4.34	0.04	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
824	1.100	7.45	9.59	0.13	0.61	0.00	0.00	0.00	0.00	0.00	0.98	4.12	4.12	0.05	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
825	1.000	7.43	9.61	0.13	0.62	0.00	0.00	0.00	0.00	0.00	0.99	3.92	3.92	0.05	0.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
826	0.900	7.42	9.63	0.13	0.62	0.00	0.00	0.00	0.00	0.00	1.00	3.74	3.74	0.05	0.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
827	0.800	7.40	9.65	0.13	0.62	0.00	0.00	0.00	0.00	0.00	1.01	3.56	3.56	0.05	0.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
828	0.700	7.38	9.67	0.13	0.62	0.00	0.00	0.00	0.00	0.00	1.01	3.40	3.40	0.05	0.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
829	0.600	7.37	9.69	0.13	0.62	0.00	0.00	0.00	0.00	0.00	1.02	3.25	3.25	0.05	0.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
830	0.500	7.35	9.71	0.14	0.62	0.00	0.00	0.00	0.00	0.00	1.03	3.11	3.11	0.05	0.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
831	0.400	7.34	9.73	0.14	0.63	0.00	0.00	0.00	0.00	0.00	1.04	2.98	2.98	0.06	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
832	0.300	7.32	9.75	0.14	0.63	0.00	0.00	0.00	0.00	0.00	1.05	2.86	2.86	0.06	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
833	0.200	7.31	9.77	0.14	0.63	0.00	0.00	0.00	0.00	0.00	1.05	2.74	2.74	0.06	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
834	0.100	7.29	9.79	0.14	0.63	0.00	0.00	0.00	0.00	0.00	1.06	2.64	2.64	0.06	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
835	0.000	7.28	9.81	0.14	0.63	0.00	0.00	0.00	0.00	0.00	1.07	2.54	2.54	0.06	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20	DEG C	RATE	7.87	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.50			0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	

* g/m²/d ** mg/L/day

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL	
819	1.600	30.12	0.43	821.03	37.23	3.21	69.41	0.00	69.41	0.00	2.13	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
820	1.500	30.24	0.43	821.03	37.23	2.39	64.68	0.00	64.68	0.00	2.03	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
821	1.400	30.37	0.43	821.03	37.23	2.13	60.25	0.00	60.25	0.00	1.93	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
822	1.300	30.49	0.43	821.03	37.23	2.14	56.12	0.00	56.12	0.00	1.85	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
823	1.200	30.61	0.43	821.03	37.23	2.28	52.27	0.00	52.27	0.00	1.76	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
824	1.100	30.73	0.43	821.03	37.23	2.48	48.68	0.00	48.68	0.00	1.69	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
825	1.000	30.86	0.43	821.03	37.23	2.70	45.32	0.00	45.32	0.00	1.61	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
826	0.900	30.98	0.43	821.03	37.23	2.91	42.20	0.00	42.20	0.00	1.54	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
827	0.800	31.10	0.43	821.03	37.23	3.12	39.28	0.00	39.28	0.00	1.48	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
828	0.700	31.22	0.43	821.03	37.23	3.32	36.56	0.00	36.56	0.00	1.42	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
829	0.600	31.35	0.43	821.03	37.23	3.51	34.03	0.00	34.03	0.00	1.36	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
830	0.500	31.47	0.43	821.03	37.23	3.68	31.67	0.00	31.67	0.00	1.30	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
831	0.400	31.59	0.43	821.03	37.23	3.84	29.47	0.00	29.47	0.00	1.25	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
832	0.300	31.71	0.43	821.03	37.23	3.99	27.42	0.00	27.42	0.00	1.20	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
833	0.200	31.84	0.43	821.03	37.23	4.13	25.52	0.00	25.52	0.00	1.16	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
834	0.100	31.96	0.43	821.03	37.23	4.26	23.74	0.00	23.74	0.00	1.11	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
835	0.000	32.08	0.43	821.03	37.23	4.37	22.09	0.00	22.09	0.00	1.07	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
819	1.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
820	1.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
821	1.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
822	1.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
823	1.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
824	1.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
825	1.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
826	0.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
827	0.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
828	0.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
829	0.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
830	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
831	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
832	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
833	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
834	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
835	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE

0.000 0.000 0.000 0.000

0.000 0.000 0.000

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT TRIBUTARY 24
REACH NO. 84 TRIB 24 FROM TOP TO PAQUET

WATER QUALITY/HYDRAULIC MODEL FOR:
BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
861	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	2.20	0.00	2.20	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
861	0.40	0.30	0.00028	0.0	0.00002	60.83	60.83	0.74	20.10	1487.40	2010.00	14.87	201.00	0.000	0.059	0.000
862	0.30	0.20	0.00028	0.0	0.00002	60.83	121.66	0.74	20.10	1487.40	2010.00	14.87	402.00	0.001	0.118	0.001
863	0.20	0.10	0.00028	0.0	0.00002	60.83	182.49	0.74	20.10	1487.40	2010.00	14.87	603.00	0.001	0.177	0.001
864	0.10	0.00	0.00028	0.0	0.00002	60.83	243.33	0.74	20.10	1487.40	2010.00	14.87	804.00	0.002	0.236	0.002
TOT AVG						243.33		0.74	20.10	5949.60	8040.00	14.87				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECAT	BOD1 SETT	ABOD1 DECAT	BOD1 HYDR	BOD2 DECAT	BOD2 SETT	ABOD2 DECAT	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECAT	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECAT	NCM DECAT	NCM SETT		
861	0.300	7.36	1.15	0.13	0.09	0.00	0.00	0.00	0.00	0.00	0.97	1.40	1.40	0.05	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
862	0.200	7.30	1.16	0.13	0.09	0.00	0.00	0.00	0.00	0.00	1.00	1.53	1.53	0.06	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
863	0.100	7.23	1.17	0.14	0.09	0.00	0.00	0.00	0.00	0.00	1.03	1.69	1.69	0.06	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
864	0.000	7.17	1.18	0.14	0.09	0.00	0.00	0.00	0.00	0.00	1.07	1.88	1.88	0.06	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20	DEG C RATE	0.95	0.08	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.50			0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00				0.00	0.00	0.00	

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL	
861	0.300	30.52	3.17	5719.02	1737.54	4.59	6.74	0.00	7.11	0.00	2.65	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.4	0.0	0.
862	0.200	31.03	3.23	5830.66	1774.70	4.21	8.09	0.00	8.82	0.00	2.98	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.8	0.0	0.
863	0.100	31.55	3.27	5899.04	1797.47	3.77	9.92	0.00	11.01	0.00	3.39	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.2	0.0	0.
864	0.000	32.07	3.30	5948.50	1813.93	3.32	12.20	0.00	13.66	0.00	3.88	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.6	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM	ENDING	BANK SECCHI	PHYT	PERI																					
------	--------	-------------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

NO.	DIST	SHADE frac	DEPTH m	N PREF	LIT LIM	N LIM	P LIM	N&P LIM	TOT LIM	GROW 1/da	RESP 1/da	DEATH 1/da	SETT 1/da	P/R RATIO	PHYTO µg/L	N PREF	LIT LIM	N LIM	P LIM	N&P LIM	SPC LIM	TOT LIM	GROW 1/da	RESP 1/da	DEATH 1/da	P/R RATIO	PERIP g/m²
861	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
862	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
863	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
864	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	13.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20 DEG C RATE										0.000	0.000	0.000	0.000								0.000	0.000	0.000				

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT TRIBUTARY 25 WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 86 TRIB 25 FROM TOP TO RKM 0.3 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
868	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	2.20	0.00	2.20	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
868	1.00	0.90	0.00028	0.0	0.00002	63.28	63.28	0.94	16.46	1547.24	1646.00	15.47	164.60	0.000	0.057	0.000
869	0.90	0.80	0.00028	0.0	0.00002	63.28	126.56	0.94	16.46	1547.24	1646.00	15.47	329.20	0.001	0.114	0.001
870	0.80	0.70	0.00028	0.0	0.00002	63.28	189.84	0.94	16.46	1547.24	1646.00	15.47	493.80	0.001	0.170	0.001
871	0.70	0.60	0.00028	0.0	0.00002	63.28	253.11	0.94	16.46	1547.24	1646.00	15.47	658.40	0.001	0.227	0.001
872	0.60	0.50	0.00028	0.0	0.00002	63.28	316.39	0.94	16.46	1547.24	1646.00	15.47	823.00	0.001	0.284	0.001
873	0.50	0.40	0.00028	0.0	0.00002	63.28	379.67	0.94	16.46	1547.24	1646.00	15.47	987.60	0.002	0.341	0.002
874	0.40	0.30	0.00028	0.0	0.00002	63.28	442.95	0.94	16.46	1547.24	1646.00	15.47	1152.20	0.002	0.398	0.002
TOT AVG					0.0000	442.95		0.94	16.46	10830.68	11522.00	15.47				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECATY	BOD1 SETT DECATY	ABOD1 DECATY	BOD1 HYDR DECATY	BOD2 DECATY	ABOD2 DECATY	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT DECATY	NH3-N DECATY	SRCE RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECATY	NCM DECATY	NCM SETT
868	0.900	7.43	0.89	0.13	0.07	0.00	0.00	0.00	0.00	0.00	0.94	1.16	1.16	0.05	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
869	0.800	7.42	0.89	0.13	0.07	0.00	0.00	0.00	0.00	0.00	0.94	1.18	1.18	0.05	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
870	0.700	7.42	0.89	0.13	0.07	0.00	0.00	0.00	0.00	0.00	0.94	1.22	1.22	0.05	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
871	0.600	7.42	0.89	0.13	0.07	0.00	0.00	0.00	0.00	0.00	0.94	1.26	1.26	0.05	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
872	0.500	7.42	0.89	0.13	0.07	0.00	0.00	0.00	0.00	0.00	0.94	1.30	1.30	0.05	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
873	0.400	7.42	0.89	0.13	0.07	0.00	0.00	0.00	0.00	0.00	0.94	1.35	1.35	0.05	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
874	0.300	7.42	0.89	0.13	0.07	0.00	0.00	0.00	0.00	0.00	0.94	1.42	1.42	0.05	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.74	0.08	0.01	0.00	0.00	0.00	0.00	0.00	0.50		0.03	0.01	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00	

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM	ENDING DIST	TEMP	SALN	COND	CL	DO	BOD1	BOD2	EBOD1	EBOD2	ORG-N	NH3-N	NO3-N	TOT-N	EORG-N	ETOT-N	ORG-P	PO4-P	TOT-P	EORG-P	ETOT-P	CHL A	PERIP	COLI
----------	-------------	------	------	------	----	----	------	------	-------	-------	-------	-------	-------	-------	--------	--------	-------	-------	-------	--------	--------	-------	-------	------

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

NO.	DIST	deg C	ppt	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	g/m²	#/100mL	
868	0.900	30.00	3.20	5778.86	1758.47	5.37	3.51	0.00	3.51	0.00	1.66	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
869	0.800	30.00	3.27	5891.88	1796.12	5.26	3.88	0.00	3.88	0.00	1.79	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
870	0.700	30.00	3.30	5961.10	1819.17	5.12	4.38	0.00	4.38	0.00	1.94	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
871	0.600	30.00	3.33	6011.16	1835.84	4.95	4.99	0.00	4.99	0.00	2.12	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
872	0.500	30.00	3.35	6050.44	1848.93	4.77	5.72	0.00	5.72	0.00	2.32	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
873	0.400	30.00	3.37	6082.81	1859.71	4.56	6.57	0.00	6.57	0.00	2.54	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
874	0.300	30.00	3.39	6110.36	1868.88	4.35	7.56	0.00	7.56	0.00	2.79	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
868	0.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
869	0.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
870	0.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
871	0.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
872	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
873	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
874	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT TRIBUTARY 25 WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 87 TRIB 25 FROM RKM 0.3 TO PAQUET BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
875	UPR RCH	0.00028	30.00	3.39	6110.36	1868.88	4.35	7.56	0.00	7.56	0.00	2.79	0.10	0.10	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
875	0.30	0.20	0.00028	0.0	0.00001	100.77	543.72	0.77	32.00	2464.00	3200.00	24.64	1472.20	0.002	0.270	0.002
876	0.20	0.10	0.00028	0.0	0.00001	100.77	644.50	0.77	32.00	2464.00	3200.00	24.64	1792.20	0.002	0.329	0.002
877	0.10	0.00	0.00028	0.0	0.00001	100.77	745.27	0.77	32.00	2464.00	3200.00	24.64	2112.20	0.002	0.388	0.002
TOT AVG					0.0000	302.32		0.77	32.00	7392.00	9600.00	24.64				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM ENDING SAT REAER BOD1 BOD1 ABOD1 BOD1 BOD2 BOD2 ABOD2 BKGD FULL CORR ORG-N NH3-N NH3-N DENIT ORG-P ORG-P PO4 PHYTO PERIP COLI NCM NCM

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

NO.	DIST	D.O. mg/L	RATE 1/da	DECAY 1/da	SETT 1/da	DECAY 1/da	HYDR 1/da	DECAY 1/da	SETT 1/da	DECAY 1/da	SOD *	SOD *	SOD *	HYDR 1/da	SETT 1/da	DECAY 1/da	SRCE *	RATE 1/da	HYDR 1/da	SETT 1/da	SRCE *	PROD **	PROD **	DECAY 1/da	DECAY 1/da	SETT 1/da		
875	0.200	7.31	1.11	0.13	0.08	0.00	0.00	0.00	0.00	0.00	0.99	1.56	1.56	0.05	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
876	0.100	7.19	1.13	0.14	0.09	0.00	0.00	0.00	0.00	0.00	1.05	1.73	1.73	0.06	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
877	0.000	7.08	1.14	0.14	0.09	0.00	0.00	0.00	0.00	0.00	1.11	1.94	1.94	0.06	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.91	0.08	0.02	0.00	0.00	0.00	0.00	0.00	0.50			0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00				0.00	0.00	0.00	0.00
* g/m ² /d			** mg/L/day																									

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL		
875	0.200	30.91	3.40	6135.05	1877.11	4.11	8.74	0.00	9.22	0.00	3.07	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.5	0.0	0.
876	0.100	31.81	3.41	6156.56	1884.27	3.83	10.30	0.00	11.27	0.00	3.42	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.1	0.0	0.
877	0.000	32.72	3.42	6174.62	1890.29	3.61	12.21	0.00	13.66	0.00	3.82	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.6	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
875	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	4.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
876	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
877	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	13.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20 DEG C RATE										0.000	0.000	0.000	0.000									0.000	0.000	0.000			

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

.....EXECUTION COMPLETED

Appendix B2 – Calibration Justification

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Calibration Justification

DATA TYPE 3 - PROGRAM CONSTANTS

CONSTANT NAME	VALUE	UNITS	DATA SOURCE
K2 MAXIMUM	25	1/day at 20 deg C	EPA Policy in the absence of a measured value.
DISPERSION EQUATION	3		Equation used to account for all modes of transport.
TIDE HEIGHT	0.1		Calculated from Survey Data
TIDAL PERIOD	19.75		Calculated from Survey Data
PERIOD OF TIDAL RISE	10.5		Calculated from Survey Data
S OXYGEN DEPENDENCE THRESHOLD	1		Calibration
SOD MAXIMUM RATE	50		To verify reasonableness of model inputs
PHYTOPLANKTON OXYGEN PROD	0		Calibration
PERIPHYTON OXYGEN PROD	0		Calibration

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Calibration Justification						
DATA TYPE 8 - REACH IDENTIFICATION DATA						
Reach	ID	Name	Upstream River Kilometer	Downstream River Kilometer	Element Length, meters	Data Source
1	DD	DRAINAGE DITCH 1	24.20	20.30	0.1000	ARC MAP Calc.
2	BV	VINCENT FROM RKM 20.3 TO BV01	20.30	19.50	0.1000	ARC MAP Calc.
3	BV	VINCENT FROM BV01 RKM 18.5	19.50	18.50	0.1000	ARC MAP Calc.
4	BV	VINCENT FROM RKM 18.5 TO BV02	18.50	17.60	0.1000	ARC MAP Calc.
5	DD	DRAINAGE DITCH 2	2.10	0.00	0.1000	ARC MAP Calc.
6	BV	VINCENT FROM BV02 TO DD 8	17.60	16.90	0.0500	ARC MAP Calc.
7	DD	DRAINAGE DITCH 8	0.80	0.00	0.1000	ARC MAP Calc.
8	BV	VINCENT FROM DD 8 TO DD 9	16.90	16.00	0.1000	ARC MAP Calc.
9	DD	DRAINAGE DITCH 9	2.10	0.00	0.1000	ARC MAP Calc.
10	BV	VINCENT FROM DD 9 TO RKM 15.2	16.00	15.20	0.1000	ARC MAP Calc.
11	BV	VINCENT FROM RKM 15.2 TO BV03	15.20	14.90	0.0500	ARC MAP Calc.
12	BV	VINCENT FROM BV03 TO BONFOUCA	14.90	14.40	0.1000	ARC MAP Calc.
13	UB	UPPER BONFOUCA FROM RKM 5.0 TO DD 23	5.00	2.60	0.1000	ARC MAP Calc.
14	DD	DRAINAGE DITCH 23	1.00	0.00	0.1000	ARC MAP Calc.
15	UB	UPPER BONFOUCA FROM DD 23 TO BB01	2.60	1.10	0.1000	ARC MAP Calc.
16	UB	UPPER BONFOUCA FROM BB01 TO BAYOU VINCENT	1.10	0.00	0.1000	ARC MAP Calc.
17	BB	BONFOUCA FROM BV TO HWY 190	14.40	14.20	0.1000	ARC MAP Calc.
18	DD	HWY 190 (DRAINAGE DITCH 5)	1.80	0.00	0.1000	ARC MAP Calc.
19	BB	BONFOUCA FROM HWY 190 TO BB02	14.20	13.30	0.1000	ARC MAP Calc.
20	BB	BONFOUCA FROM BB02 TO WD	13.30	12.10	0.1000	ARC MAP Calc.
21	WD	WEST DRAINAGE CANAL	0.30	0.00	0.1000	ARC MAP Calc.
22	BB	BONFOUCA FROM WD TO DD6	12.10	10.00	0.1000	ARC MAP Calc.
23	DD	DRAINAGE DITCH 6	0.30	0.00	0.1000	ARC MAP Calc.
24	BB	BONFOUCA FROM DD 6 TO TRIB 2	10.00	9.20	0.1000	ARC MAP Calc.
25	DD	DRAINAGE DITCH 7	1.50	0.50	0.1000	ARC MAP Calc.

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Calibration Justification						
DATA TYPE 8 - REACH IDENTIFICATION DATA						
Reach	ID	Name	Upstream River Kilometer	Downstream River Kilometer	Element Length, meters	Data Source
26	TR	TRIBUTARY 2	0.50	0.00	0.1000	ARC MAP Calc.
27	BB	BONFOUCA FROM TRIB 2 TO BB03	9.20	8.60	0.1000	ARC MAP Calc.
28	BB	BONFOUCA FROM BB03 TO CANAL 26	8.60	7.80	0.1000	ARC MAP Calc.
29	C	CANAL 26	2.00	0.00	0.1000	ARC MAP Calc.
30	BB	BONFOUCA FROM CANAL 26 TO TRIB 4	7.80	7.60	0.1000	ARC MAP Calc.
31	TR	TRIBUTARY 4 - UPLAND	1.90	0.80	0.1000	ARC MAP Calc.
32	TR	TRIBUTARY 4 - TIDAL	0.80	0.00	0.1000	ARC MAP Calc.
33	BB	BONFOUCA FROM TRIB 4 TO BB04	7.60	6.80	0.1000	ARC MAP Calc.
34	BB	BONFOUCA FROM BB04 TO Rkm 5.6	6.80	5.60	0.1000	ARC MAP Calc.
35	BB	BONFOUCA FROM RKM 5.6 TO BB05	5.60	4.50	0.1000	ARC MAP Calc.
36	BB	BONFOUCA FROM BB05 TO RKM 2.7	4.50	2.70	0.1000	ARC MAP Calc.
37	BB	BONFOUCA FROM RKM 2.7 TO LIBERTY	2.70	0.80	0.1000	ARC MAP Calc.
38	BL	LIBERTY FROM RKM 15.0 TO TRIB 1	15.00	14.40	0.1000	ARC MAP Calc.
39	TR	TRIBUTARY 1	2.40	0.00	0.1000	ARC MAP Calc.
40	BL	LIBERTY FROM RKM 14.4 TO DD22	14.40	13.70	0.1000	ARC MAP Calc.
41	DD	DD22	0.30	0.00	0.1000	ARC MAP Calc.
42	BL	LIBERTY FROM DD22 TO DD20	13.70	12.80	0.1000	ARC MAP Calc.
43	DD	DD20	2.70	0.00	0.1000	ARC MAP Calc.
44	BL	LIBERTY FROM DD20 TO BL03	12.80	12.60	0.1000	ARC MAP Calc.
45	BL	LIBERTY FROM BL03 TO HWY 190	12.60	10.10	0.1000	ARC MAP Calc.
46	DD	HWY 190 (DRAINAGE DITCH 14)	2.30	0.00	0.1000	ARC MAP Calc.
47	BL	LIBERTY FROM HWY 190 TO BL04	10.10	10.00	0.1000	ARC MAP Calc.
48	BL	LIBERTY FROM BL04 TO DD18	10.00	8.40	0.1000	ARC MAP Calc.
49	DD	DD18	0.30	0.00	0.1000	ARC MAP Calc.
50	BL	LIBERTY FROM DD18 TO DD19	8.40	7.80	0.1000	ARC MAP Calc.

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Calibration Justification						
DATA TYPE 8 - REACH IDENTIFICATION DATA						
Reach	ID	Name	Upstream River Kilometer	Downstream River Kilometer	Element Length, meters	Data Source
51	DD	DD19	1.40	0.00	0.1000	ARC MAP Calc.
52	BL	LIBERTY FROM DD19 TO DD04	7.80	7.60	0.1000	ARC MAP Calc.
53	DD	DD04	4.20	0.00	0.1000	ARC MAP Calc.
54	BL	LIBERTY FROM DD04 TO BL05	7.60	6.90	0.1000	ARC MAP Calc.
55	BL	LIBERTY FROM BL05 TO RKM 6.3	6.90	6.30	0.1000	ARC MAP Calc.
56	BL	LIBERTY FROM RKM 6.3 TO RKM 6.0	6.30	6.00	0.1000	ARC MAP Calc.
57	BL	LIBERTY FROM RKM 6.0 TO TRIB 9	6.00	5.20	0.1000	ARC MAP Calc.
58	DD	DRAINAGE DITCH 3	0.50	0.30	0.1000	ARC MAP Calc.
59	TR	TRIBUTARY 9	0.30	0.00	0.1000	ARC MAP Calc.
60	BL	LIBERTY FROM TRIB 9 TO TRIB 6	5.20	4.40	0.1000	ARC MAP Calc.
61	DD	DRAINAGE DITCH 11	1.60	0.60	0.1000	ARC MAP Calc.
62	TR	TRIBUTARY 6	0.60	0.00	0.1000	ARC MAP Calc.
63	BL	LIBERTY FROM TRIB 6 TO TO TRIB 10	4.40	4.20	0.1000	ARC MAP Calc.
64	TR	TRIBUTARY 10 - UPLAND	0.70	0.20	0.1000	ARC MAP Calc.
65	TR	TRIBUTARY 10 - TIDAL	0.20	0.00	0.1000	ARC MAP Calc.
66	BL	LIBERTY FROM TRIB 10 TO BL07	4.20	3.30	0.1000	ARC MAP Calc.
67	BL	LIBERTY FROM BL07 TO TRIB 8	3.30	3.20	0.1000	ARC MAP Calc.
68	TR	TRIBUTARY 8	0.60	0.10	0.1000	ARC MAP Calc.
69	TR	TRIBUTARY 8	0.10	0.00	0.1000	ARC MAP Calc.
70	BL	LIBERTY FROM TRIB 8 TO M1	3.20	2.60	0.1000	ARC MAP Calc.
71	M	MARINA 1	0.20	0.00	0.1000	ARC MAP Calc.
72	BL	LIBERTY FROM M1 TO M2	2.60	2.50	0.1000	ARC MAP Calc.
73	M	MARINA02	1.80	0.00	0.1000	ARC MAP Calc.
74	BL	LIBERTY FROM M2 TO B PAQUET	2.50	1.10	0.1000	ARC MAP Calc.
75	DD	HWY 190 (DD13) PAQUET HEADWATERS	8.60	7.20	0.1000	ARC MAP Calc.

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Calibration Justification						
DATA TYPE 8 - REACH IDENTIFICATION DATA						
Reach	ID	Name	Upstream River Kilometer	Downstream River Kilometer	Element Length, meters	Data Source
76	BP	PAQUET FROM HWY 190 TO DD16	7.20	5.10	0.1000	ARC MAP Calc.
77	DD	DD16	0.90	0.00	0.1000	ARC MAP Calc.
78	BP	PAQUET FROM RKM 5.1 TO DD17	5.10	3.80	0.1000	ARC MAP Calc.
79	DD	DD17	1.70	0.00	0.1000	ARC MAP Calc.
80	BP	PAQUET FROM DD17 TO TIDAL REACH	3.80	3.40	0.1000	ARC MAP Calc.
81	BP	PAQUET (TIDAL) TO BP02	3.40	2.40	0.1000	ARC MAP Calc.
82	BP	PAQUET FROM BP02 TO BP03	2.40	1.60	0.1000	ARC MAP Calc.
83	BP	PAQUET FROM BP03 TO TRIB 24	1.60	1.30	0.1000	ARC MAP Calc.
84	C1	TRIB 24 FROM TOP TO PAQUET	0.40	0.00	0.1000	ARC MAP Calc.
85	BP	PAQUET FROM TRIB 24 TO TRIB 25	1.30	1.00	0.1000	ARC MAP Calc.
86	C2	TRIB 25 FROM TOP TO RKM 0.3	1.00	0.30	0.1000	ARC MAP Calc.
87	C2	TRIB 25 FROM RKM 0.3 TO PAQUET	0.30	0.00	0.1000	ARC MAP Calc.
88	BP	PAQUET FROM TRIB 25 TO BP04	1.00	0.20	0.1000	ARC MAP Calc.
89	BP	PAQUET FROM BP04 TO LIBERTY	0.20	0.00	0.1000	ARC MAP Calc.
90	BL	LIBERTY FROM PAQUET TO BONFOUCA	1.10	0.00	0.1000	ARC MAP Calc.
91	BB	BONFOUCA FROM LIBERTY TO PONTCHARTRAIN (INCL BB06)	0.80	0.00	0.1000	ARC MAP Calc.

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Calibration Justification									
Reach	Name	Data Type 9 - Advective Hydraulic Coefficients					Depth Exp. "e"	Depth Const. "f"	Data Source
		Width Coeff. "a"	Width Exp. "b"	Width Const. "c"	Data Source	Depth Coeff. "d"			
1	DRAINAGE DITCH 1	11.5977	0.3	0.000	Generic ditch	0.9468	0.36	0.000	Generic ditch
2	VINCENT FROM RKM 20.3 TO BV01	4.765	0.3	0.000	Bayou Vincent Reaches	0.3255	0.36	0.000	Bayou Vincent Reaches
3	VINCENT FROM BV01 RKM 18.5	4.765	0.3	0.000	Bayou Vincent Reaches	0.3255	0.36	0.000	Bayou Vincent Reaches
4	VINCENT FROM RKM 18.5 TO BV02	4.765	0.3	0.000	Bayou Vincent Reaches	0.3255	0.36	0.000	Bayou Vincent Reaches
5	DRAINAGE DITCH 2	11.5977	0.3	0.000	Generic ditch	0.9468	0.36	0.000	Generic ditch
6	VINCENT FROM BV02 TO DD 8	4.765	0.3	0.000	Bayou Vincent Reaches	0.3255	0.36	0.000	Bayou Vincent Reaches
7	DRAINAGE DITCH 8	11.5977	0.3	0.000	Generic ditch	0.9468	0.36	0.000	Generic ditch
8	VINCENT FROM DD 8 TO DD 9	4.765	0.3	0.000	Bayou Vincent Reaches	0.3255	0.36	0.000	Bayou Vincent Reaches
9	DRAINAGE DITCH 9	11.5977	0.3	0.000	Generic ditch	0.9468	0.36	0.000	Generic ditch
10	VINCENT FROM DD 9 TO RKM 15.2	4.765	0.3	0.000	Bayou Vincent Reaches	0.3255	0.36	0.000	Bayou Vincent Reaches
11	VINCENT FROM RKM 15.2 TO BV03	0	0	4.724	Bayou Vincent Reaches	0	0	0.271	Bayou Vincent Reaches
12	VINCENT FROM BV03 TO BONFOUCA	0	0	4.724	Bayou Vincent Reaches	0	0	0.271	Bayou Vincent Reaches
13	UPPER BONFOUCA FROM RKM 5.0 TO DD 23	5.813	0.3	0.000	Upper Bayou Bonfouca Reaches	0.413	0.36	0.000	Upper Bayou Bonfouca Reaches
14	DRAINAGE DITCH 23	11.5977	0.3	0.000	Generic ditch	0.9468	0.36	0.000	Generic ditch
15	UPPER BONFOUCA FROM DD 23 TO BB01	5.813	0.3	0.000	Upper Bayou Bonfouca Reaches	0.413	0.36	0.000	Upper Bayou Bonfouca Reaches
16	UPPER BONFOUCA FROM BB01 TO BAYOU VINCENT	8.719	0.3	0.000	Upper Bayou Bonfouca Reaches	0.62	0.36	0.000	Upper Bayou Bonfouca Reaches
17	BONFOUCA FROM BV TO HWY 190	0	0	10.840	Bayou Bonfouca Reaches	0	0	0.872	Bayou Bonfouca Reaches
18	HWY 190 (DRAINAGE DITCH 5)	11.5977	0.3	0.000	Generic ditch	0.9468	0.36	0.000	Generic ditch
19	BONFOUCA FROM HWY 190 TO BB02	0	0	10.840	Bayou Bonfouca Reaches	0	0	0.872	Bayou Bonfouca Reaches
20	BONFOUCA FROM BB02 TO WD	0	0	10.840	Bayou Bonfouca Reaches	0	0	0.872	Bayou Bonfouca Reaches

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Calibration Justification									
Reach	Name	Data Type 9 - Advective Hydraulic Coefficients					Depth Exp. "e"	Depth Const. "f"	Data Source
		Width Coeff. "a"	Width Exp. "b"	Width Const. "c"	Data Source	Depth Coeff. "d"			
21	WEST DRAINAGE CANAL	0.000	0	3	Tidal Channel & Marine Reaches	0	0	0.150	Tidal Channel & Marine Reaches
22	BONFOUCA FROM WD TO DD6	0	0	54.250	Bayou Bonfouca Reaches	0	0	1.240	Bayou Bonfouca Reaches
23	DRAINAGE DITCH 6	11.5977	0.3	0.000	Generic ditch	0.9468	0.36	0.000	Generic ditch
24	BONFOUCA FROM DD 6 TO TRIB 2	0	0	93.080	Bayou Bonfouca Reaches	0	0	1.603	Bayou Bonfouca Reaches
25	DRAINAGE DITCH 7	11.5977	0.3	0.000	Generic ditch	0.9468	0.36	0.000	Generic ditch
26	TRIBUTARY 2	0	0	12.000	Tidal Channel & Marine Reaches	0	0	0.600	Tidal Channel & Marine Reaches
27	BONFOUCA FROM TRIB 2 TO BB03	0	0	93.080	Bayou Bonfouca Reaches	0	0	1.603	Bayou Bonfouca Reaches
28	BONFOUCA FROM BB03 TO CANAL 26	0	0	93.080	Bayou Bonfouca Reaches	0	0	1.603	Bayou Bonfouca Reaches
29	CANAL 26	0	0	114.000	Tidal Channel & Marine Reaches	0	0	1.000	Tidal Channel & Marine Reaches
30	BONFOUCA FROM CANAL 26 TO TRIB 4	0	0	76.510	Bayou Bonfouca Reaches	0	0	1.872	Bayou Bonfouca Reaches
31	TRIBUTARY 4 - UPLAND	11.5977	0.3	0.000	Generic ditch	0.9468	0.36	0.000	Generic ditch
32	TRIBUTARY 4 - TIDAL	0	0	18.000	Tidal Channel & Marine Reaches	0	0	0.900	Tidal Channel & Marine Reaches
33	BONFOUCA FROM TRIB 4 TO BB04	0	0	76.510	Bayou Bonfouca Reaches	0	0	1.872	Bayou Bonfouca Reaches
34	BONFOUCA FROM BB04 TO Rkm 5.6	0	0	91.440	Bayou Bonfouca Reaches	0	0	1.890	Bayou Bonfouca Reaches
35	BONFOUCA FROM RKM 5.6 TO BB05	0	0	114.300	Bayou Bonfouca Reaches	0	0	1.670	Bayou Bonfouca Reaches
36	BONFOUCA FROM BB05 TO RKM 2.7	0	0	77.700	Bayou Bonfouca Reaches	0	0	1.440	Bayou Bonfouca Reaches
37	BONFOUCA FROM RKM 2.7 TO LIBERTY	0	0	88.000	Bayou Bonfouca Reaches	0	0	1.600	Bayou Bonfouca Reaches
38	LIBERTY FROM RKM 15.0 TO TRIB 1	8.719	0.3	0.000	Bayou Liberty Reaches	0.62	0.36	0.000	Bayou Liberty Reaches
39	TRIBUTARY 1	11.5977	0.3	0.000	Generic ditch	0.9468	0.36	0.000	Generic ditch
40	LIBERTY FROM RKM 14.4 TO DD22	8.719	0.3	0.000	Bayou Liberty Reaches	0.62	0.36	0.000	Bayou Liberty Reaches

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Calibration Justification									
Reach	Name	Data Type 9 - Advective Hydraulic Coefficients					Depth Exp. "e"	Depth Const. "f"	Data Source
		Width Coeff. "a"	Width Exp. "b"	Width Const. "c"	Data Source	Depth Coeff. "d"			
41	DD22	11.5977	0.3	0.000	Generic ditch	0.9468	0.36	0.000	Generic ditch
42	LIBERTY FROM DD22 TO DD20	17.4376	0.3	0.000	Bayou Liberty Reaches	0.992	0.36	0.000	Bayou Liberty Reaches
43	DD20	11.5977	0.3	0.000	Generic ditch	0.9468	0.36	0.000	Generic ditch
44	LIBERTY FROM DD20 TO BL03	0	0	8.840	Bayou Liberty Reaches	0	0	0.472	Bayou Liberty Reaches
45	LIBERTY FROM BL03 TO HWY 190	0	0	8.840	Bayou Liberty Reaches	0	0	0.472	Bayou Liberty Reaches
46	HWY 190 (DRAINAGE DITCH 14)	11.5977	0.3	0.000	Generic ditch	0.9468	0.36	0.000	Generic ditch
47	LIBERTY FROM HWY 190 TO BL04	0	0	18.600	Bayou Liberty Reaches	0	0	1.400	Bayou Liberty Reaches
48	LIBERTY FROM BL04 TO DD18	0	0	18.600	Bayou Liberty Reaches	0	0	1.400	Bayou Liberty Reaches
49	DD18	11.5977	0.3	0.000	Generic ditch	0.9468	0.36	0.000	Generic ditch
50	LIBERTY FROM DD18 TO DD19	0	0	18.600	Bayou Liberty Reaches	0	0	1.400	Bayou Liberty Reaches
51	DD19	11.5977	0.3	0.000	Generic ditch	0.9468	0.36	0.000	Generic ditch
52	LIBERTY FROM DD19 TO DD04	0	0	42.670	Bayou Liberty Reaches	0	0	2.280	Bayou Liberty Reaches
53	DD04	11.5977	0.3	0.000	Generic ditch	0.9468	0.36	0.000	Generic ditch
54	LIBERTY FROM DD04 TO BL05	0	0	42.670	Bayou Liberty Reaches	0	0	2.280	Bayou Liberty Reaches
55	LIBERTY FROM BL05 TO RKM 6.3	0	0	42.670	Bayou Liberty Reaches	0	0	2.280	Bayou Liberty Reaches
56	LIBERTY FROM RKM 6.3 TO RKM 6.0	0	0	39.690	Bayou Liberty Reaches	0	0	1.700	Bayou Liberty Reaches
57	LIBERTY FROM RKM 6.0 TO TRIB 9	0	0	47.550	Bayou Liberty Reaches	0	0	2.080	Bayou Liberty Reaches
58	DRAINAGE DITCH 3	11.5977	0.3	0.000	Generic ditch	0.9468	0.36	0.000	Generic ditch
59	TRIBUTARY 9	0	0	16.000	Tidal Channel & Marine Reaches	0	0	0.800	Tidal Channel & Marine Reaches
60	LIBERTY FROM TRIB 9 TO TRIB 6	0	0	47.550	Bayou Liberty Reaches	0	0	2.080	Bayou Liberty Reaches

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Calibration Justification										
Reach	Name	Data Type 9 - Advective Hydraulic Coefficients				Data Source	Depth Coeff. "d"	Depth Exp. "e"	Depth Const. "f"	Data Source
		Width Coeff. "a"	Width Exp. "b"	Width Const. "c"						
61	DRAINAGE DITCH 11	11.5977	0.3	0.000	Generic ditch	0.9468	0.36	0.000	Generic ditch	
62	TRIBUTARY 6	0	0	12.000	Tidal Channel & Marine Reaches	0	0	0.600	Tidal Channel & Marine Reaches	
63	LIBERTY FROM TRIB 6 TO TO TRIB 10	0	0	52.730	Bayou Liberty Reaches	0	0	2.090	Bayou Liberty Reaches	
64	TRIBUTARY 10 - UPLAND	11.5977	0.3	0.000	Generic ditch	0.9468	0.36	0.000	Generic ditch	
65	TRIBUTARY 10 - TIDAL	0	0	13.000	Tidal Channel & Marine Reaches	0	0	0.650	Tidal Channel & Marine Reaches	
66	LIBERTY FROM TRIB 10 TO BL07	0	0	52.120	Bayou Liberty Reaches	0	0	2.140	Bayou Liberty Reaches	
67	LIBERTY FROM BL07 TO TRIB 8	0	0	52.120	Bayou Liberty Reaches	0	0	2.140	Bayou Liberty Reaches	
68	TRIBUTARY 8	11.5977	0.3	0.000	Generic ditch	0.9468	0.36	0.000	Generic ditch	
69	TRIBUTARY 8	0	0	10.000	Tidal Channel & Marine Reaches	0	0	0.500	Tidal Channel & Marine Reaches	
70	LIBERTY FROM TRIB 8 TO M1	0	0	52.120	Bayou Liberty Reaches	0	0	2.140	Bayou Liberty Reaches	
71	MARINA 1	0	0	32.000	Tidal Channel & Marine Reaches	0	0	1.200	Tidal Channel & Marine Reaches	
72	LIBERTY FROM M1 TO M2	0	0	56.540	Bayou Liberty Reaches	0	0	2.130	Bayou Liberty Reaches	
73	MARINA02	0	0	32.000	Tidal Channel & Marine Reaches	0	0	1.200	Tidal Channel & Marine Reaches	
74	LIBERTY FROM M2 TO B PAQUET	0	0	60.960	Bayou Liberty Reaches	0	0	2.130	Bayou Liberty Reaches	
75	HWY 190 (DD13) PAQUET HEADWATERS	11.5977	0.3	0.000	Generic ditch	0.9468	0.36	0.000	Generic ditch	
76	PAQUET FROM HWY 190 TO DD16	8.72	0.3	0.000	Bayou Paquet Reaches	0.62	0.36	0.000	Bayou Paquet Reaches	
77	DD16	11.5977	0.3	0.000	Generic ditch	0.9468	0.36	0.000	Generic ditch	
78	PAQUET FROM RKM 5.1 TO DD17	8.72	0.3	0.000	Bayou Paquet Reaches	0.62	0.36	0.000	Bayou Paquet Reaches	
79	DD17	11.5977	0.3	0.000	Generic ditch	0.9468	0.36	0.000	Generic ditch	
80	PAQUET FROM DD17 TO TIDAL REACH	8.72	0.3	0.000	Bayou Paquet Reaches	0.62	0.36	0.000	Bayou Paquet Reaches	

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Calibration Justification										
Reach	Name	Data Type 9 - Advective Hydraulic Coefficients				Data Source	Depth Coeff. "d"	Depth Exp. "e"	Depth Const. "f"	Data Source
		Width Coeff. "a"	Width Exp. "b"	Width Const. "c"						
81	PAQUET (TIDAL) TO BP02	0	0	18.900	Bayou Paquet Reaches	0	0	1.100	Bayou Paquet Reaches	
82	PAQUET FROM BP02 TO BP03	0	0	18.290	Bayou Paquet Reaches	0	0	1.000	Bayou Paquet Reaches	
83	PAQUET FROM BP03 TO TRIB 24	0	0	21.340	Bayou Paquet Reaches	0	0	1.500	Bayou Paquet Reaches	
84	TRIB 24 FROM TOP TO PAQUET	0	0	20.100	Tidal Channel & Marine Reaches	0	0	0.740	Tidal Channel & Marine Reaches	
85	PAQUET FROM TRIB 24 TO TRIB 25	0	0	21.340	Bayou Paquet Reaches	0	0	1.450	Bayou Paquet Reaches	
86	TRIB 25 FROM TOP TO RKM 0.3	0	0	16.460	Tidal Channel & Marine Reaches	0	0	0.940	Tidal Channel & Marine Reaches	
87	TRIB 25 FROM RKM 0.3 TO PAQUET	0	0	32.000	Tidal Channel & Marine Reaches	0	0	0.770	Tidal Channel & Marine Reaches	
88	PAQUET FROM TRIB 25 TO BP04	0	0	30.480	Bayou Paquet Reaches	0	0	1.500	Bayou Paquet Reaches	
89	PAQUET FROM BP04 TO LIBERTY	0	0	30.480	Bayou Paquet Reaches	0	0	1.500	Bayou Paquet Reaches	
90	LIBERTY FROM PAQUET TO BONFOUCA	0	0	60.960	Bayou Liberty Reaches	0	0	2.130	Bayou Liberty Reaches	
91	BONFOUCA FROM LIBERTY TO PONTCHARTRAIN (INCL BB06)	0	0	105.590	Bayou Bonfouca Reaches	0	0	1.957	Bayou Bonfouca Reaches	

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Calibration Justification							
DATA TYPE 10 - DISPERSIVE HYDRAULIC COEFFICIENTS							
Reach	Tidal Range	Data Source	a	b	c	d	Data Source
1	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
2	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
3	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
4	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
5	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
6	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
7	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
8	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
9	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
10	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
11	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
12	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
13	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
14	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
15	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
16	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
17	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
18	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
19	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
20	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
21	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
22	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
23	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
24	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
25	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
26	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
27	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
28	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
29	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
30	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
31	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
32	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
33	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Calibration Justification							
DATA TYPE 10 - DISPERSIVE HYDRAULIC COEFFICIENTS							
Reach	Tidal Range	Data Source	a	b	c	d	Data Source
34	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
35	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
36	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
37	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
38	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
39	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
40	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
41	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
42	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
43	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
44	1.0	Calibration	100.00	0.8333	0.0	1.0	Constant values used for advective dispersion
45	1.0	Calibration	100.00	0.8333	0.0	1.0	Constant values used for advective dispersion
46	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
47	1.0	Calibration	100.00	0.8333	0.0	1.0	Constant values used for advective dispersion
48	1.0	Calibration	100.00	0.8333	0.0	1.0	Constant values used for advective dispersion
49	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
50	1.0	Calibration	150.00	0.8333	0.0	1.0	Constant values used for advective dispersion
51	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
52	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
53	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
54	1.0	Calibration	250.00	0.8333	0.0	1.0	Constant values used for advective dispersion
55	1.0	Calibration	300.00	0.8333	0.0	1.0	Constant values used for advective dispersion
56	1.0	Calibration	300.00	0.8333	0.0	1.0	Constant values used for advective dispersion
57	1.0	Calibration	300.00	0.8333	0.0	1.0	Constant values used for advective dispersion
58	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
59	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
60	1.0	Calibration	300.00	0.8333	0.0	1.0	Constant values used for advective dispersion
61	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
62	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
63	1.0	Calibration	300.00	0.8333	0.0	1.0	Constant values used for advective dispersion
64	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
65	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
66	1.0	Calibration	300.00	0.8333	0.0	1.0	Constant values used for advective dispersion

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Calibration Justification							
DATA TYPE 10 - DISPERSIVE HYDRAULIC COEFFICIENTS							
Reach	Tidal Range	Data Source	a	b	c	d	Data Source
67	1.0	Calibration	300.00	0.8333	0.0	1.0	Constant values used for advective dispersion
68	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
69	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
70	1.0	Calibration	300.00	0.8333	0.0	1.0	Constant values used for advective dispersion
71	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
72	1.0	Calibration	300.00	0.8333	0.0	1.0	Constant values used for advective dispersion
73	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
74	1.0	Calibration	300.00	0.8333	0.0	1.0	Constant values used for advective dispersion
75	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
76	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
77	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
78	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
79	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
80	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
81	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
82	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
83	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
84	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
85	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
86	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
87	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
88	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
89	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
90	1.0	Calibration	300.00	0.8333	0.0	1.0	Constant values used for advective dispersion
91	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Calibration Justification						
DATA TYPE 11-INITIAL CONDITIONS						
Reach	Name	Temp, deg C	Sal, ppt	DO, mg/l	Chlorophyll a	Data Source
1	DRAINAGE DITCH 1	30.00	0.26	3.00	0.00	Survey Measurements
2	VINCENT FROM RKM 20.3 TO BV01	33.82	0.26	3.00	0.00	Survey Measurements
3	VINCENT FROM BV01 RKM 18.5	33.82	0.26	3.00	0.00	Survey Measurements
4	VINCENT FROM RKM 18.5 TO BV02	27.21	0.39	3.00	0.00	Survey Measurements
5	DRAINAGE DITCH 2	30.00	0.30	3.00	0.00	Survey Measurements
6	VINCENT FROM BV02 TO DD 8	27.21	0.39	3.00	0.00	Survey Measurements
7	DRAINAGE DITCH 8	30.00	0.30	3.00	0.00	Survey Measurements
8	VINCENT FROM DD 8 TO DD 9	27.21	0.28	3.00	0.00	Survey Measurements
9	DRAINAGE DITCH 9	30.00	0.30	3.00	0.00	Survey Measurements
10	VINCENT FROM DD 9 TO RKM 15.2	27.90	0.17	3.00	0.00	Survey Measurements
11	VINCENT FROM RKM 15.2 TO BV03	27.90	0.17	3.00	24.60	Survey Measurements
12	VINCENT FROM BV03 TO BONFOUCA	27.90	0.17	3.00	24.60	Survey Measurements
13	UPPER BONFOUCA FROM RKM 5.0 TO DD 23	30.00	0.17	3.00	0.00	Survey Measurements
14	DRAINAGE DITCH 23	30.00	0.30	3.00	0.00	Survey Measurements
15	UPPER BONFOUCA FROM DD 23 TO BB01	30.00	0.17	3.00	0.00	Survey Measurements
16	UPPER BONFOUCA FROM BB01 TO BAYOU VINCENT	30.00	0.17	3.00	0.00	Survey Measurements
17	BONFOUCA FROM BV TO HWY 190	29.60	0.24	3.00	24.60	Survey Measurements
18	HWY 190 (DRAINAGE DITCH 5)	30.00	0.27	3.00	0.00	Survey Measurements
19	BONFOUCA FROM HWY 190 TO BB02	29.60	0.27	3.00	49.90	Survey Measurements
20	BONFOUCA FROM BB02 TO WD	29.60	0.45	3.00	49.90	Survey Measurements
21	WEST DRAINAGE CANAL	30.00	0.30	3.00	0.00	Survey Measurements
22	BONFOUCA FROM WD TO DD6	29.60	1.15	3.00	8.80	Survey Measurements
23	DRAINAGE DITCH 6	30.00	0.30	3.00	0.00	Survey Measurements
24	BONFOUCA FROM DD 6 TO TRIB 2	31.54	2.10	3.00	8.80	Survey Measurements
25	DRAINAGE DITCH 7	30.00	0.30	3.00	0.00	Survey Measurements
26	TRIBUTARY 2	30.00	0.30	3.00	0.00	Survey Measurements
27	BONFOUCA FROM TRIB 2 TO BB03	31.54	2.40	3.00	8.80	Survey Measurements
28	BONFOUCA FROM BB03 TO CANAL 26	31.54	2.68	3.00	8.80	Survey Measurements
29	CANAL 26	30.00	0.30	3.00	0.00	Survey Measurements
30	BONFOUCA FROM CANAL 26 TO TRIB 4	31.54	3.00	3.00	10.60	Survey Measurements

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Calibration Justification						
DATA TYPE 11-INITIAL CONDITIONS						
Reach	Name	Temp, deg C	Sal, ppt	DO, mg/l	Chlorophyll a	Data Source
31	TRIBUTARY 4 - UPLAND	30.00	0.30	3.00	0.00	Survey Measurements
32	TRIBUTARY 4 - TIDAL	30.00	0.30	3.00	10.60	Survey Measurements
33	BONFOUCA FROM TRIB 4 TO BB04	31.29	3.10	3.00	11.30	Survey Measurements
34	BONFOUCA FROM BB04 TO Rkm 5.6	31.29	3.30	3.00	11.30	Survey Measurements
35	BONFOUCA FROM RKM 5.6 TO BB05	31.29	3.30	3.00	12.90	Survey Measurements
36	BONFOUCA FROM BB05 TO RKM 2.7	31.29	3.62	3.00	12.90	Survey Measurements
37	BONFOUCA FROM RKM 2.7 TO LIBERTY	31.29	3.82	3.00	10.20	Survey Measurements
38	LIBERTY FROM RKM 15.0 TO TRIB 1	29.33	0.30	3.00	0.00	Survey Measurements
39	TRIBUTARY 1	30.00	0.30	3.00	0.00	Survey Measurements
40	LIBERTY FROM RKM 14.4 TO DD22	29.33	0.30	3.00	0.00	Survey Measurements
41	DD22	30.00	0.30	3.00	0.00	Survey Measurements
42	LIBERTY FROM DD22 TO DD20	29.33	0.30	3.00	0.00	Survey Measurements
43	DD20	30.00	0.30	3.00	0.00	Survey Measurements
44	LIBERTY FROM DD20 TO BL03	29.33	0.48	3.00	14.80	Survey Measurements
45	LIBERTY FROM BL03 TO HWY 190	29.33	0.48	3.00	14.80	Survey Measurements
46	HWY 190 (DRAINAGE DITCH 14)	30.00	0.30	3.00	0.00	Survey Measurements
47	LIBERTY FROM HWY 190 TO BL04	29.52	0.54	3.00	14.80	Survey Measurements
48	LIBERTY FROM BL04 TO DD18	29.52	0.54	3.00	57.10	Survey Measurements
49	DD18	30.00	0.30	3.00	0.00	Survey Measurements
50	LIBERTY FROM DD18 TO DD19	29.52	1.70	3.00	3.20	Survey Measurements
51	DD19	30.00	0.30	3.00	0.00	Survey Measurements
52	LIBERTY FROM DD19 TO DD04	31.31	2.90	3.00	3.20	Survey Measurements
53	DD04	30.00	0.30	3.00	0.00	Survey Measurements
54	LIBERTY FROM DD04 TO BL05	31.31	3.09	3.00	3.20	Survey Measurements
55	LIBERTY FROM BL05 TO RKM 6.3	31.31	3.09	3.00	3.20	Survey Measurements
56	LIBERTY FROM RKM 6.3 TO RKM 6.0	31.31	3.09	3.00	3.20	Survey Measurements
57	LIBERTY FROM RKM 6.0 TO TRIB 9	31.31	3.09	3.00	3.20	Survey Measurements
58	DRAINAGE DITCH 3	30.00	0.30	3.00	0.00	Survey Measurements
59	TRIBUTARY 9	30.00	0.30	3.00	0.00	Survey Measurements
60	LIBERTY FROM TRIB 9 TO TRIB 6	31.99	2.80	3.00	3.20	Survey Measurements

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Calibration Justification						
DATA TYPE 11-INITIAL CONDITIONS						
Reach	Name	Temp, deg C	Sal, ppt	DO, mg/l	Chlorophyll a	Data Source
61	DRAINAGE DITCH 11	30.00	0.30	3.00	0.00	Survey Measurements
62	TRIBUTARY 6	30.00	0.30	3.00	0.00	Survey Measurements
63	LIBERTY FROM TRIB 6 TO TO TRIB 10	31.99	2.40	3.00	3.20	Survey Measurements
64	TRIBUTARY 10 - UPLAND	30.00	0.30	3.00	0.00	Survey Measurements
65	TRIBUTARY 10 - TIDAL	30.00	0.30	3.00	0.00	Survey Measurements
66	LIBERTY FROM TRIB 10 TO BL07	31.99	2.12	3.00	3.20	Survey Measurements
67	LIBERTY FROM BL07 TO TRIB 8	31.99	2.12	3.00	65.20	Survey Measurements
68	TRIBUTARY 8	30.00	0.30	3.00	0.00	Survey Measurements
69	TRIBUTARY 8	30.00	0.30	3.00	0.00	Survey Measurements
70	LIBERTY FROM TRIB 8 TO M1	31.99	2.80	3.00	65.20	Survey Measurements
71	MARINA 1	30.00	0.30	3.00	0.00	Survey Measurements
72	LIBERTY FROM M1 TO M2	31.99	3.50	3.00	6.80	Survey Measurements
73	MARINA02	30.00	0.30	3.00	0.00	Survey Measurements
74	LIBERTY FROM M2 TO B PAQUET	31.99	4.16	3.00	6.80	Survey Measurements
75	HWY 190 (DD13) PAQUET HEADWATERS	30.00	0.30	3.00	0.00	Survey Measurements
76	PAQUET FROM HWY 190 TO DD16	32.08	0.30	3.00	0.00	Survey Measurements
77	DD16	30.00	0.30	3.00	0.00	Survey Measurements
78	PAQUET FROM RKM 5.1 TO DD17	32.08	0.30	3.00	0.00	Survey Measurements
79	DD17	30.00	0.30	3.00	0.00	Survey Measurements
80	PAQUET FROM DD17 TO TIDAL REACH	32.08	1.60	3.00	0.00	Survey Measurements
81	PAQUET (TIDAL) TO BP02	32.08	3.17	3.00	14.60	Survey Measurements
82	PAQUET FROM BP02 TO BP03	32.08	3.32	3.00	14.60	Survey Measurements
83	PAQUET FROM BP03 TO TRIB 24	32.07	3.47	3.00	14.60	Survey Measurements
84	TRIB 24 FROM TOP TO PAQUET	30.00	0.30	3.00	0.00	Survey Measurements
85	PAQUET FROM TRIB 24 TO TRIB 25	32.07	3.70	3.00	13.60	Survey Measurements
86	TRIB 25 FROM TOP TO RKM 0.3	30.00	0.30	3.00	0.00	Survey Measurements
87	TRIB 25 FROM RKM 0.3 TO PAQUET	30.00	0.30	3.00	0.00	Survey Measurements
88	PAQUET FROM TRIB 25 TO BP04	32.72	3.94	3.00	13.60	Survey Measurements
89	PAQUET FROM BP04 TO LIBERTY	32.72	3.94	3.00	13.60	Survey Measurements
90	LIBERTY FROM PAQUET TO BONFOUCA	30.44	4.16	3.00	6.80	Survey Measurements
91	BONFOUCA FROM LIBERTY TO PONTCHARTRAIN (INCL BB06)	30.22	4.00	3.00	7.40	Survey Measurements

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Calibration Justification					Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908				
DATA TYPE 12 - REAERATION, SEDIMENT OXYGEN DEMAND AND BOD COEFFICIENTS					DATA TYPE 12 - REAERATION, SEDIMENT OXYGEN DEMAND AND BOD COEFFICIENTS				
REACH	NAME	K2 OPT	Data Source	a	BKGRND SOD, gmO2/m2/day at 20 deg C	Data Source	Aerobic BOD1 Dec Rate (1/day)	BOD1 SETT RATE (1/day)	Data Source
1	DRAINAGE DITCH 1	15	Louisiana Equation	0	0.50	Calibration	0.0800	0.05	Calibration
2	VINCENT FROM RKM 20.3 TO BV01	15	Louisiana Equation	0	0.30	Calibration	0.0800	0.05	Calibration
3	VINCENT FROM BV01 RKM 18.5	15	Louisiana Equation	0	6.00	Calibration	0.0800	0.05	Calibration
4	VINCENT FROM RKM 18.5 TO BV02	15	Louisiana Equation	0	7.00	Calibration	0.0800	0.05	Calibration
5	DRAINAGE DITCH 2	15	Louisiana Equation	0	0.50	Calibration	0.0800	0.05	Calibration
6	VINCENT FROM BV02 TO DD 8	15	Louisiana Equation	0	7.00	Calibration	0.0800	0.05	Calibration
7	DRAINAGE DITCH 8	15	Louisiana Equation	0	0.50	Calibration	0.0800	0.05	Calibration
8	VINCENT FROM DD 8 TO DD 9	15	Louisiana Equation	0	7.00	Calibration	0.0800	0.05	Calibration
9	DRAINAGE DITCH 9	15	Louisiana Equation	0	0.50	Calibration	0.0800	0.05	Calibration
10	VINCENT FROM DD 9 TO RKM 15.2	15	Louisiana Equation	0	7.00	Calibration	0.0800	0.05	Calibration
11	VINCENT FROM RKM 15.2 TO BV03	15	Louisiana Equation	0	4.20	Calibration	0.0800	0.05	Calibration
12	VINCENT FROM BV03 TO BONFOUCA	15	Louisiana Equation	0	4.20	Calibration	0.0800	0.05	Calibration
13	UPPER BONFOUCA FROM RKM 5.0 TO DD 23	15	Louisiana Equation	0	0.50	Calibration	0.0800	0.05	Calibration
14	DRAINAGE DITCH 23	15	Louisiana Equation	0	0.50	Calibration	0.0800	0.05	Calibration
15	UPPER BONFOUCA FROM DD 23 TO BB01	15	Louisiana Equation	0	0.50	Calibration	0.0800	0.05	Calibration

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Calibration Justification					Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908				
DATA TYPE 12 - REAERATION, SEDIMENT OXYGEN DEMAND AND BOD COEFFICIENTS					DATA TYPE 12 - REAERATION, SEDIMENT OXYGEN DEMAND AND BOD COEFFICIENTS				
REACH	NAME	K2 OPT	Data Source	a	BKGRND SOD, gmO2/m2/day at 20 deg C	Data Source	Aerobic BOD1 Dec Rate (1/day)	BOD1 SETT RATE (1/day)	Data Source
16	UPPER BONFOUCA FROM BB01 TO BAYOU VINCENT	15	Louisiana Equation	0	0.50	Calibration	0.0800	0.05	Calibration
17	BONFOUCA FROM BV TO HWY 190	15	Louisiana Equation	0	2.80	Calibration	0.0800	0.05	Calibration
18	HWY 190 (DRAINAGE DITCH 5)	15	Louisiana Equation	0	0.50	Calibration	0.0800	0.05	Calibration
19	BONFOUCA FROM HWY 190 TO BB02	15	Louisiana Equation	0	3.60	Calibration	0.0800	0.05	Calibration
20	BONFOUCA FROM BB02 TO WD	15	Louisiana Equation	0	3.60	Calibration	0.0800	0.05	Calibration
21	WEST DRAINAGE CANAL	15	Louisiana Equation	0	0.50	Calibration	0.0800	0.05	Calibration
22	BONFOUCA FROM WD TO DD6	11	Texas Equation	0	2.30	Calibration	0.0800	0.05	Calibration
23	DRAINAGE DITCH 6	15	Louisiana Equation	0	0.50	Calibration	0.0800	0.05	Calibration
24	BONFOUCA FROM DD 6 TO TRIB 2	1	$K_2 = a$	0.5	0.50	Calibration	0.0800	0.05	Calibration
25	DRAINAGE DITCH 7	15	Louisiana Equation	0	0.50	Calibration	0.0800	0.05	Calibration
26	TRIBUTARY 2	11	Texas Equation	0	0.50	Calibration	0.0800	0.05	Calibration
27	BONFOUCA FROM TRIB 2 TO BB03	1	$K_2 = a$	0.5	0.40	Calibration	0.0800	0.05	Calibration
28	BONFOUCA FROM BB03 TO CANAL 26	1	$K_2 = a$	0.5	0.40	Calibration	0.0800	0.05	Calibration
29	CANAL 26	11	Texas Equation	0	0.50	Calibration	0.0800	0.05	Calibration
30	BONFOUCA FROM CANAL 26 TO TRIB 4	1	$K_2 = a$	0.48	0.40	Calibration	0.0800	0.05	Calibration

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Calibration Justification					Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908				
DATA TYPE 12 - REAERATION, SEDIMENT OXYGEN DEMAND AND BOD COEFFICIENTS					DATA TYPE 12 - REAERATION, SEDIMENT OXYGEN DEMAND AND BOD COEFFICIENTS				
REACH	NAME	K2 OPT	Data Source	a	BKGRND SOD, gmO2/m2/day at 20 deg C	Data Source	Aerobic BOD1 Dec Rate (1/day)	BOD1 SETT RATE (1/day)	Data Source
31	TRIBUTARY 4 - UPLAND	15	Louisiana Equation	0	0.50	Calibration	0.0800	0.05	Calibration
32	TRIBUTARY 4 - TIDAL	11	Texas Equation	0	0.50	Calibration	0.0800	0.05	Calibration
33	BONFOUCA FROM TRIB 4 TO BB04	1	$K_2 = a$	0.48	0.20	Calibration	0.0800	0.05	Calibration
34	BONFOUCA FROM BB04 TO Rkm 5.6	1	$K_2 = a$	0.48	0.00	Calibration	0.0800	0.05	Calibration
35	BONFOUCA FROM RKM 5.6 TO BB05	1	$K_2 = a$	0.54	0.00	Calibration	0.0800	0.05	Calibration
36	BONFOUCA FROM BB05 TO RKM 2.7	1	$K_2 = a$	0.66	0.05	Calibration	0.0800	0.05	Calibration
37	BONFOUCA FROM RKM 2.7 TO LIBERTY	1	$K_2 = a$	0.58	0.00	Calibration	0.0800	0.05	Calibration
38	LIBERTY FROM RKM 15.0 TO TRIB 1	15	Louisiana Equation	0	2.00	Calibration	0.0800	0.05	Calibration
39	TRIBUTARY 1	15	Louisiana Equation	0	0.50	Calibration	0.0800	0.05	Calibration
40	LIBERTY FROM RKM 14.4 TO DD22	15	Louisiana Equation	0	2.50	Calibration	0.0800	0.05	Calibration
41	DD22	15	Louisiana Equation	0	0.50	Calibration	0.0800	0.05	Calibration
42	LIBERTY FROM DD22 TO DD20	15	Louisiana Equation	0	2.70	Calibration	0.0800	0.05	Calibration
43	DD20	15	Louisiana Equation	0	0.50	Calibration	0.0800	0.05	Calibration
44	LIBERTY FROM DD20 TO BL03	15	Louisiana Equation	0	2.50	Calibration	0.0800	0.05	Calibration
45	LIBERTY FROM BL03 TO HWY 190	15	Louisiana Equation	0	1.70	Calibration	0.0800	0.05	Calibration

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Calibration Justification					Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908				
DATA TYPE 12 - REAERATION, SEDIMENT OXYGEN DEMAND AND BOD COEFFICIENTS					DATA TYPE 12 - REAERATION, SEDIMENT OXYGEN DEMAND AND BOD COEFFICIENTS				
REACH	NAME	K2 OPT	Data Source	a	BKGRND SOD, gmO2/m2/day at 20 deg C	Data Source	Aerobic BOD1 Dec Rate (1/day)	BOD1 SETT RATE (1/day)	Data Source
46	HWY 190 (DRAINAGE DITCH 14)	15	Louisiana Equation	0	0.50	Calibration	0.0800	0.05	Calibration
47	LIBERTY FROM HWY 190 TO BL04	11	Texas Equation	0	0.40	Calibration	0.0800	0.05	Calibration
48	LIBERTY FROM BL04 TO DD18	11	Texas Equation	0	0.33	Calibration	0.0800	0.05	Calibration
49	DD18	15	Louisiana Equation	0	0.50	Calibration	0.0800	0.05	Calibration
50	LIBERTY FROM DD18 TO DD19	11	Texas Equation	0	0.10	Calibration	0.0800	0.05	Calibration
51	DD19	15	Louisiana Equation	0	0.50	Calibration	0.0800	0.05	Calibration
52	LIBERTY FROM DD19 TO DD04	11	Texas Equation	0	0.00	Calibration	0.0800	0.05	Calibration
53	DD04	15	Louisiana Equation	0	0.50	Calibration	0.0800	0.05	Calibration
54	LIBERTY FROM DD04 TO BL05	11	Texas Equation	0	0.04	Calibration	0.0800	0.05	Calibration
55	LIBERTY FROM BL05 TO RKM 6.3	1	$K_2 = a$	0.36	0.10	Calibration	0.0800	0.05	Calibration
56	LIBERTY FROM RKM 6.3 TO RKM 6.0	1	$K_2 = a$	0.47	0.04	Calibration	0.0800	0.05	Calibration
57	LIBERTY FROM RKM 6.0 TO TRIB 9	1	$K_2 = a$	0.39	0.00	Calibration	0.0800	0.05	Calibration
58	DRAINAGE DITCH 3	15	Louisiana Equation	0	0.50	Calibration	0.0800	0.05	Calibration
59	TRIBUTARY 9	11	Texas Equation	0	0.50	Calibration	0.0800	0.05	Calibration
60	LIBERTY FROM TRIB 9 TO TRIB 6	1	$K_2 = a$	0.44	0.00	Calibration	0.0800	0.05	Calibration

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Calibration Justification					Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908				
DATA TYPE 12 - REAERATION, SEDIMENT OXYGEN DEMAND AND BOD COEFFICIENTS					DATA TYPE 12 - REAERATION, SEDIMENT OXYGEN DEMAND AND BOD COEFFICIENTS				
REACH	NAME	K2 OPT	Data Source	a	BKGRND SOD, gmO2/m2/day at 20 deg C	Data Source	Aerobic BOD1 Dec Rate (1/day)	BOD1 SETT RATE (1/day)	Data Source
61	DRAINAGE DITCH 11	15	Louisiana Equation	0	0.50	Calibration	0.0800	0.05	Calibration
62	TRIBUTARY 6	11	Texas Equation	0	0.50	Calibration	0.0800	0.05	Calibration
63	LIBERTY FROM TRIB 6 TO TRIB 10	1	$K_2 = a$	0.43	0.00	Calibration	0.0800	0.05	Calibration
64	TRIBUTARY 10 - UPLAND	15	Louisiana Equation	0	0.50	Calibration	0.0800	0.05	Calibration
65	TRIBUTARY 10 - TIDAL	11	Texas Equation	0	0.50	Calibration	0.0800	0.05	Calibration
66	LIBERTY FROM TRIB 10 TO BL07	1	$K_2 = a$	0.43	0.21	Calibration	0.0800	0.05	Calibration
67	LIBERTY FROM BL07 TO TRIB 8	1	$K_2 = a$	0.43	0.22	Calibration	0.0800	0.05	Calibration
68	TRIBUTARY 8	15	Louisiana Equation	0	0.50	Calibration	0.0800	0.05	Calibration
69	TRIBUTARY 8	11	Texas Equation	0	0.50	Calibration	0.0800	0.05	Calibration
70	LIBERTY FROM TRIB 8 TO M1	1	$K_2 = a$	0.43	0.20	Calibration	0.0800	0.05	Calibration
71	MARINA 1	11	Texas Equation	0	0.50	Calibration	0.0800	0.05	Calibration
72	LIBERTY FROM M1 TO M2	1	$K_2 = a$	0.43	0.00	Calibration	0.0800	0.05	Calibration
73	MARINA02	11	Texas Equation	0	0.50	Calibration	0.0800	0.05	Calibration
74	LIBERTY FROM M2 TO B PAQUET	1	$K_2 = a$	0.43	0.00	Calibration	0.0800	0.05	Calibration
75	HWY 190 (DD13) PAQUET HEADWATERS	15	Louisiana Equation	0	0.50	Calibration	0.0800	0.05	Calibration

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Calibration Justification					Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908				
DATA TYPE 12 - REAERATION, SEDIMENT OXYGEN DEMAND AND BOD COEFFICIENTS					DATA TYPE 12 - REAERATION, SEDIMENT OXYGEN DEMAND AND BOD COEFFICIENTS				
REACH	NAME	K2 OPT	Data Source	a	BKGRND SOD, gmO2/m2/day at 20 deg C	Data Source	Aerobic BOD1 Dec Rate (1/day)	BOD1 SETT RATE (1/day)	Data Source
76	PAQUET FROM HWY 190 TO DD16	15	Louisiana Equation	0	0.50	Calibration	0.0800	0.05	Calibration
77	DD16	15	Louisiana Equation	0	0.50	Calibration	0.0800	0.05	Calibration
78	PAQUET FROM RKM 5.1 TO DD17	15	Louisiana Equation	0	0.50	Calibration	0.0800	0.05	Calibration
79	DD17	15	Louisiana Equation	0	0.50	Calibration	0.0800	0.05	Calibration
80	PAQUET FROM DD17 TO TIDAL REACH	15	Louisiana Equation	0	0.50	Calibration	0.0800	0.05	Calibration
81	PAQUET (TIDAL) TO BP02	15	Louisiana Equation	0	0.32	Calibration	0.0800	0.05	Calibration
82	PAQUET FROM BP02 TO BP03	1	$K_2 = a$	0.8	0.76	Calibration	0.0800	0.05	Calibration
83	PAQUET FROM BP03 TO TRIB 24	1	$K_2 = a$	0.61	0.60	Calibration	0.0800	0.05	Calibration
84	TRIB 24 FROM TOP TO PAQUET	15	Louisiana Equation	0	0.50	Calibration	0.0800	0.05	Calibration
85	PAQUET FROM TRIB 24 TO TRIB 25	1	$K_2 = a$	0.61	0.30	Calibration	0.0800	0.05	Calibration
86	TRIB 25 FROM TOP TO RKM 0.3	15	Louisiana Equation	0	0.50	Calibration	0.0800	0.05	Calibration
87	TRIB 25 FROM RKM 0.3 TO PAQUET	15	Louisiana Equation	0	0.50	Calibration	0.0800	0.05	Calibration
88	PAQUET FROM TRIB 25 TO BP04	1	$K_2 = a$	0.61	0.00	Calibration	0.0800	0.05	Calibration
89	PAQUET FROM BP04 TO LIBERTY	1	$K_2 = a$	0.61	0.00	Calibration	0.0800	0.05	Calibration
90	LIBERTY FROM PAQUET TO BONFOUCA	1	$K_2 = a$	0.43	0.00	Calibration	0.0800	0.05	Calibration
91	BONFOUCA FROM LIBERTY TO PONTCHARTRAIN (INCL BB06)	1	$K_2 = a$	0.5	0.00	Calibration	0.0800	0.05	Calibration

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Calibration Justification

DATA TYPE 13 - NITROGEN AND PHOSPHORUS COEFFICIENTS

Reach	Name	NBOD decay rate, 1/day	NBOD settling rate, 1/day	Data Source
1	DRAINAGE DITCH 1	0.0300	0.05	Calibration
2	VINCENT FROM RKM 20.3 TO BV01	0.0300	0.05	Calibration
3	VINCENT FROM BV01 RKM 18.5	0.0300	0.05	Calibration
4	VINCENT FROM RKM 18.5 TO BV02	0.0300	0.05	Calibration
5	DRAINAGE DITCH 2	0.0300	0.05	Calibration
6	VINCENT FROM BV02 TO DD 8	0.0300	0.10	Calibration
7	DRAINAGE DITCH 8	0.0300	0.05	Calibration
8	VINCENT FROM DD 8 TO DD 9	0.0300	0.10	Calibration
9	DRAINAGE DITCH 9	0.0300	0.05	Calibration
10	VINCENT FROM DD 9 TO RKM 15.2	0.0300	0.05	Calibration
11	VINCENT FROM RKM 15.2 TO BV03	0.0300	0.15	Calibration
12	VINCENT FROM BV03 TO BONFOUCA	0.0300	0.15	Calibration
13	UPPER BONFOUCA FROM RKM 5.0 TO DD 23	0.0300	0.05	Calibration
14	DRAINAGE DITCH 23	0.0300	0.05	Calibration
15	UPPER BONFOUCA FROM DD 23 TO BB01	0.0300	0.05	Calibration
16	UPPER BONFOUCA FROM BB01 TO BAYOU VINCENT	0.0300	0.05	Calibration
17	BONFOUCA FROM BV TO HWY 190	0.0300	0.15	Calibration
18	HWY 190 (DRAINAGE DITCH 5)	0.0300	0.05	Calibration
19	BONFOUCA FROM HWY 190 TO BB02	0.0300	0.15	Calibration
20	BONFOUCA FROM BB02 TO WD	0.0300	0.05	Calibration
21	WEST DRAINAGE CANAL	0.0300	0.05	Calibration
22	BONFOUCA FROM WD TO DD6	0.0300	0.05	Calibration
23	DRAINAGE DITCH 6	0.0300	0.05	Calibration
24	BONFOUCA FROM DD 6 TO TRIB 2	0.0300	0.05	Calibration
25	DRAINAGE DITCH 7	0.0300	0.05	Calibration
26	TRIBUTARY 2	0.0300	0.05	Calibration
27	BONFOUCA FROM TRIB 2 TO BB03	0.0300	0.05	Calibration
28	BONFOUCA FROM BB03 TO CANAL 26	0.0300	0.05	Calibration
29	CANAL 26	0.0300	0.05	Calibration
30	BONFOUCA FROM CANAL 26 TO TRIB 4	0.0300	0.05	Calibration

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Calibration Justification

DATA TYPE 13 - NITROGEN AND PHOSPHORUS COEFFICIENTS

Reach	Name	NBOD decay rate, 1/day	NBOD settling rate, 1/day	Data Source
31	TRIBUTARY 4 - UPLAND	0.0300	0.05	Calibration
32	TRIBUTARY 4 - TIDAL	0.0300	0.05	Calibration
33	BONFOUCA FROM TRIB 4 TO BB04	0.0300	0.05	Calibration
34	BONFOUCA FROM BB04 TO Rkm 5.6	0.0300	0.05	Calibration
35	BONFOUCA FROM RKM 5.6 TO BB05	0.03	0.05	Calibration
36	BONFOUCA FROM BB05 TO RKM 2.7	0.03	0.05	Calibration
37	BONFOUCA FROM RKM 2.7 TO LIBERTY	0.03	0.05	Calibration
38	LIBERTY FROM RKM 15.0 TO TRIB 1	0.03	0.05	Calibration
39	TRIBUTARY 1	0.03	0.05	Calibration
40	LIBERTY FROM RKM 14.4 TO DD22	0.03	0.05	Calibration
41	DD22	0.03	0.05	Calibration
42	LIBERTY FROM DD22 TO DD20	0.03	0.05	Calibration
43	DD20	0.03	0.05	Calibration
44	LIBERTY FROM DD20 TO BL03	0.03	0.05	Calibration
45	LIBERTY FROM BL03 TO HWY 190	0.03	0.05	Calibration
46	HWY 190 (DRAINAGE DITCH 14)	0.03	0.05	Calibration
47	LIBERTY FROM HWY 190 TO BL04	0.03	0.05	Calibration
48	LIBERTY FROM BL04 TO DD18	0.03	0.05	Calibration
49	DD18	0.03	0.05	Calibration
50	LIBERTY FROM DD18 TO DD19	0.03	0.05	Calibration
51	DD19	0.03	0.05	Calibration
52	LIBERTY FROM DD19 TO DD04	0.03	0.05	Calibration
53	DD04	0.03	0.05	Calibration
54	LIBERTY FROM DD04 TO BL05	0.03	0.05	Calibration
55	LIBERTY FROM BL05 TO RKM 6.3	0.03	0.05	Calibration
56	LIBERTY FROM RKM 6.3 TO RKM 6.0	0.03	0.05	Calibration
57	LIBERTY FROM RKM 6.0 TO TRIB 9	0.03	0.05	Calibration
58	DRAINAGE DITCH 3	0.03	0.05	Calibration
59	TRIBUTARY 9	0.03	0.05	Calibration
60	LIBERTY FROM TRIB 9 TO TRIB 6	0.03	0.05	Calibration
61	DRAINAGE DITCH 11	0.03	0.05	Calibration

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Calibration Justification

DATA TYPE 13 - NITROGEN AND PHOSPHORUS COEFFICIENTS

Reach	Name	NBOD decay rate, 1/day	NBOD settling rate, 1/day	Data Source
62	TRIBUTARY 6	0.03	0.05	Calibration
63	LIBERTY FROM TRIB 6 TO TO TRIB 10	0.03	0.05	Calibration
64	TRIBUTARY 10 - UPLAND	0.03	0.05	Calibration
65	TRIBUTARY 10 - TIDAL	0.03	0.05	Calibration
66	LIBERTY FROM TRIB 10 TO BL07	0.03	0.05	Calibration
67	LIBERTY FROM BL07 TO TRIB 8	0.03	0.05	Calibration
68	TRIBUTARY 8	0.03	0.05	Calibration
69	TRIBUTARY 8	0.03	0.05	Calibration
70	LIBERTY FROM TRIB 8 TO M1	0.03	0.05	Calibration
71	MARINA 1	0.03	0.05	Calibration
72	LIBERTY FROM M1 TO M2	0.03	0.05	Calibration
73	MARINA02	0.03	0.05	Calibration
74	LIBERTY FROM M2 TO B PAQUET	0.03	0.05	Calibration
75	HWY 190 (DD13) PAQUET HEADWATERS	0.03	0.05	Calibration
76	PAQUET FROM HWY 190 TO DD16	0.03	0.05	Calibration
77	DD16	0.03	0.05	Calibration
78	PAQUET FROM RKM 5.1 TO DD17	0.03	0.05	Calibration
79	DD17	0.03	0.05	Calibration
80	PAQUET FROM DD17 TO TIDAL REACH	0.03	0.05	Calibration
81	PAQUET (TIDAL) TO BP02	0.03	0.05	Calibration
82	PAQUET FROM BP02 TO BP03	0.03	0.05	Calibration
83	PAQUET FROM BP03 TO TRIB 24	0.03	0.05	Calibration
84	TRIB 24 FROM TOP TO PAQUET	0.03	0.05	Calibration
85	PAQUET FROM TRIB 24 TO TRIB 25	0.03	0.05	Calibration
86	TRIB 25 FROM TOP TO RKM 0.3	0.03	0.05	Calibration
87	TRIB 25 FROM RKM 0.3 TO PAQUET	0.03	0.05	Calibration
88	PAQUET FROM TRIB 25 TO BP04	0.03	0.05	Calibration
89	PAQUET FROM BP04 TO LIBERTY	0.03	0.05	Calibration
90	LIBERTY FROM PAQUET TO BONFOUCA	0.03	0.05	Calibration
91	BONFOUCA FROM LIBERTY TO PONTCHARTRAIN (INCL BB06)	0.03	0.05	Calibration

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Calibration Justification

DATA TYPE 19 - NONPOINT SOURCES

Reach	Reach Name	Length of Reach, km	CBOD, kg/day	NBOD, kg/day	Data Source
1	DRAINAGE DITCH 1	3.90	0.65	0.27	Calibration
2	VINCENT FROM RKM 20.3 TO BV01	0.80	0.13	0.05	Calibration
3	VINCENT FROM BV01 RKM 18.5	1.00	1.40	0.05	Calibration
4	VINCENT FROM RKM 18.5 TO BV02	0.90	1.40	0.05	Calibration
5	DRAINAGE DITCH 2	2.10	0.30	0.13	Calibration
6	VINCENT FROM BV02 TO DD 8	0.70	1.40	0.14	Calibration
7	DRAINAGE DITCH 8	0.80	0.11	0.05	Calibration
8	VINCENT FROM DD 8 TO DD 9	0.90	1.70	0.14	Calibration
9	DRAINAGE DITCH 9	2.10	0.30	0.13	Calibration
10	VINCENT FROM DD 9 TO RKM 15.2	0.80	0.10	0.05	Calibration
11	VINCENT FROM RKM 15.2 TO BV03	0.30	0.80	0.15	Calibration
12	VINCENT FROM BV03 TO BONFOUCA	0.50	1.40	0.90	Calibration
13	UPPER BONFOUCA FROM RKM 5.0 TO DD 23	2.40	0.37	0.16	Calibration
14	DRAINAGE DITCH 23	1.00	0.15	0.07	Calibration
15	UPPER BONFOUCA FROM DD 23 TO BB01	1.50	0.25	0.10	Calibration
16	UPPER BONFOUCA FROM BB01 TO BAYOU VINCENT	1.10	0.28	0.11	Calibration
17	BONFOUCA FROM BV TO HWY 190	0.20	0.10	0.00	Calibration
18	HWY 190 (DRAINAGE DITCH 5)	1.80	0.26	0.12	Calibration
19	BONFOUCA FROM HWY 190 TO BB02	0.90	11.70	3.80	Calibration
20	BONFOUCA FROM BB02 TO WD	1.20	22.50	2.10	Calibration
21	WEST DRAINAGE CANAL	0.30	0.17	0.06	Calibration
22	BONFOUCA FROM WD TO DD6	2.10	135.00	17.00	Calibration
23	DRAINAGE DITCH 6	0.30	0.05	0.02	Calibration
24	BONFOUCA FROM DD 6 TO TRIB 2	0.80	160.00	18.00	Calibration
25	DRAINAGE DITCH 7	1.00	0.15	0.07	Calibration
26	TRIBUTARY 2	0.50	1.85	0.61	Calibration
27	BONFOUCA FROM TRIB 2 TO BB03	6.00	126.00	16.00	Calibration
28	BONFOUCA FROM BB03 TO CANAL 26	6.00	146.00	15.00	Calibration
29	CANAL 26	0.20	98.00	28.00	Calibration
30	BONFOUCA FROM CANAL 26 TO TRIB 4	0.70	100.00	12.00	Calibration
31	TRIBUTARY 4 - UPLAND	1.60	0.17	0.07	Calibration

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Calibration Justification

DATA TYPE 19 - NONPOINT SOURCES

Reach	Reach Name	Length of Reach, km	CBOD, kg/day	NBOD, kg/day	Data Source
32	TRIBUTARY 4 - TIDAL	3.10	5.70	1.72	Calibration
33	BONFOUCA FROM TRIB 4 TO BB04	2.30	140.00	15.00	Calibration
34	BONFOUCA FROM BB04 TO Rkm 5.6	1.10	280.00	30.00	Calibration
35	BONFOUCA FROM RKM 5.6 TO BB05	1.10	325.00	40.00	Calibration
36	BONFOUCA FROM BB05 TO RKM 2.7	1.10	325.00	5.00	Calibration
37	BONFOUCA FROM RKM 2.7 TO LIBERTY	1.10	0.00	0.00	Calibration
38	LIBERTY FROM RKM 15.0 TO TRIB 1	1.10	2.00	1.40	Calibration
39	TRIBUTARY 1	1.10	0.35	0.15	Calibration
40	LIBERTY FROM RKM 14.4 TO DD22	1.10	2.00	1.90	Calibration
41	DD22	1.10	0.05	0.02	Calibration
42	LIBERTY FROM DD22 TO DD20	1.10	10.80	12.00	Calibration
43	DD20	1.10	0.40	0.17	Calibration
44	LIBERTY FROM DD20 TO BL03	1.10	3.40	4.00	Calibration
45	LIBERTY FROM BL03 TO HWY 190	1.10	40.00	3.50	Calibration
46	HWY 190 (DRAINAGE DITCH 14)	1.10	0.34	0.15	Calibration
47	LIBERTY FROM HWY 190 TO BL04	1.10	6.00	2.00	Calibration
48	LIBERTY FROM BL04 TO DD18	1.10	64.00	5.00	Calibration
49	DD18	1.10	0.04	0.02	Calibration
50	LIBERTY FROM DD18 TO DD19	1.10	25.00	3.00	Calibration
51	DD19	1.10	0.21	0.09	Calibration
52	LIBERTY FROM DD19 TO DD04	1.10	38.00	3.00	Calibration
53	DD04	1.10	0.64	0.28	Calibration
54	LIBERTY FROM DD04 TO BL05	1.10	98.00	3.00	Calibration
55	LIBERTY FROM BL05 TO RKM 6.3	1.10	75.00	3.00	Calibration
56	LIBERTY FROM RKM 6.3 TO RKM 6.0	1.10	40.00	2.00	Calibration
57	LIBERTY FROM RKM 6.0 TO TRIB 9	1.10	120.00	2.00	Calibration
58	DRAINAGE DITCH 3	1.10	0.03	0.01	Calibration
59	TRIBUTARY 9	1.10	1.80	0.55	Calibration
60	LIBERTY FROM TRIB 9 TO TRIB 6	1.10	220.00	35.00	Calibration
61	DRAINAGE DITCH 11	1.10	0.15	0.07	Calibration
62	TRIBUTARY 6	1.10	2.30	0.74	Calibration

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Calibration Justification

DATA TYPE 19 - NONPOINT SOURCES

Reach	Reach Name	Length of Reach, km	CBOD, kg/day	NBOD, kg/day	Data Source
63	LIBERTY FROM TRIB 6 TO TO TRIB 10	1.10	40.00	12.00	Calibration
64	TRIBUTARY 10 - UPLAND	1.10	0.07	0.03	Calibration
65	TRIBUTARY 10 - TIDAL	1.10	0.86	0.28	Calibration
66	LIBERTY FROM TRIB 10 TO BL07	1.10	220.00	36.00	Calibration
67	LIBERTY FROM BL07 TO TRIB 8	1.10	0.00	17.00	Calibration
68	TRIBUTARY 8	1.10	0.07	0.03	Calibration
69	TRIBUTARY 8	1.10	0.29	0.10	Calibration
70	LIBERTY FROM TRIB 8 TO M1	1.10	25.00	13.00	Calibration
71	MARINA 1	1.10	3.35	0.89	Calibration
72	LIBERTY FROM M1 TO M2	1.10	50.00	12.00	Calibration
73	MARINA02	1.10	29.00	8.00	Calibration
74	LIBERTY FROM M2 TO B PAQUET	1.10	150.00	0.00	Calibration
75	HWY 190 (DD13) PAQUET HEADWATERS	1.10	0.21	0.10	Calibration
76	PAQUET FROM HWY 190 TO DD16	1.10	0.60	0.26	Calibration
77	DD16	1.10	0.14	0.06	Calibration
78	PAQUET FROM RKM 5.1 TO DD17	1.10	0.40	0.14	Calibration
79	DD17	1.10	0.26	0.11	Calibration
80	PAQUET FROM DD17 TO TIDAL REACH	1.10	0.09	0.05	Calibration
81	PAQUET (TIDAL) TO BP02	1.10	83.50	14.50	Calibration
82	PAQUET FROM BP02 TO BP03	1.10	37.00	4.00	Calibration
83	PAQUET FROM BP03 TO TRIB 24	1.10	22.00	4.00	Calibration
84	TRIB 24 FROM TOP TO PAQUET	1.10	3.00	0.90	Calibration
85	PAQUET FROM TRIB 24 TO TRIB 25	1.10	35.00	8.50	Calibration
86	TRIB 25 FROM TOP TO RKM 0.3	1.10	4.60	1.33	Calibration
87	TRIB 25 FROM RKM 0.3 TO PAQUET	1.10	3.60	1.10	Calibration
88	PAQUET FROM TRIB 25 TO BP04	1.10	150.00	35.00	Calibration
89	PAQUET FROM BP04 TO LIBERTY	1.10	160.00	30.00	Calibration
90	LIBERTY FROM PAQUET TO BONFOUCA	1.10	150.00	0.00	Calibration
91	BONFOUCA FROM LIBERTY TO PONTCHARTRAIN (INCL BB06)	1.10	0.00	0.00	Calibration

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Calibration Justification

DATA TYPE 20 - HEADWATER DATA FOR FLOW, TEMPERATURE, SALINITY, AND CONSERVATIVES

Headwater Name	Element No.	Headwater Flow, cms	Data Source	Temp, deg C	Salinity	Chlorides	Conductivity	Data Source
B Vincent & Bonfouca	1	0.00028	Minimal Flow	33.8	0.26	520.9	7.23	Survey Data Average
Browns Vill Rd (DD2)	67	0.00028	Minimal Flow	33.8	0.26	520.9	7.23	Survey Data Average
Drainage Ditch 8	102	0.00028	Minimal Flow	33.8	0.26	520.9	7.23	Survey Data Average
Drainage Ditch 9	119	0.00028	Minimal Flow	33.8	0.26	520.9	7.23	Survey Data Average
UPPER B BONFOUCA	159	0.00283	Minimal Flow	33.8	0.26	520.9	7.23	Survey Data Average
Drainage Ditch 23	183	0.00028	Minimal Flow	33.8	0.26	520.9	7.23	Survey Data Average
Highway 190(DD 5)	221	0.00028	Minimal Flow	33.8	0.26	520.9	7.23	Survey Data Average
West Drainage Canal	260	0.00028	Minimal Flow	33.8	0.26	520.9	7.23	Survey Data Average
Drainage Ditch 6	284	0.00028	Minimal Flow	33.8	0.26	520.9	7.23	Survey Data Average
Tributary 2	295	0.00028	Minimal Flow	33.8	0.26	520.9	7.23	Survey Data Average
Canal 26	324	0.00028	Minimal Flow	33.8	0.26	520.9	7.23	Survey Data Average
Tributary 4	346	0.00028	Minimal Flow	33.8	0.26	520.9	7.23	Survey Data Average
BAYOU LIBERTY	433	0.00283	Minimal Flow	33.8	0.26	520.9	7.23	Survey Data Average
Tributary 1	439	0.00028	Minimal Flow	33.8	0.26	520.9	7.23	Survey Data Average
Drainage Ditch 22	470	0.00028	Minimal Flow	33.8	0.26	520.9	7.23	Survey Data Average
Drainage Ditch 20	482	0.00028	Minimal Flow	33.8	0.26	520.9	7.23	Survey Data Average
Highway 190	536	0.00028	Minimal Flow	33.8	0.26	520.9	7.23	Survey Data Average
Drainage Ditch 18	576	0.00028	Minimal Flow	33.8	0.26	520.9	7.23	Survey Data Average
Drainage Ditch 19	585	0.00028	Minimal Flow	33.8	0.26	520.9	7.23	Survey Data Average
Drainage Ditch 4	601	0.00028	Minimal Flow	33.8	0.26	520.9	7.23	Survey Data Average
Tributary 9	667	0.00028	Minimal Flow	33.8	0.26	520.9	7.23	Survey Data Average
Tributary 6	680	0.00028	Minimal Flow	33.8	0.26	520.9	7.23	Survey Data Average
Tributary 10	698	0.00028	Minimal Flow	33.8	0.26	520.9	7.23	Survey Data Average
Tributary 8	715	0.00028	Minimal Flow	33.8	0.26	520.9	7.23	Survey Data Average
Marina 1	727	0.00028	Minimal Flow	33.8	0.26	520.9	7.23	Survey Data Average
Marina 2	730	0.00028	Minimal Flow	33.8	0.26	520.9	7.23	Survey Data Average
BAYOU PAQUET	762	0.00028	Minimal Flow	33.8	0.26	520.9	7.23	Survey Data Average
Drainage Ditch 16	797	0.00028	Minimal Flow	33.8	0.26	520.9	7.23	Survey Data Average
Drainage Ditch 17	819	0.00028	Minimal Flow	33.8	0.26	520.9	7.23	Survey Data Average
Tributary 24	861	0.00028	Minimal Flow	33.8	0.26	520.9	7.23	Survey Data Average
Tributary 25	868	0.00028	Minimal Flow	33.8	0.26	520.9	7.23	Survey Data Average

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Calibration Justification				
DATA TYPE 21 - HEADWATER DATA FOR DO, BOD, AND NITROGEN				
Headwater Name	Dissolved Oxygen, mg/L	UCBOD1, mg/l	NBOD, mg/l	Data Source
B Vincent & Bonfouca	6.00	2.2	1	Survey Data Averages
Browns Vill Rd (DD2)	6.00	2.2	1	Survey Data Averages
Drainage Ditch 8	6.00	2.2	1	Survey Data Averages
Drainage Ditch 9	6.00	2.2	1	Survey Data Averages
UPPER B BONFOUCA	6.00	2.2	1	Survey Data Averages
Drainage Ditch 23	6.00	2.2	1	Survey Data Averages
Highway 190(DD 5)	6.00	2.2	1	Survey Data Averages
West Drainage Canal	6.00	2.2	1	Survey Data Averages
Drainage Ditch 6	6.00	2.2	1	Survey Data Averages
Tributary 2	6.00	2.2	1	Survey Data Averages
Canal 26	6.00	2.2	1	Survey Data Averages
Tributary 4	6.00	2.2	1	Survey Data Averages
BAYOU LIBERTY	6.00	2.2	1	Survey Data Averages
Tributary 1	6.00	2.2	1	Survey Data Averages
Drainage Ditch 22	6.00	2.2	1	Survey Data Averages
Drainage Ditch 20	6.00	2.2	1	Survey Data Averages
Highway 190	6.00	2.2	1	Survey Data Averages
Drainage Ditch 18	6.00	2.2	1	Survey Data Averages
Drainage Ditch 19	6.00	2.2	1	Survey Data Averages
Drainage Ditch 4	6.00	2.2	1	Survey Data Averages
Tributary 9	6.00	2.2	1	Survey Data Averages
Tributary 6	6.00	2.2	1	Survey Data Averages
Tributary 10	6.00	2.2	1	Survey Data Averages
Tributary 8	6.00	2.2	1	Survey Data Averages
Marina 1	6.00	2.2	1	Survey Data Averages
Marina 2	6.00	2.2	1	Survey Data Averages
BAYOU PAQUET	6.00	2.2	1	Survey Data Averages
Drainage Ditch 16	6.00	2.2	1	Survey Data Averages
Drainage Ditch 17	6.00	2.2	1	Survey Data Averages
Tributary 24	6.00	2.2	1	Survey Data Averages
Tributary 25	6.00	2.2	1	Survey Data Averages

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Calibration Justification							
DATA TYPE 24 - WASTELOAD DATA FOR FLOW, TEMPERATURE, SALINITY, AND CONSERVATIVES							
Wasteload / Withdrawal Name	EL #	Flow, cms	Temperature, deg C	Salinity	Conductivity	Chlorides	Data Source
V H Seal Apartments	1	3.29E-05	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Groundwater	40	5.50E-03	33.80	0.26	520.9	7.2	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Eagle Lake MHP	48	2.76E-03	30.00	0.40	774.0	34.4	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
J&K Management LLC	63	7.89E-06	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Stones Throw Apts	67	8.41E-04	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Good Value Auto Sale	73	2.63E-06	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Adams MHP	74	9.20E-05	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Wadleigh Offshore	79	3.51E-05	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
ExxonMobil #51367	80	1.10E-04	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
LCR-M Plumbing Supp	81	5.26E-06	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Baker-Ellis-Shamrock	83	1.84E-05	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Northshore Chemical	84	2.41E-06	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Calibration Justification							
DATA TYPE 24 - WASTELOAD DATA FOR FLOW, TEMPERATURE, SALINITY, AND CONSERVATIVES							
Wasteload / Withdrawal Name	EL #	Flow, cms	Temperature, deg C	Salinity	Conductivity	Chlorides	Data Source
Manheim Auto Auction	85	3.07E-05	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Wadleigh Fitness	87	1.31E-05	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Jubilee #4815	102	7.45E-05	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Johnson-Bldg 2	107	6.13E-05	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Charter-John's Auto	119	7.01E-06	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
I-12 Shell	125	7.01E-06	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
St Tam Par Sch Maint	135	4.38E-06	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
J&D-Vets Health/Omni	136	3.33E-05	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Good Shepherd Church	183	4.82E-05	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Jolly Apartments	221	2.50E-04	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Piney Ridge MHP	222	4.07E-04	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Starling Plaza	223	1.25E-04	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Po Folks Seafood	224	2.15E-05	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
South Seas Rstrnt	227	8.54E-05	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Shady Pines MHP	228	4.60E-04	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Calibration Justification							
DATA TYPE 24 - WASTELOAD DATA FOR FLOW, TEMPERATURE, SALINITY, AND CONSERVATIVES							
Wasteload / Withdrawal Name	EL #	Flow, cms	Temperature, deg C	Salinity	Conductivity	Chlorides	Data Source
1421Hwy190-ArmaCoat	230	2.80E-05	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
FacDir-StTamBrakeTag	231	3.51E-06	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
New Life Ministries	232	2.15E-05	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Peace Luth Church	233	1.04E-04	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Ernest Walder	234	1.58E-05	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Stor N Lock-Tymeless	235	6.13E-06	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Bonfouca Supfnd Site	260	6.31E-04	30.00	0.22	437.3	23.5	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
DOTD Bnfca Bridge	281	8.80E-07	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Slidell Marine	282	1.62E-04	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
ARC Mech Contractors	284	4.38E-06	30.00	0.39	753.6	200.0	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Pearl River Nav	289	1.53E-04	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
STP Const Building	295	3.51E-05	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Acadian Grdns Condos	346	3.29E-04	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Oakwood Estates	351	5.43E-04	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Coin du Lestin Sub	389	3.51E-03	30.00	0.32	628.1	54.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Calibration Justification							
DATA TYPE 24 - WASTELOAD DATA FOR FLOW, TEMPERATURE, SALINITY, AND CONSERVATIVES							
Wasteload / Withdrawal Name	EL #	Flow, cms	Temperature, deg C	Salinity	Conductivity	Chlorides	Data Source
Northshore Squadron	439	1.10E-06	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Andy Knight	442	1.75E-06	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
The Meadows Sub	470	1.21E-02	30.00	0.55	1053.0	150.0	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Royal Golf Club	482	1.90E-04	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
NatFinance-Textron	494	1.75E-04	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Guardian Angels	495	4.08E-05	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Oakmont Subdivisio	498	3.09E-03	30.00	0.32	619.5	47.0	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Assunta's Restaurant	536	1.27E-04	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Indian Hills RV Park	544	3.45E-04	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
J&J Auto Brokers	546	1.75E-06	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
7thDay & Dollar Gen	548	6.00E-05	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Omni Storage VI	550	1.31E-05	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
ABC Supply Co	551	6.13E-06	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Lion Consulting	552	1.75E-06	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Chill Rite	553	9.64E-06	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Calibration Justification							
DATA TYPE 24 - WASTELOAD DATA FOR FLOW, TEMPERATURE, SALINITY, AND CONSERVATIVES							
Wasteload / Withdrawal Name	EL #	Flow, cms	Temperature, deg C	Salinity	Conductivity	Chlorides	Data Source
Herron-2315/17/19	555	2.50E-05	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
ThomGroc-ST Pol Jury	556	4.38E-06	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
PitStop3-ReflectMir	557	6.13E-05	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
All Am Elks Lodge	576	7.01E-05	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Lake Castle School	585	3.81E-04	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
BlueBell-NuLite	601	3.77E-05	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Albers AC & Heating	602	5.26E-06	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Baker Sales Wrhse	611	1.75E-06	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Cleco Service Center	614	8.76E-06	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
G&S-United Medical	615	1.58E-05	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Airgas-Hanna-Sunbelt	616	6.92E-04	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
RJD Contractors	617	8.76E-07	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
M&R-WagnerShopCtr	619	8.73E-05	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
CalWes Center	620	1.82E-04	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Beau's-La Lumber	621	2.37E-05	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Calibration Justification							
DATA TYPE 24 - WASTELOAD DATA FOR FLOW, TEMPERATURE, SALINITY, AND CONSERVATIVES							
Wasteload / Withdrawal Name	EL #	Flow, cms	Temperature, deg C	Salinity	Conductivity	Chlorides	Data Source
Advance Auto	625	4.38E-06	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Huntwyck Village	633	1.22E-02	30.00	0.3	582.3	52.5	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
B Liberty Water Assn	667	7.89E-06	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Thompson Rd Baptist	680	3.51E-05	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Liberty Food Store	698	2.50E-05	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
A-1 Remodeling & Bld	715	8.76E-06	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
St Genevieve Cath Ch	723	1.31E-04	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Bayou Liberty Marina	728	0.0000	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
A Bonfouca Marina	746	0.0000	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Waste Mgmt of La	762	0.0000	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
AcAlign-AllAm-CT-M&D	763	0.0000	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
K-Bar-B Youth Ranch	767	1.01E-04	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Bayou Paquet headwater	776	2.83E-03	33.80	0.26	520.9	7.2	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Acts 1 Tax Service	797	2.63E-06	30.00	0.39	753.6	63.3	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Timber Ridge Sub	819	1.95E-03	30.00	0.45	864.7	41.6	Flow - Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Calibration Justification					
DATA TYPE 25 - WASTELOAD DATA FOR DO, BOD, AND NITROGEN					
Wasteload / Withdrawal Name	EL #	DO, mg/l	CBOD, mg/l	UNBOD, mg/l	Data Source
V H Seal Apartments	1	2.00	69.0000	69.0000	Data from sampled dischargers
Groundwater	40	6.53	2.1600	0.9500	BV01
Eagle Lake MHP	48	6.40	6.8100	2.4100	Data from sampled dischargers
J&K Management LLC	63	2.00	69.0000	69.0000	Data from sampled dischargers
Stones Throw Apts	67	2.00	11.5000	11.5000	Data from sampled dischargers
Good Value Auto Sale	73	2.00	13.8000	13.8000	Data from sampled dischargers
Adams MHP	74	2.00	18.4000	18.4000	Data from sampled dischargers
Wadleigh Offshore	79	2.00	23.0000	23.0000	Data from sampled dischargers
ExxonMobil #51367	80	2.00	25.3000	25.3000	Data from sampled dischargers
LCR-M Plumbing Supp	81	2.00	16.1000	16.1000	Data from sampled dischargers
Baker-Ellis-Shamrock	83	2.00	25.0700	25.0700	Data from sampled dischargers
Northshore Chemical	84	2.00	69.0000	69.0000	Data from sampled dischargers
Manheim Auto Auction	85	2.00	69.0000	69.0000	Data from sampled dischargers
Wadleigh Fitness	87	2.00	69.0000	69.0000	Data from sampled dischargers
Jubilee #4815	102	2.00	23.0000	23.0000	Data from sampled dischargers
Johnson-Bldg 2	107	2.00	40.2500	40.2500	Data from sampled dischargers
Charter-John's Auto	119	2.00	77.0500	77.0500	Data from sampled dischargers
I-12 Shell	125	2.00	18.4000	18.4000	Data from sampled dischargers
St Tam Par Sch Maint	135	2.00	16.1000	16.1000	Data from sampled dischargers
J&D-Vets Health/Omni	136	2.00	69.0000	69.0000	Data from sampled dischargers
Good Shepherd Church	183	2.00	69.0000	69.0000	Data from sampled dischargers
Jolly Apartments	221	2.00	25.3000	25.3000	Data from sampled dischargers
Piney Ridge MHP	222	2.00	6.9000	6.9000	Data from sampled dischargers
Starling Plaza	223	2.00	69.0000	69.0000	Data from sampled dischargers
Po Folks Seafood	224	2.00	69.0000	69.0000	Data from sampled dischargers
South Seas Rstrnt	227	2.00	621.0000	621.0000	Data from sampled dischargers
Shady Pines MHP	228	2.00	69.0000	69.0000	Data from sampled dischargers

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Calibration Justification					
DATA TYPE 25 - WASTELOAD DATA FOR DO, BOD, AND NITROGEN					
Wasteload / Withdrawal Name	EL #	DO, mg/l	CBOD, mg/l	UNBOD, mg/l	Data Source
1421Hwy190-ArmaCoat	230	2.00	69.0000	69.0000	Data from sampled dischargers
FacDir-StTamBrakeTag	231	2.00	69.0000	69.0000	Data from sampled dischargers
New Life Ministries	232	2.00	69.0000	69.0000	Data from sampled dischargers
Peace Luth Church	233	2.00	92.0000	92.0000	Data from sampled dischargers
Ernest Walder	234	2.00	25.3000	25.3000	Data from sampled dischargers
Stor N Lock-Tymeless	235	2.00	55.2000	55.2000	Data from sampled dischargers
Bonfouca Supfnd Site	260	7.10	1.3300	1.7400	Data from sampled dischargers
DOTD Bnfca Bridge	281	2.00	69.0000	69.0000	Data from sampled dischargers
Slidell Marine	282	2.00	18.4000	18.4000	Data from sampled dischargers
ARC Mech Contractors	284	2.00	69.0000	69.0000	Data from sampled dischargers
Pearl River Nav	289	2.00	69.0000	69.0000	Data from sampled dischargers
STP Const Building	295	2.00	69.0000	69.0000	Data from sampled dischargers
Acadian Grdns Condos	346	2.00	34.5000	34.5000	Data from sampled dischargers
Oakwood Estates	351	2.00	2.3000	2.3000	Data from sampled dischargers
Coin du Lestin Sub	389	3.60	3.1000	2.4100	Data from sampled dischargers
Northshore Squadron	439	2.00	69.0000	69.0000	Data from sampled dischargers
Andy Knight	442	2.00	69.0000	69.0000	Data from sampled dischargers
The Meadows Sub	470	4.97	10.1700	3.0100	Data from sampled dischargers
Royal Golf Club	482	2.00	69.0000	69.0000	Data from sampled dischargers
NatFinance-TEXTRON	494	2.00	69.0000	69.0000	Data from sampled dischargers
Guardian Angels	495	2.00	69.0000	69.0000	Data from sampled dischargers
Oakmont Subdivisio	498	7.40	6.2000	2.8000	Data from sampled dischargers
Assunta's Restaurant	536	2.00	69.0000	69.0000	Data from sampled dischargers
Indian Hills RV Park	544	2.00	39.1000	39.1000	Data from sampled dischargers
J&J Auto Brokers	546	2.00	69.0000	69.0000	Data from sampled dischargers
7thDay & Dollar Gen	548	2.00	56.9300	56.9300	Data from sampled dischargers
Omni Storage VI	550	2.00	69.0000	69.0000	Data from sampled dischargers
ABC Supply Co	551	2.00	69.0000	69.0000	Data from sampled dischargers
Lion Consulting	552	2.00	69.0000	69.0000	Data from sampled dischargers
Chill Rite	553	2.00	69.0000	69.0000	Data from sampled dischargers

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Calibration Justification					
DATA TYPE 25 - WASTELOAD DATA FOR DO, BOD, AND NITROGEN					
Wasteload / Withdrawal Name	EL #	DO, mg/l	CBOD, mg/l	UNBOD, mg/l	Data Source
Herron-2315/17/19	555	2.00	57.3900	57.3900	Data from sampled dischargers
ThomGroce-ST Pol Jury	556	2.00	69.0000	69.0000	Data from sampled dischargers
PitStop3-ReflectMir	557	2.00	69.0000	69.0000	Data from sampled dischargers
All Am Elks Lodge	576	2.00	69.0000	69.0000	Data from sampled dischargers
Lake Castle School	585	2.00	46.0000	46.0000	Data from sampled dischargers
BlueBell-NuLite	601	2.00	145.4800	145.4800	Data from sampled dischargers
Albers AC & Heating	602	2.00	20.7000	20.7000	Data from sampled dischargers
Baker Sales Wrhse	611	2.00	69.0000	69.0000	Data from sampled dischargers
Cleco Service Center	614	2.00	57.5000	57.5000	Data from sampled dischargers
G&S-United Medical	615	2.00	21.8500	21.8500	Data from sampled dischargers
Airgas-Hanna-Sunbelt	616	2.00	36.5700	36.5700	Data from sampled dischargers
RJD Contractors	617	2.00	69.0000	69.0000	Data from sampled dischargers
M&R-WagnerShopCtr	619	2.00	11.5000	11.5000	Data from sampled dischargers
CalWes Center	620	2.00	16.1000	16.1000	Data from sampled dischargers
Beau's-La Lumber	621	2.00	69.0000	69.0000	Data from sampled dischargers
Advance Auto	625	2.00	69.0000	69.0000	Data from sampled dischargers
Huntwyck Village	633	7.10	4.6800	3.0100	Data from sampled dischargers
B Liberty Water Assn	667	2.00	46.0000	46.0000	Data from sampled dischargers
Thompson Rd Baptist	680	2.00	32.2000	32.2000	Data from sampled dischargers
Liberty Food Store	698	2.00	69.0000	69.0000	Data from sampled dischargers
A-1 Remodeling & Bld	715	2.00	25.3000	25.3000	Data from sampled dischargers
St Genevieve Cath Ch	723	2.00	69.0000	69.0000	Data from sampled dischargers
Bayou Liberty Marina	728	2.00	69.0000	69.0000	Data from sampled dischargers
A Bonfouca Marina	746	2.00	128.8000	128.8000	Data from sampled dischargers
Waste Mgmt of La	762	2.00	27.6000	27.6000	Data from sampled dischargers
AcAlign-AllAm-CT- M&D	763	2.00	69.0000	69.0000	Data from sampled dischargers
K-Bar-B Youth Ranch	767	2.00	69.0000	69.0000	Data from sampled dischargers
Bayou Paquet headwater	776	6.53	2.1600	0.9500	Data from sampled dischargers
Acts 1 Tax Service	797	2.00	6.9000	6.9000	Data from sampled dischargers
Timber Ridge Sub	819	5.00	85.0000	2.4100	Data from sampled dischargers

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Calibration Justification

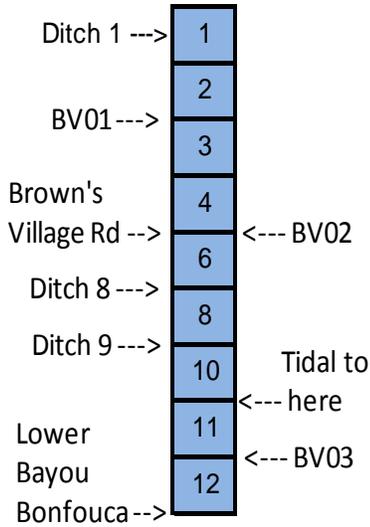
DATA TYPE 27 - LOWER BOUNDMIDY CONDITIONS

PMIDameter	Value	Units	Data Source
TEMPERATURE	29.9800	°C	BB07
SALINITY	3.9400	ppt	BB07
CHLORIDES	7096.0000	ppm	BB07
CONDUCTIVITY	2200.0000	umhos/cm	BB07
DISSOLVED OXYGEN	6.8000	mg/L	BB07
CBOD1	7.8200	mg/L	BB07
CBOD2	0.0000	mg/L	BB07
CHLOROPHYLL A	5.5500	ug/L	BB07
NBOD	1.8000	mg/L	BB07

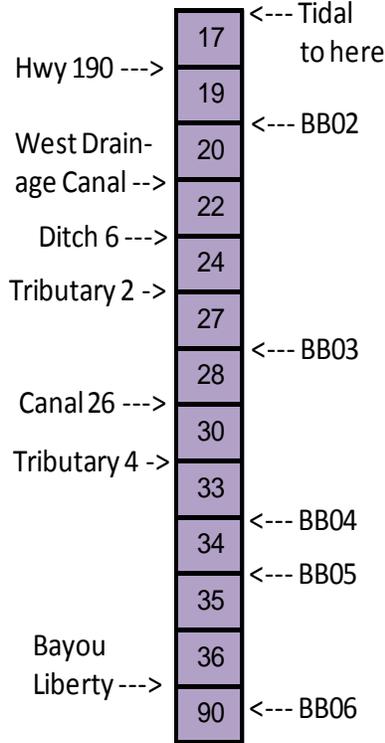
Appendix C - Calibration Model Development

Appendix C1 – Vector Diagram

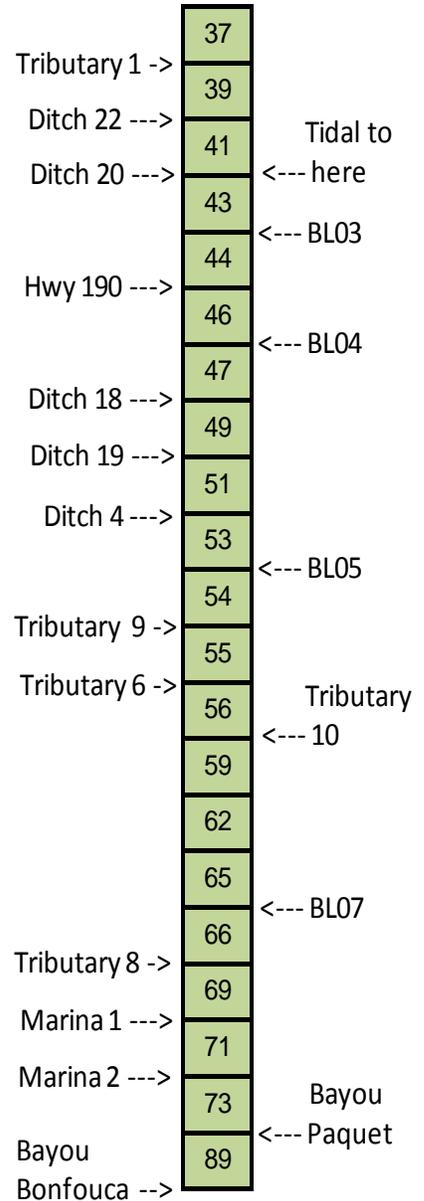
BAYOU VINCENT REACHES



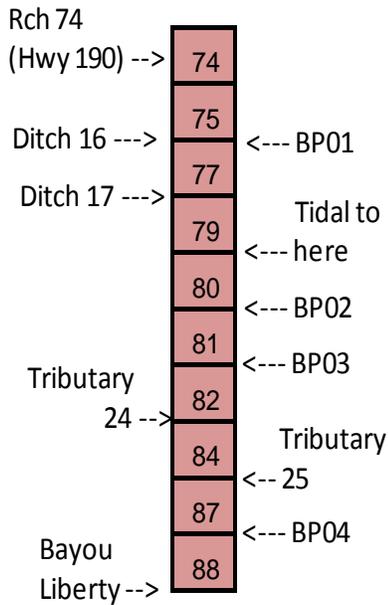
LOWER BAYOU BONFOUCA REACHES



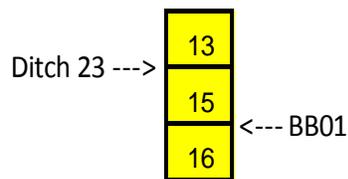
BAYOU LIBERTY REACHES



BAYOU PAQUET REACHES



UPPER BONFOUCA REACHES



Appendix C2 – Reach Setup

Bayou Liberty and Bayou Bonfouca											
Reach #	Description	Subsegment	Headwater Yes/No	Starting modeled Kilometer	Ending modeled Kilometer	Modeled Length kilometers	Element Length kilometers	Element Count	Cumulative Elements	Begin Element #	End Element #
1	DRAINAGE DITCH 1	40907	Yes	24.2	20.3	3.90	0.100	39	39	1	39
2	VINCENT FROM RKM 20.3 TO BV01	40907	No	20.3	19.5	0.80	0.100	8	47	40	47
3	VINCENT FROM BV01 RKM 18.5	40907	No	19.5	18.5	1.00	0.100	10	57	48	57
4	VINCENT FROM RKM 18.5 TO BV02	40907	No	18.5	17.6	0.90	0.100	9	66	58	66
5	DRAINAGE DITCH 2	40907	Yes	2.1	0.0	2.10	0.100	21	87	67	87
6	VINCENT FROM BV02 TO DD 8	40907	No	17.6	16.9	0.70	0.050	14	101	88	101
7	DRAINAGE DITCH 8	40907	Yes	0.8	0.0	0.80	0.100	8	109	102	109
8	VINCENT FROM DD 8 TO DD 9	40907	No	16.9	16.0	0.90	0.100	9	118	110	118
9	DRAINAGE DITCH 9	40907	Yes	2.1	0.0	2.10	0.100	21	139	119	139
10	VINCENT FROM DD 9 TO RKM 15.2	40907	No	16.0	15.2	0.80	0.100	8	147	140	147
11	VINCENT FROM RKM 15.2 TO BV03	40907	No	15.2	14.9	0.30	0.050	6	153	148	153
12	VINCENT FROM BV03 TO BONFOUCA	40907	Yes	14.9	14.4	0.50	0.100	5	158	154	158
13	UPPER BONFOUCA FROM RKM 5.0 TO DD 23	40907	Yes	5.0	2.6	2.40	0.100	24	182	159	182
14	DRAINAGE DITCH 23	40907	No	1.0	0.0	1.00	0.100	10	192	183	192
15	UPPER BONFOUCA FROM DD 23 TO BB01	40907	No	2.6	1.1	1.50	0.100	15	207	193	207
16	UPPER BONFOUCA FROM BB01 TO BAYOU VINCENT	40907	No	1.1	0.0	1.10	0.100	11	218	208	218
17	BONFOUCA FROM BV TO HWY 190	40907	No	14.4	14.2	0.20	0.100	2	220	219	220
18	HWY 190 (DRAINAGE DITCH 5)	40907	Yes	1.8	0.0	1.80	0.100	18	238	221	238
19	BONFOUCA FROM HWY 190 TO BB02	40907	No	14.2	13.3	0.90	0.100	9	247	239	247
20	BONFOUCA FROM BB02 TO WD	40907	No	13.3	12.1	1.20	0.100	12	259	248	259
21	WEST DRAINAGE CANAL	40907	Yes	0.3	0.0	0.30	0.100	3	262	260	262
22	BONFOUCA FROM WD TO DD6	40907	No	12.1	10.0	2.10	0.100	21	283	263	283

Bayou Liberty and Bayou Bonfouca						Modeled Length	Element Length				
Reach #	Description	Subsegment	Headwater Yes/No	Starting modeled Kilometer	Ending modeled Kilometer	kilometers	kilometers	Element Count	Cumulative Elements	Begin Element #	End Element #
23	DRAINAGE DITCH 6	40908	Yes	0.3	0.0	0.30	0.100	3	286	284	286
24	BONFOUCA FROM DD 6 TO TRIB 2	40908	No	10.0	9.2	0.80	0.100	8	294	287	294
25	DRAINAGE DITCH 7	40908	Yes	1.5	0.5	1.00	0.100	10	304	295	304
26	TRIBUTARY 2	40908	No	0.5	0.0	0.50	0.100	5	309	305	309
27	BONFOUCA FROM TRIB 2 TO BB03	40908	No	9.2	8.6	6.00	0.100	60	369	310	315
28	BONFOUCA FROM BB03 TO CANAL 26	40908	No	8.6	7.8	6.00	0.100	60	429	316	323
29	CANAL 26	40908	Yes	2.0	0.0	0.20	0.100	2	431	324	343
30	BONFOUCA FROM CANAL 26 TO TRIB 4	40908	No	7.8	7.6	0.70	0.100	7	438	344	345
31	TRIBUTARY 4 - UPLAND	40908	Yes	1.9	0.8	1.60	0.100	16	454	346	356
32	TRIBUTARY 4 - TIDAL	40908	No	0.8	0.0	3.10	0.100	31	485	357	364
33	BONFOUCA FROM TRIB 4 TO BB04	40908	No	7.6	6.8	2.30	0.100	23	508	365	372
34	BONFOUCA FROM BB04 TO Rkm 5.6	40908	No	6.8	5.6	1.10	0.100	11	519	373	384
35	BONFOUCA FROM Rkm 5.6 TO BB05	40908	No	5.6	4.5	1.10	0.100	11	530	385	395
36	BONFOUCA FROM BB05 TO Rkm 2.7	40908	No	4.5	2.7	1.10	0.100	11	541	396	413
37	BONFOUCA FROM Rkm 2.7 TO LIBERTY	40908	No	2.7	0.8	1.10	0.100	11	552	414	432

Bayou Liberty and Bayou Bonfouca						Modeled Length	Element Length				
Reach #	Description	Subsegment	Headwater Yes/No	Starting modeled Kilometer	Ending modeled Kilometer	kilometers	kilometers	Element Count	Cumulative Elements	Begin Element #	End Element #
38	LIBERTY FROM RKM 15.0 TO TRIB 1	40905	Yes	15.0	14.4	1.10	0.100	11	563	433	438
39	TRIBUTARY 1	40905	Yes	2.4	0.0	1.10	0.100	11	574	439	462
40	LIBERTY FROM RKM 14.4 TO DD22	40905	No	14.4	13.7	1.10	0.100	11	585	463	469
41	DD22	40905	Yes	0.3	0.0	1.10	0.100	11	596	470	472
42	LIBERTY FROM DD22 TO DD20	40905	No	13.7	12.8	1.10	0.100	11	607	473	481
43	DD20	40905	Yes	2.7	0.0	1.10	0.100	11	618	482	508
44	LIBERTY FROM DD20 TO BL03	40905	No	12.8	12.6	1.10	0.100	11	629	509	510
45	LIBERTY FROM BL03 TO HWY 190	40905	No	12.6	10.1	1.10	0.100	11	640	511	535
46	HWY 190 (DRAINAGE DITCH 14)	40905	Yes	2.3	0.0	1.10	0.100	11	651	536	558
47	LIBERTY FROM HWY 190 TO BL04	40905	No	10.1	10.0	1.10	0.100	11	662	559	559
48	LIBERTY FROM BL04 TO DD18	40905	No	10.0	8.4	1.10	0.100	11	673	560	575
49	DD18	40905	Yes	0.3	0.0	1.10	0.100	11	684	576	578
50	LIBERTY FROM DD18 TO DD19	40905	No	8.4	7.8	1.10	0.100	11	695	579	584
51	DD19	40905	Yes	1.4	0.0	1.10	0.100	11	706	585	598
52	LIBERTY FROM DD19 TO DD04	40905	No	7.8	7.6	1.10	0.100	11	717	599	600
53	DD04	40905	Yes	4.2	0.0	1.10	0.100	11	728	601	642
54	LIBERTY FROM DD04 TO BL05	40905	No	7.6	6.9	1.10	0.100	11	739	643	649
55	LIBERTY FROM BL05 TO RKM 6.3	40905	No	6.9	6.3	1.10	0.100	11	750	650	655
56	LIBERTY FROM RKM 6.3 TO RKM 6.0	40905	No	6.3	6.0	1.10	0.100	11	761	656	658
57	LIBERTY FROM RKM 6.0 TO TRIB 9	40905	No	6.0	5.2	1.10	0.100	11	772	659	666
58	DRAINAGE DITCH 3	40905	Yes	0.5	0.3	1.10	0.100	11	783	667	668
59	TRIBUTARY 9	40905	No	0.3	0.0	1.10	0.100	11	794	669	671
60	LIBERTY FROM TRIB 9 TO TRIB 6	40905	No	5.2	4.4	1.10	0.100	11	805	672	679
61	DRAINAGE DITCH 11	40905	Yes	1.6	0.6	1.10	0.100	11	816	680	689
62	TRIBUTARY 6	40905	No	0.6	0.0	1.10	0.100	11	827	690	695
63	LIBERTY FROM TRIB 6 TO TO TRIB 10	40905	No	4.4	4.2	1.10	0.100	11	838	696	697
64	TRIBUTARY 10 - UPLAND	40905	Yes	0.7	0.2	1.10	0.100	11	849	698	702
65	TRIBUTARY 10 - TIDAL	40905	No	0.2	0.0	1.10	0.100	11	860	703	704
66	LIBERTY FROM TRIB 10 TO BL07	40905	No	4.2	3.3	1.10	0.100	11	871	705	713
67	LIBERTY FROM BL07 TO TRIB 8	40905	No	3.3	3.2	1.10	0.100	11	882	714	714

Bayou Liberty and Bayou Bonfouca						Modeled Length	Element Length				
Reach #	Description	Subsegment	Headwater Yes/No	Starting modeled Kilometer	Ending modeled Kilometer	kilometers	kilometers	Element Count	Cumulative Elements	Begin Element #	End Element #
68	TRIBUTARY 8	40906	Yes	0.6	0.1	1.10	0.100	11	893	715	719
69	TRIBUTARY 8	40906	No	0.1	0.0	1.10	0.100	11	904	720	720
70	LIBERTY FROM TRIB 8 TO M1	40906	No	3.2	2.6	1.10	0.100	11	915	721	726
71	MARINA 1	40906	Yes	0.2	0.0	1.10	0.100	11	926	727	728
72	LIBERTY FROM M1 TO M2	40906	No	2.6	2.5	1.10	0.100	11	937	729	729
73	MARINA02	40906	Yes	1.8	0.0	1.10	0.100	11	948	730	747
74	LIBERTY FROM M2 TO B PAQUET	40906	No	2.5	1.1	1.10	0.100	11	959	748	761
75	HWY 190 (DD13) PAQUET HEADWATERS	40906	Yes	8.6	7.2	1.10	0.100	11	970	762	775
76	PAQUET FROM HWY 190 TO DD16	40906	No	7.2	5.1	1.10	0.100	11	981	776	796
77	DD16	40906	Yes	0.9	0.0	1.10	0.100	11	992	797	805
78	PAQUET FROM RKM 5.1 TO DD17	40906	No	5.1	3.8	1.10	0.100	11	1003	806	818
79	DD17	40906	Yes	1.7	0.0	1.10	0.100	11	1014	819	835
80	PAQUET FROM DD17 TO TIDAL REACH	40906	No	3.8	3.4	1.10	0.100	11	1025	836	839
81	PAQUET (TIDAL) TO BP02	40906	No	3.4	2.4	1.10	0.100	11	1036	840	849
82	PAQUET FROM BP02 TO BP03	40906	No	2.4	1.6	1.10	0.100	11	1047	850	857
83	PAQUET FROM BP03 TO TRIB 24	40906	No	1.6	1.3	1.10	0.100	11	1058	858	860
84	TRIB 24 FROM TOP TO PAQUET	40906	Yes	0.4	0.0	1.10	0.100	11	1069	861	864
85	PAQUET FROM TRIB 24 TO TRIB 25	40906	No	1.3	1.0	1.10	0.100	11	1080	865	867
86	TRIB 25 FROM TOP TO RKM 0.3	40906	Yes	1.0	0.3	1.10	0.100	11	1091	868	874
87	TRIB 25 FROM RKM 0.3 TO PAQUET	40906	No	0.3	0.0	1.10	0.100	11	1102	875	877
88	PAQUET FROM TRIB 25 TO BP04	40906	No	1.0	0.2	1.10	0.100	11	1113	878	885
89	PAQUET FROM BP04 TO LIBERTY	40906	No	0.2	0.0	1.10	0.100	11	1124	886	887
90	LIBERTY FROM PAQUET TO BONFOUCA	40906	No	1.1	0.0	1.10	0.100	11	1135	888	898
91	BONFOUCA FROM LIBERTY TO PONTCHARTRAIN (INCL BB06)	40908	No	0.8	0.0	1.10	0.100	11	1146	899	906

Appendix C3 –

Calibration Loading

Calibration Model Non-Point Load Equivalent Calculations:												
			Modeled stream or water body: BAYOU BONFOUCA AND BAYOU LIBERTY									
Shaded cells are input values for calculations.			If modeling the nitrogen series, be sure that column "T" is clear of all values.									
REACH NO.	REACH ID	REACH NUMBER & DESCRIPTION	Calibration Model Reach Length	Calibration Model Average Reach Width	Calibration Model UCBOD1 Nonpoint loading	Calibration Model Total UCBOD Nonpoint loading	Calibration Model UNBOD Nonpoint loading	Calibration Model Total UNBOD Nonpoint loading	Calibration Model Total UCBOD Nonpoint loading	Calibration Model Total UNBOD Nonpoint loading	Calibration Model SOD	Calibration Model TOTAL Benthic Load
			km	meters	kg O ₂ /day	kg O ₂ /day	kg O ₂ /day	kg O ₂ /day	g O ₂ / [(m ²)(day)]	g O ₂ / [(m ²)(day)]	g O ₂ / [(m ²)(day)]	g O ₂ / [(m ²)(day)]
1	DD	DRAINAGE DITCH 1	3.90	1.03	0.65	0.65	0.27	0.27	0.162	0.067	0.50	0.73
2	BV	VINCENT FROM RKM 20.0 TO BV01	0.80	1.02	0.13	0.13	0.05	0.05	0.159	0.061	0.30	0.52
3	BV	VINCENT FROM BV01 RKM 18.5	1.00	1.14	1.40	1.40	0.05	0.05	1.228	0.044	6.00	7.27
4	BV	VINCENT FROM RKM 18.5 TO BV02	0.90	1.14	1.40	1.40	0.05	0.05	1.365	0.049	7.00	8.41
5	DD	DRAINAGE DITCH 2	2.10	1.56	0.30	0.30	0.13	0.13	0.092	0.040	0.50	0.63
6	BV	VINCENT FROM BV02 TO DD 8	0.70	1.20	1.40	1.40	0.14	0.14	1.667	0.167	7.00	8.83
7	DD	DRAINAGE DITCH 8	0.80	1.09	0.11	0.11	0.05	0.05	0.126	0.057	0.5	0.68
8	BV	VINCENT FROM DD 8 TO DD 9	0.90	1.21	1.70	1.70	0.14	0.14	1.561	0.129	7.0	8.69
9	DD	DRAINAGE DITCH 9	2.10	1.02	0.30	0.30	0.13	0.13	0.140	0.062	0.5	0.70
10	BV	VINCENT FROM DD 9 TO RKM 15.2	0.80	1.22	0.10	0.10	0.05	0.05	0.102	0.051	7.0	7.15
11	BV	VINCENT FROM RKM 15.2 TO BV03	0.30	4.72	0.80	0.80	0.15	0.15	0.565	0.106	4.2	4.87
12	BV	VINCENT FROM BV03 TO BONFOUCA	0.50	4.72	1.40	1.40	0.90	0.90	0.593	0.381	4.2	5.17
13	UB	UB FROM RKM 5.0 TO DD 23	2.40	1.00	0.37	0.37	0.16	0.16	0.154	0.067	0.5	0.72
14	DD	DRAINAGE DITCH 23	1.00	1.05	0.15	0.15	0.07	0.07	0.142	0.062	0.5	0.70
15	UB	UB FROM DD 23 TO BB01	1.50	1.03	0.25	0.25	0.10	0.10	0.162	0.066	0.5	0.73
16	UB	UB FROM BB01 TO BAYOU VINCENT	1.10	1.55	0.28	0.28	0.11	0.11	0.164	0.066	0.5	0.73
17	BB	BONFOUCA FROM BV TO HWY 190	0.20	10.84	0.10	0.10	0.00	0.00	0.046	0.000	2.8	2.85
18	DD	HWY 190 (DRAINAGE DITCH 5)	1.80	1.62	0.26	0.26	0.12	0.12	0.090	0.040	0.5	0.63
19	BB	BONFOUCA FROM HWY 190 TO BB02	0.90	10.84	11.70	11.70	3.80	3.80	1.199	0.390	3.6	5.19
20	BB	BONFOUCA FROM BB02 TO WD	1.20	10.84	22.50	22.50	2.10	2.10	1.730	0.161	3.6	5.49
21	WD	WEST DRAINAGE CANAL	0.30	3.00	0.17	0.17	0.06	0.06	0.189	0.071	0.5	0.76
22	BB	BONFOUCA FROM WD TO DD6	2.10	54.25	135.00	135.00	17.00	17.00	1.185	0.149	2.3	3.63
23	DD	DRAINAGE DITCH 6	0.30	1.00	0.05	0.05	0.02	0.02	0.150	0.067	0.5	0.72
24	BB	BONFOUCA FROM DD 6 TO TRIB 2	0.80	93.10	160.00	160.00	18.00	18.00	2.148	0.242	0.5	2.89
25	DD	DRAINAGE DITCH 7 - UPLAND	1.00	1.04	0.15	0.15	0.07	0.07	0.142	0.063	0.5	0.70
26	TR	TRIBUTARY 2 - TIDAL	0.50	12.00	1.85	1.85	0.61	0.61	0.308	0.102	0.5	0.91
27	BB	BONFOUCA FROM TRIB 2 TO BB03	0.60	93.10	126.00	126.00	16.00	16.00	2.256	0.286	0.4	2.94
28	BB	BONFOUCA FROM BB03 TO CANAL 26	0.80	93.10	146.00	146.00	15.00	15.00	1.960	0.201	0.4	2.56
29	C	CANAL 26	2.00	114.00	98.00	98.00	28.00	28.00	0.430	0.123	0.5	1.05
30	BB	BONFOUCA FROM CANAL 26 TO TRIB 4	0.20	76.50	100.00	100.00	12.00	12.00	6.536	0.784	0.4	7.72

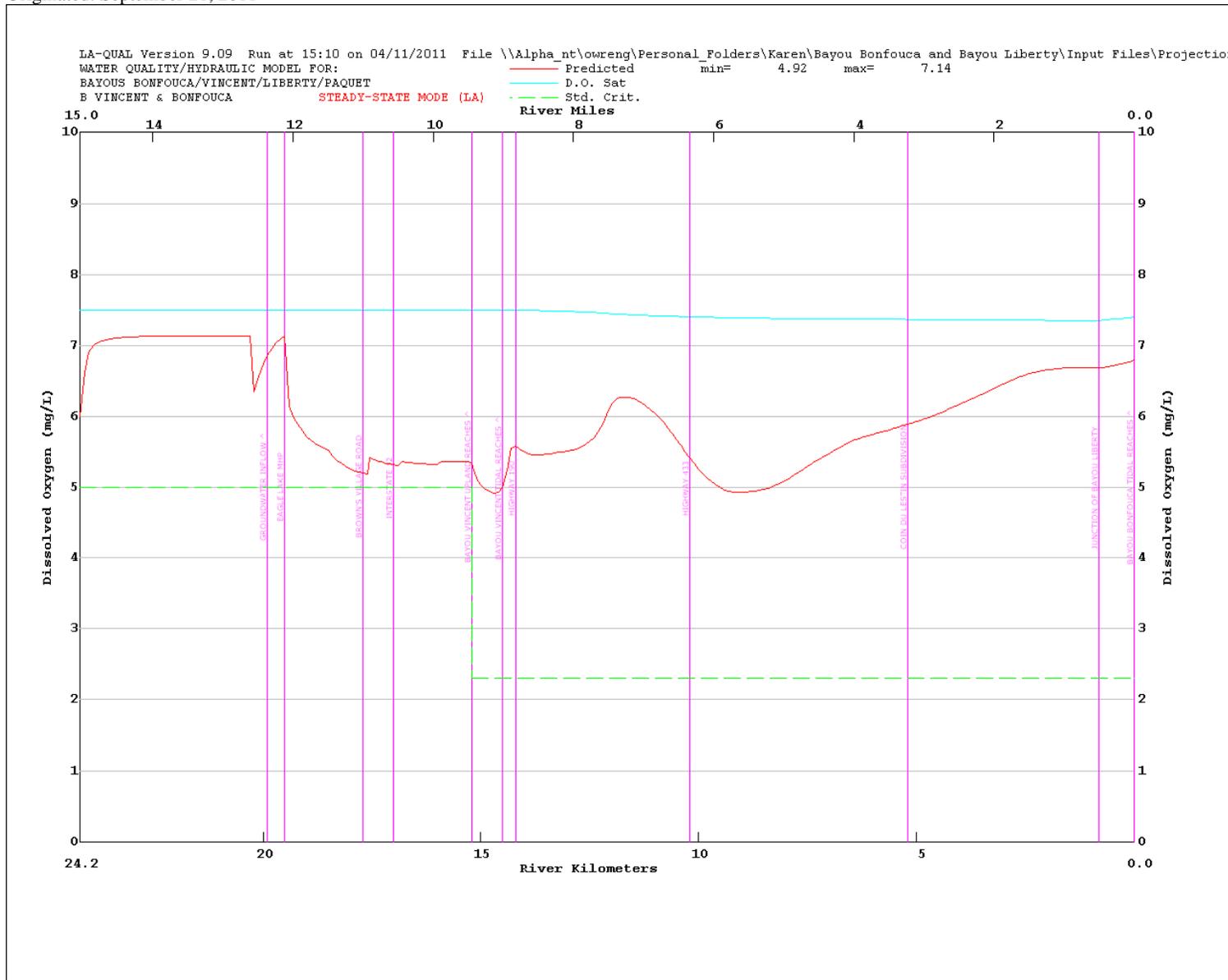
Calibration Model Non-Point Load Equivalent Calculations:												
			Modeled stream or water body: BAYOU BONFOUCA AND BAYOU LIBERTY									
Shaded cells are input values for calculations.			If modeling the nitrogen series, be sure that column "I" is clear of all values.									
REACH NO.	REACH ID	REACH NUMBER & DESCRIPTION	Calibration Model Reach Length	Calibration Model Average Reach Width	Calibration Model UCBOD1 Nonpoint loading	Calibration Model Total UCBOD Nonpoint loading	Calibration Model UNBOD Nonpoint loading	Calibration Model Total UNBOD Nonpoint loading	Calibration Model Total UCBOD Nonpoint loading	Calibration Model Total UNBOD Nonpoint loading	Calibration Model SOD	Calibration Model TOTAL Benthic Load
			km	meters	kg O ₂ /day	kg O ₂ /day	kg O ₂ /day	kg O ₂ /day	g O ₂ / [(m ²)(day)]	g O ₂ / [(m ²)(day)]	g O ₂ / [(m ²)(day)]	g O ₂ / [(m ²)(day)]
31	TR	TRIBUTARY 10 - UPLAND	1.10	1.40	0.17	0.17	0.07	0.07	0.107	0.046	0.5	0.65
32	TR	TRIBUTARY 4 - TIDAL	0.80	18.00	5.70	5.70	1.72	1.72	0.396	0.119	0.5	1.02
33	BB	BONFOUCA FROM TRIB 4 TO BB04	0.80	76.50	140.00	140.00	15.00	15.00	2.288	0.245	0.2	2.73
34	BB	BONFOUCA FROM BB04 TO Rkm 5.6	1.20	91.40	280.00	280.00	30.00	30.00	2.553	0.274	0.0	2.83
35	BB	BONFOUCA FROM Rkm 5.6 TO BB05	1.10	114.30	325.00	325.00	40.00	40.00	2.585	0.318	0.0	2.90
36	BB	BONFOUCA FROM BB05 TO RKM 2.7	1.80	77.70	325.00	325.00	5.00	5.00	2.324	0.036	0.1	2.41
37	BB	BONFOUCA FROM RKM 2.7 TO LIBERTY	1.90	88.00	0.00	0.00	0.00	0.00	0.000	0.000	0.0	0.00
38	BL	LIBERTY FROM RKM 15.0 TO TRIB 1	0.60	1.50	2.00	2.00	1.40	1.40	2.222	1.556	2.0	5.78
39	TR	TRIBUTARY 1	2.40	1.00	0.35	0.35	0.15	0.15	0.147	0.064	0.5	0.71
40	BL	LIBERTY FROM RKM 14.4 TO DD22	0.70	1.54	2.00	2.00	1.90	1.90	1.855	1.763	2.5	6.12
41	DD	DD22	0.30	3.11	0.05	0.05	0.02	0.02	0.048	0.020	0.5	0.57
42	BL	LIBERTY FROM DD22 TO DD20	0.90	4.99	10.80	10.80	12.00	12.00	2.405	2.672	2.7	7.78
43	DD	DD20	2.70	1.60	0.40	0.40	0.17	0.17	0.092	0.040	0.5	0.63
44	BL	LIBERTY FROM DD20 TO BL03	0.20	8.84	3.40	3.40	4.00	4.00	1.923	2.262	2.5	6.69
45	BL	LIBERTY FROM BL03 TO HWY 190	2.50	8.84	40.00	40.00	3.50	3.50	1.810	0.158	1.7	3.67
46	DD	HWY 190 (DRAINAGE DITCH 14)	2.30	1.29	0.34	0.34	0.15	0.15	0.114	0.050	0.5	0.66
47	BL	LIBERTY FROM HWY 190 TO BL04	0.10	18.60	6.00	6.00	2.00	2.00	3.226	1.075	0.4	4.70
48	BL	LIBERTY FROM BL04 TO DD18	1.60	18.60	64.00	64.00	5.00	5.00	2.151	0.168	0.3	2.65
49	DD	DD18	0.30	1.07	0.04	0.04	0.02	0.02	0.138	0.059	0.5	0.70
50	BL	LIBERTY FROM DD18 TO DD19	0.60	18.60	25.00	25.00	3.00	3.00	2.240	0.269	0.1	2.61
51	DD	DD19	1.40	1.29	0.21	0.21	0.09	0.09	0.116	0.051	0.5	0.67
52	BL	LIBERTY FROM DD19 TO DD04	0.20	42.67	38.00	38.00	3.00	3.00	4.453	0.352	0.0	4.80
53	DD	DD04	4.20	1.77	0.64	0.64	0.28	0.28	0.085	0.037	0.5	0.62
54	BL	LIBERTY FROM DD04 TO BL05	0.70	42.67	98.00	98.00	3.00	3.00	3.281	0.100	0.0	3.42
55	BL	LIBERTY FROM BL05 TO RKM 6.3	0.60	42.67	75.00	75.00	3.00	3.00	2.929	0.117	0.1	3.15
56	BL	LIBERTY FROM RKM 6.3 TO RKM 6.0	0.30	39.69	40.00	40.00	2.00	2.00	3.359	0.168	0.0	3.57
57	BL	LIBERTY FROM RKM 6.0 TO Trib 9	0.80	47.55	120.00	120.00	2.00	2.00	3.155	0.053	0.0	3.21
58	DD	DRAINAGE DITCH 3 - UPLAND	0.20	1.01	0.03	0.03	0.01	0.01	0.149	0.064	0.5	0.71
59	TR	TRIBUTARY 9 - TIDAL	0.30	16.00	1.80	1.80	0.55	0.55	0.375	0.115	0.5	0.99
60	BL	LIBERTY FROM TRIB 9 TO TRIB 6	0.80	47.55	220.00	220.00	35.00	35.00	5.783	0.920	0.0	6.70

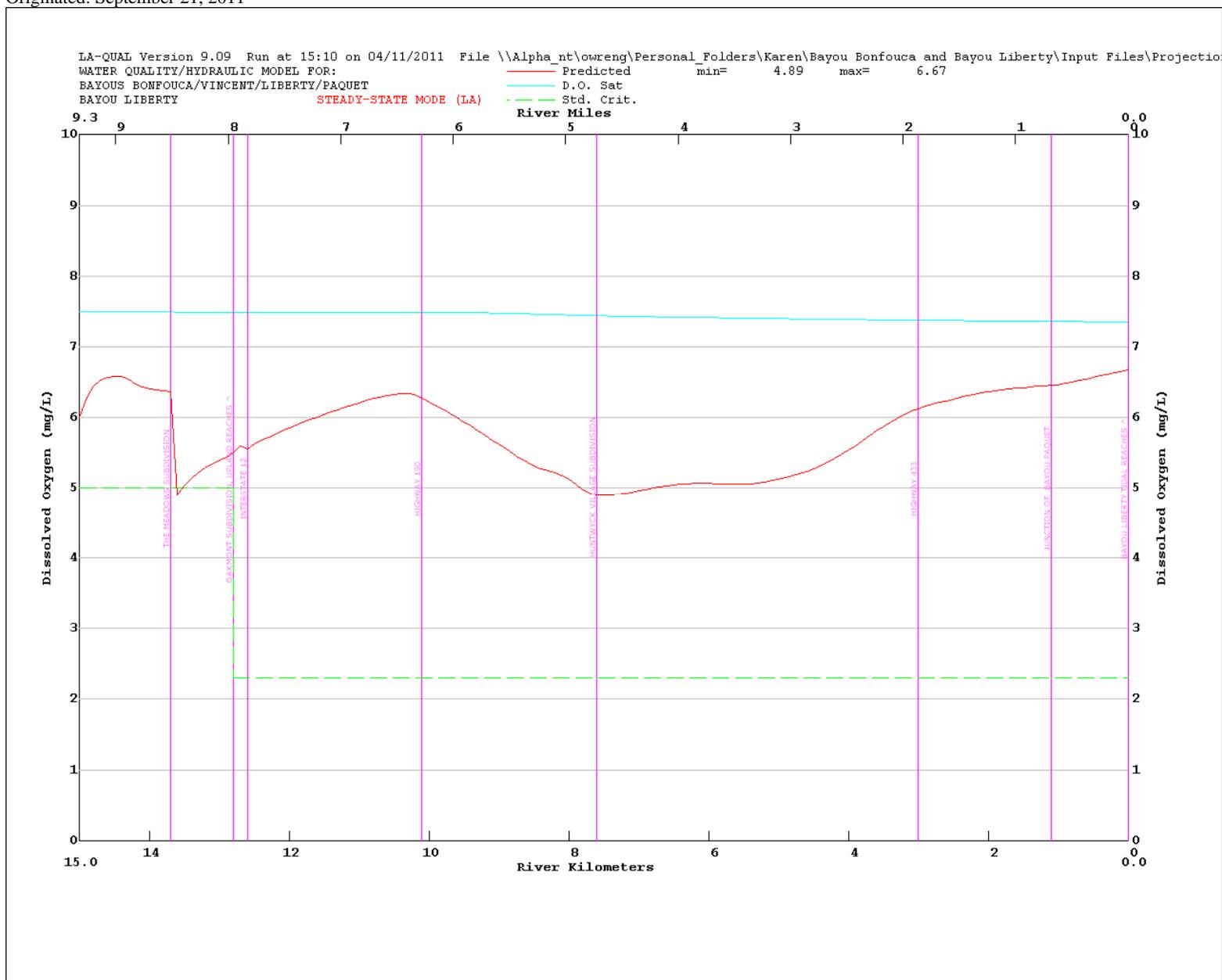
Calibration Model Non-Point Load Equivalent Calculations:												
Modeled stream or water body:			BAYOU BONFOUCA AND BAYOU LIBERTY									
Shaded cells are input values for calculations.			If modeling the nitrogen series, be sure that column "T" is clear of all values.									
REACH NO.	REACH ID	REACH NUMBER & DESCRIPTION	Calibration Model Reach Length	Calibration Model Average Reach Width	Calibration Model UCBOD1 Nonpoint loading	Calibration Model Total UCBOD Nonpoint loading	Calibration Model UNBOD Nonpoint loading	Calibration Model Total UNBOD Nonpoint loading	Calibration Model Total UCBOD Nonpoint loading	Calibration Model Total UNBOD Nonpoint loading	Calibration Model SOD	Calibration Model TOTAL Benthic Load
			km	meters	kg O ₂ /day	kg O ₂ /day	kg O ₂ /day	kg O ₂ /day	g O ₂ / [(m ²)(day)]	g O ₂ / [(m ²)(day)]	g O ₂ / [(m ²)(day)]	g O ₂ / [(m ²)(day)]
61	DD	DRAINAGE DITCH 11 - UPLAND	1.00	1.04	0.15	0.15	0.07	0.07	0.142	0.063	0.5	0.70
62	TR	TRIBUTARY 6 - TIDAL	0.60	12.00	2.30	2.30	0.74	0.74	0.319	0.103	0.5	0.92
63	BL	LIBERTY FROM TRIB 6 TO TRIB 10	0.20	52.73	40.00	40.00	12.00	12.00	3.793	1.138	0.0	4.93
64	TR	TRIBUTARY 10 - UPLAND	0.50	1.03	0.07	0.07	0.03	0.03	0.144	0.064	0.5	0.71
65	TR	TRIBUTARY 10 - TIDAL	0.20	13.00	0.86	0.86	0.28	0.28	0.331	0.108	0.5	0.94
66	BL	LIBERTY FROM TRIB 10 TO BL07	0.90	52.12	220.00	220.00	36.00	36.00	4.690	0.767	0.2	5.67
67	BL	LIBERTY FROM BL07 TO TRIB 8	0.10	52.12	0.00	0.00	17.00	17.00	0.000	3.262	0.2	3.48
68	TR	TRIBUTARY 8 - UPLAND	0.50	1.01	0.07	0.07	0.03	0.03	0.147	0.065	0.5	0.71
69	TR	TRIBUTARY 8 - TIDAL	0.10	10.00	0.29	0.29	0.10	0.10	0.290	0.099	0.5	0.89
70	BL	LIBERTY FROM TRIB 8 TO M1	0.60	52.12	25.00	25.00	13.00	13.00	0.799	0.416	0.2	1.42
71	M	MARINA 1 - TIDAL	0.20	32.00	3.35	3.35	0.89	0.89	0.523	0.139	0.5	1.16
72	BL	LIBERTY FROM M1 TO M2	0.10	60.96	50.00	50.00	12.00	12.00	8.202	1.969	0.0	10.17
73	M	MARINA02 - TIDAL	1.80	32.00	29.00	29.00	8.00	8.00	0.503	0.139	0.5	1.14
74	BL	LIBERTY FROM M2 TO B PAQUET	1.40	60.96	150.00	150.00	0.00	0.00	1.758	0.000	0.0	1.76
75	DD	HWY 190 (DD13-PAQUET HEADWATERS)	1.40	1.09	0.21	0.21	0.10	0.10	0.139	0.064	0.5	0.70
76	BP	PAQUET FROM HWY 190 TO DD16	2.10	1.56	0.60	0.60	0.26	0.26	0.183	0.078	0.5	0.76
77	DD	DD16	0.90	1.00	0.14	0.14	0.06	0.06	0.153	0.067	0.5	0.72
78	BP	PAQUET FROM RKM 5.1 TO DD17	1.30	1.60	0.40	0.40	0.14	0.14	0.192	0.067	0.5	0.76
79	DD	DD17	1.70	1.86	0.26	0.26	0.11	0.11	0.082	0.036	0.5	0.62
80	BP	PAQUET FROM DD17 TO TIDAL REACH	0.40	1.86	0.09	0.09	0.05	0.05	0.114	0.067	0.5	0.68
81	BP	PAQUET TIDAL REACH TO BP02	1.00	18.90	83.50	83.50	14.50	14.50	4.418	0.767	0.3	5.51
82	BP	PAQUET FROM BP02 TO BP03	0.80	18.29	37.00	37.00	4.00	4.00	2.529	0.273	0.8	3.56
83	BP	PAQUET FROM BP03 TO TRIB 24	0.30	21.34	22.00	22.00	4.00	4.00	3.436	0.625	0.6	4.66
84	C	TRIB 24 FROM TOP TO PAQUET	0.40	20.10	3.00	3.00	0.90	0.90	0.373	0.112	0.5	0.99
85	BP	PAQUET FROM TRIB 24 TO TRIB 25	0.30	21.34	35.00	35.00	8.50	8.50	5.467	1.328	0.3	7.09
86	C	TRIB 25 FROM TOP TO RKM 0.3	0.70	16.46	4.60	4.60	1.33	1.33	0.399	0.115	0.5	1.01
87	C	TRIB 25 FROM RKM 0.3 TO PAQUET	0.30	32.00	3.60	3.60	1.10	1.10	0.375	0.115	0.5	0.99
88	BP	PAQUET FROM TRIB 25 TO BP04	0.80	30.48	150.00	150.00	35.00	35.00	6.152	1.435	0.0	7.59
89	BP	PAQUET FROM BP04 TO LIBERTY	0.20	30.48	160.00	160.00	30.00	30.00	26.247	4.921	0.0	31.17
90	BL	LIBERTY FROM PAQUET TO BONFOUCA	1.10	60.96	150.00	150.00	0.00	0.00	2.237	0.000	0.0	2.24
91	BB	BONFOUCA FROM LIBERTY TO BB06	0.80	105.60	0.00	0.00	0.00	0.00	0.000	0.000	0.0	0.00

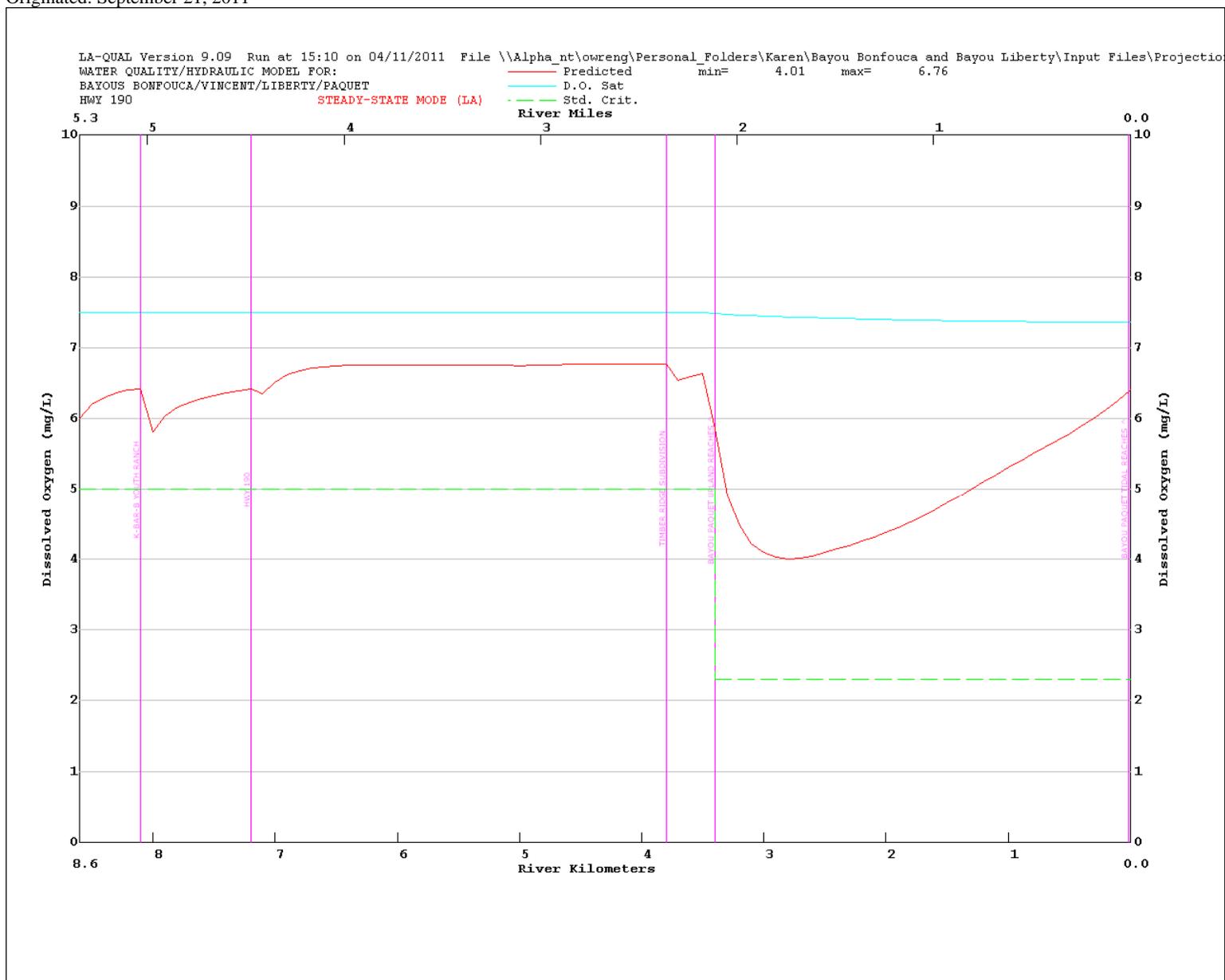
Appendix D – Projection Model Input and Output Data Sets

Appendix D1 –Summer Projection Output Graphs and Input, Overlay, and Output Files

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011







Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

BAYOU BONFOUCA AND BAYOU LIBERTY SUMMER PROJECTION INPUT DATA SET

! DATA TYPE 01 -- TITLES AND CONTROL DATA

TITLE01 WATER QUALITY/HYDRAULIC MODEL FOR:
TITLE02 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET
CONTROL YES METRIC UNITS
CONTROL YES USE EFFECTIVE CONCENTRATIONS
ENDATA01

! DATA TYPE 02 -- Model Options

MODOPT01 NO TEMPERATURE
MODOPT02 YES SALINITY
MODOPT03 YES CONSERVATIVE MATERIAL I = CONDUCTIVITY IN COND
MODOPT04 YES CONSERVATIVE MATERIAL II = CHLORIDES IN CL
MODOPT05 YES DISSOLVED OXYGEN
MODOPT06 YES BOD1 BIOCHEMICAL OXYGEN DEMAND
MODOPT07 NO BOD2 BIOCHEMICAL OXYGEN DEMAND
MODOPT08 YES NBOD
MODOPT09 NO PHOSPHORUS SERIES
MODOPT10 NO PHYTOPLANKTON
MODOPT11 NO PERIPHYTON
MODOPT12 NO COLIFORM
MODOPT13 NO NONCONSERVATIVE MATERIAL
ENDATA02

! DATA TYPE 03 -- PROGRAM CONSTANTS

PROGRAM K2 MAXIMUM = 25
PROGRAM DISPERSION EQUATION = 3
PROGRAM TIDE HEIGHT = 0.1
PROGRAM TIDAL PERIOD = 19.75
PROGRAM PERIOD OF TIDAL RISE = 10.5
PROGRAM S OXYGEN DEPENDENCE THRESHOLD = 1
PROGRAM SOD MAXIMUM RATE = 50
PROGRAM PHYTOPLANKTON OXYGEN PROD = 0.05
PROGRAM PERIPHYTON OXYGEN PROD = 0

ENDATA03

! DATA TYPE 04 -- TEMPERATURE CORRECTION CONSTANTS

ENDATA04

! DATA TYPE 05 -- TEMPERATURE DATA

ENDATA05

! DATA TYPE 06 -- ALGAE CONSTANTS

ENDATA06

! DATA TYPE 07 -- MACROPHYTE CONSTANTS

ENDATA07

! DATA TYPE 08 -- REACH IDENTIFICATION DATA

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

! - - - -1- - - -2- - - -3- - - -4- - - -5- - - -6- - - -7- - - -8- - - -9- - - -0- - - -1
 !234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890

! *** -- *****-----*****-----

!	R#	ID	SITE NAME	RKM	RKM	LENGTH
REACH ID	1	DD	DRAINAGE DITCH 1	24.2	20.3	0.1
REACH ID	2	BV	VINCENT FROM RKM 20.0 TO BV01	20.3	19.5	0.1
REACH ID	3	BV	VINCENT FROM BV01 RKM 18.5	19.5	18.5	0.1
REACH ID	4	BV	VINCENT FROM RKM 18.5 TO BV02	18.5	17.6	0.1
REACH ID	5	DD	DRAINAGE DITCH 2	2.1	0	0.1
REACH ID	6	BV	VINCENT FROM BV02 TO DD 8	17.6	16.9	0.05
REACH ID	7	DD	DRAINAGE DITCH 8	0.8	0	0.1
REACH ID	8	BV	VINCENT FROM DD 8 TO DD 9	16.9	16	0.1
REACH ID	9	DD	DRAINAGE DITCH 9	2.1	0	0.1
REACH ID	10	BV	VINCENT FROM DD 9 TO RKM 15.2	16	15.2	0.1
REACH ID	11	BV	VINCENT FROM RKM 15.2 TO BV03	15.2	14.9	0.05
REACH ID	12	BV	VINCENT FROM BV03 TO BONFOUCA	14.9	14.4	0.1
REACH ID	13	UB	UB FROM RKM 5.0 TO DD 23	5	2.6	0.1
REACH ID	14	DD	DRAINAGE DITCH 23	1	0	0.1
REACH ID	15	UB	UB FROM DD 23 TO BB01	2.6	1.1	0.1
REACH ID	16	UB	UB FROM BB01 TO BAYOU VINCENT	1.1	0	0.1
REACH ID	17	BB	BONFOUCA FROM BV TO HWY 190	14.4	14.2	0.1
REACH ID	18	DD	HWY 190 (DRAINAGE DITCH 5)	1.8	0	0.1
REACH ID	19	BB	BONFOUCA FROM HWY 190 TO BB02	14.2	13.3	0.1
REACH ID	20	BB	BONFOUCA FROM BB02 TO WD	13.3	12.1	0.1
REACH ID	21	WD	WEST DRAINAGE CANAL	0.3	0	0.1
REACH ID	22	BB	BONFOUCA FROM WD TO DD6	12.1	10	0.1
REACH ID	23	DD	DRAINAGE DITCH 6	0.3	0	0.1
REACH ID	24	BB	BONFOUCA FROM DD 6 TO TRIB 2	10	9.2	0.1
REACH ID	25	DD	DRAINAGE DITCH 7 - UPLAND	1.5	0.5	0.1
REACH ID	26	TR	TRIBUTARY 2 - TIDAL	0.5	0	0.1
REACH ID	27	BB	BONFOUCA FROM TRIB 2 TO BB03	9.2	8.6	0.1
REACH ID	28	BB	BONFOUCA FROM BB03 TO CANAL 26	8.6	7.8	0.1
REACH ID	29	C	CANAL 26	2	0	0.1
REACH ID	30	BB	BONFOUCA FROM CANAL 26 TO TRIB 47.8	47.8	7.6	0.1
REACH ID	31	TR	TRIBUTARY 10 - UPLAND	1.9	0.8	0.1
REACH ID	32	TR	TRIBUTARY 4 - TIDAL	0.8	0	0.1
REACH ID	33	BB	BONFOUCA FROM TRIB 4 TO BB04	7.6	6.8	0.1
REACH ID	34	BB	BONFOUCA FROM BB04 TO RKM 5.6	6.8	5.6	0.1
REACH ID	35	BB	BONFOUCA FROM RKM 5.6 TO BB05	5.6	4.5	0.1
REACH ID	36	BB	BONFOUCA FROM BB05 TO RKM 2.7	4.5	2.7	0.1
REACH ID	37	BB	BONFOUCA FROM RKM 2.7 TO LIBERTY2.7	2.7	0.8	0.1
REACH ID	38	BL	LIBERTY FROM RKM 15.0 TO TRIB 1 15	15	14.4	0.1

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

REACH ID	39	TR TRIBUTARY 1	2.4	0	0.1
REACH ID	40	BL LIBERTY FROM RKM 14.4 TO DD22	14.4	13.7	0.1
REACH ID	41	DD DD22	0.3	0	0.1
REACH ID	42	BL LIBERTY FROM DD22 TO DD20	13.7	12.8	0.1
REACH ID	43	DD DD20	2.7	0	0.1
REACH ID	44	BL LIBERTY FROM DD20 TO BL03	12.8	12.6	0.1
REACH ID	45	BL LIBERTY FROM BL03 TO HWY 190	12.6	10.1	0.1
REACH ID	46	DD HWY 190 (DRAINAGE DITCH 14)	2.3	0	0.1
REACH ID	47	BL LIBERTY FROM HWY 190 TO BL04	10.1	10	0.1
REACH ID	48	BL LIBERTY FROM BL04 TO DD18	10	8.4	0.1
REACH ID	49	DD DD18	0.3	0	0.1
REACH ID	50	BL LIBERTY FROM DD18 TO DD19	8.4	7.8	0.1
REACH ID	51	DD DD19	1.4	0	0.1
REACH ID	52	BL LIBERTY FROM DD19 TO DD04	7.8	7.6	0.1
REACH ID	53	DD DD04	4.2	0	0.1
REACH ID	54	BL LIBERTY FROM DD04 TO BL05	7.6	6.9	0.1
REACH ID	55	BL LIBERTY FROM BL05 TO RKM 6.3	6.9	6.3	0.1
REACH ID	56	BL LIBERTY FROM RKM 6.3 TO RKM 6.0	6.3	6	0.1
REACH ID	57	BL LIBERTY FROM RKM 6.0 TO TRIB 9	6	5.2	0.1
REACH ID	58	DD DRAINAGE DITCH 3 - UPLAND	0.5	0.3	0.1
REACH ID	59	TR TRIBUTARY 9 - TIDAL	0.3	0	0.1
REACH ID	60	BL LIBERTY FROM TRIB 9 TO TRIB 6	5.2	4.4	0.1
REACH ID	61	DD DRAINAGE DITCH 11 - UPLAND	1.6	0.6	0.1
REACH ID	62	TR TRIBUTARY 6 - TIDAL	0.6	0	0.1
REACH ID	63	BL LIBERTY FROM TRIB 6 TO TRIB 10	4.4	4.2	0.1
REACH ID	64	TR TRIBUTARY 10 - UPLAND	0.7	0.2	0.1
REACH ID	65	TR TRIBUTARY 10 - TIDAL	0.2	0	0.1
REACH ID	66	BL LIBERTY FROM TRIB 10 TO BL07	4.2	3.3	0.1
REACH ID	67	BL LIBERTY FROM BL07 TO TRIB 8	3.3	3.2	0.1
REACH ID	68	TR TRIBUTARY 8 - UPLAND	0.6	0.1	0.1
REACH ID	69	TR TRIBUTARY 8 - TIDAL	0.1	0	0.1
REACH ID	70	BL LIBERTY FROM TRIB 8 TO M1	3.2	2.6	0.1
REACH ID	71	M MARINA 1 - TIDAL	0.2	0	0.1
REACH ID	72	BL LIBERTY FROM M1 TO M2	2.6	2.5	0.1
REACH ID	73	M MARINA02 - TIDAL	1.8	0	0.1
REACH ID	74	BL LIBERTY FROM M2 TO B PAQUET	2.5	1.1	0.1
REACH ID	75	DD HWY 190 (DD13-PAQUET HEADWATERS)	8.6	7.2	0.1
REACH ID	76	BP PAQUET FROM HWY 190 TO DD16	7.2	5.1	0.1
REACH ID	77	DD DD16	0.9	0	0.1
REACH ID	78	BP PAQUET FROM RKM 5.1 TO DD17	5.1	3.8	0.1
REACH ID	79	DD DD17	1.7	0	0.1
REACH ID	80	BP PAQUET FROM DD17 TO TIDAL REACH	3.8	3.4	0.1

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

REACH ID	81	BP PAQUET TIDAL REACH TO BP02	3.4	2.4	0.1
REACH ID	82	BP PAQUET FROM BP02 TO BP03	2.4	1.6	0.1
REACH ID	83	BP PAQUET FROM BP03 TO TRIB 24	1.6	1.3	0.1
REACH ID	84	C TRIB 24 FROM TOP TO PAQUET	0.4	0	0.1
REACH ID	85	BP PAQUET FROM TRIB 24 TO TRIB 25	1.3	1	0.1
REACH ID	86	C TRIB 25 FROM TOP TO RKM 0.3	1	0.3	0.1
REACH ID	87	C TRIB 25 FROM RKM 0.3 TO PAQUET	0.3	0	0.1
REACH ID	88	BP PAQUET FROM TRIB 25 TO BP04	1	0.2	0.1
REACH ID	89	BP PAQUET FROM BP04 TO LIBERTY	0.2	0	0.1
REACH ID	90	BL LIBERTY FROM PAQUET TO BONFOUCA	1.1	0	0.1
REACH ID	91	BB BONFOUCA FROM LIBERTY TO BB06	0.8	0	0.1

ENDATA08

! DATA TYPE 09 -- ADVECTIVE HYDRAULIC COEFFICIENTS

! - - - -1- - - - -2- - - - -3- - - - -4- - - - -5- - - - -6- - - - -7- - - - -8- - - - -9- - - - -0- - - - -1

! 234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890

! *** -----*****-----*****-----*****-----*****

!		a	b	c	d	e	f		
!		WIDTH	WIDTH	WIDTH	DEPTH	DEPTH	DEPTH		
!	R#	COEFF	EXP	CONST	COEFF	EXP	CONST	SLOPE	MANNING
HYDR-1	1	11.59770	0.3	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	2	4.765	0.3	0	0.3255	0.36	0	0.00001	0.03
HYDR-1	3	4.765	0.3	0	0.3255	0.36	0	0.00001	0.03
HYDR-1	4	4.765	0.3	0	0.3255	0.36	0	0.00001	0.03
HYDR-1	5	11.59770	0.3	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	6	4.765	0.3	0	0.3255	0.36	0	0.00001	0.03
HYDR-1	7	11.59770	0.3	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	8	4.765	0.3	0	0.3255	0.36	0	0.00001	0.03
HYDR-1	9	11.59770	0.3	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	10	4.765	0.3	0	0.3255	0.36	0	0.00001	0.03
HYDR-1	11	0	0	4.724	0	0	0.271	0.00001	0.03
HYDR-1	12	0	0	4.724	0	0	0.271	0.00001	0.03
HYDR-1	13	5.813	0.3	0	0.413	0.36	0	0.00001	0.03
HYDR-1	14	11.59770	0.3	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	15	5.813	0.3	0	0.413	0.36	0	0.00001	0.03
HYDR-1	16	8.719	0.3	0	0.62	0.36	0	0.00001	0.03
HYDR-1	17	0	0	10.84	0	0	0.87	0.00001	0.03
HYDR-1	18	11.59770	0.3	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	19	0	0	10.84	0	0	0.87	0.00001	0.03
HYDR-1	20	0	0	10.84	0	0	0.87	0.00001	0.03
HYDR-1	21	0	0	3	0	0	0.15	0.00001	0.03
HYDR-1	22	0	0	54.25	0	0	1.24	0.00001	0.03
HYDR-1	23	11.59770	0.3	0	0.9468	0.36	0	0.00001	0.03

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

HYDR-1	24	0	0	93.08	0	0	1.603	0.00001	0.03
HYDR-1	25	11.59770.3	0	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	26	0	0	12	0	0	0.6	0.00001	0.03
HYDR-1	27	0	0	93.08	0	0	1.603	0.00001	0.03
HYDR-1	28	0	0	93.08	0	0	1.603	0.00001	0.03
HYDR-1	29	0	0	114	0	0	1	0.00001	0.03
HYDR-1	30	0	0	76.51	0	0	1.87	0.00001	0.03
HYDR-1	31	11.59770.3	0	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	32	0	0	18	0	0	0.9	0.00001	0.03
HYDR-1	33	0	0	76.51	0	0	1.87	0.00001	0.03
HYDR-1	34	0	0	91.4	0	0	1.89	0.00001	0.03
HYDR-1	35	0	0	114.3	0	0	1.67	0.00001	0.03
HYDR-1	36	0	0	77.7	0	0	1.44	0.00001	0.03
HYDR-1	37	0	0	88	0	0	1.6	0.00001	0.03
HYDR-1	38	8.72	0.3	0	0.62	0.36	0	0.00001	0.03
HYDR-1	39	11.59770.3	0	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	40	8.72	0.3	0	0.62	0.36	0	0.00001	0.03
HYDR-1	41	11.59770.3	0	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	42	17.43760.3	0	0	0.992	0.36	0	0.00001	0.03
HYDR-1	43	11.59770.3	0	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	44	0	0	8.84	0	0	0.472	0.00001	0.03
HYDR-1	45	0	0	8.84	0	0	0.472	0.00001	0.03
HYDR-1	46	11.59770.3	0	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	47	0	0	18.6	0	0	1.4	0.00001	0.03
HYDR-1	48	0	0	18.6	0	0	1.4	0.00001	0.03
HYDR-1	49	11.59770.3	0	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	50	0	0	18.6	0	0	1.4	0.00001	0.03
HYDR-1	51	11.59770.3	0	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	52	0	0	42.67	0	0	2.28	0.00001	0.03
HYDR-1	53	11.59770.3	0	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	54	0	0	42.67	0	0	2.28	0.00001	0.03
HYDR-1	55	0	0	42.67	0	0	2.28	0.00001	0.03
HYDR-1	56	0	0	39.69	0	0	1.7	0.00001	0.03
HYDR-1	57	0	0	47.55	0	0	2.08	0.00001	0.03
HYDR-1	58	11.59770.3	0	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	59	0	0	16	0	0	0.8	0.00001	0.03
HYDR-1	60	0	0	47.55	0	0	2.08	0.00001	0.03
HYDR-1	61	11.59770.3	0	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	62	0	0	12	0	0	0.6	0.00001	0.03
HYDR-1	63	0	0	52.73	0	0	2.09	0.00001	0.03
HYDR-1	64	11.59770.3	0	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	65	0	0	13	0	0	0.65	0.00001	0.03

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

HYDR-1	66	0	0	52.12	0	0	2.14	0.00001	0.03
HYDR-1	67	0	0	52.12	0	0	2.14	0.00001	0.03
HYDR-1	68	11.59770.3	0	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	69	0	0	10	0	0	0.5	0.00001	0.03
HYDR-1	70	0	0	52.12	0	0	2.14	0.00001	0.03
HYDR-1	71	0	0	32	0	0	1.2	0.00001	0.03
HYDR-1	72	0	0	56.54	0	0	2.14	0.00001	0.03
HYDR-1	73	0	0	32	0	0	1.2	0.00001	0.03
HYDR-1	74	0	0	60.96	0	0	2.13	0.00001	0.03
HYDR-1	75	11.59770.3	0	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	76	8.72	0.3	0	0.62	0.36	0	0.00001	0.03
HYDR-1	77	11.59770.3	0	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	78	8.72	0.3	0	0.62	0.36	0	0.00001	0.03
HYDR-1	79	11.59770.3	0	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	80	8.72	0.3	0	0.62	0.36	0	0.00001	0.03
HYDR-1	81	0	0	18.9	0	0	1.1	0.00001	0.03
HYDR-1	82	0	0	18.29	0	0	1	0.00001	0.03
HYDR-1	83	0	0	21.34	0	0	1.5	0.00001	0.03
HYDR-1	84	0	0	20.1	0	0	0.74	0.00001	0.03
HYDR-1	85	0	0	21.34	0	0	1.5	0.00001	0.03
HYDR-1	86	0	0	16.46	0	0	0.94	0.00001	0.03
HYDR-1	87	0	0	32	0	0	0.77	0.00001	0.03
HYDR-1	88	0	0	30.48	0	0	1.5	0.00001	0.03
HYDR-1	89	0	0	30.48	0	0	1.5	0.00001	0.03
HYDR-1	90	0	0	60.96	0	0	2.13	0.00001	0.03
HYDR-1	91	0	0	105.59	0	0	1.96	0.00001	0.03

ENDATA09

! DATA TYPE 10 -- DISPERSIVE HYDRAULIC COEFFICIENTS

! - - - -1- - - - -2- - - - -3- - - - -4- - - - -5- - - - -6- - - - -7- - - - -8- - - - -9- - - - -0- - - - -1

! 234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890

! *** -----*****-----*****-----

!	TIDAL					
!	R#	RANGE	a	b	c	d
HYDR-2	1	0	0	0.833	0	1
HYDR-2	2	0	0	0.833	0	1
HYDR-2	3	0	0	0.833	0	1
HYDR-2	4	0	0	0.833	0	1
HYDR-2	5	0	0	0.833	0	1
HYDR-2	6	0	0	0.833	0	1
HYDR-2	7	0	0	0.833	0	1
HYDR-2	8	0	0	0.833	0	1
HYDR-2	9	0	0	0.833	0	1

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

HYDR-2	10	0	0	0.833	0	1
HYDR-2	11	1	200	0.833	0	1
HYDR-2	12	1	200	0.833	0	1
HYDR-2	13	0	0	0.833	0	1
HYDR-2	14	0	0	0.833	0	1
HYDR-2	15	0	0	0.833	0	1
HYDR-2	16	0	0	0.833	0	1
HYDR-2	17	1	200	0.833	0	1
HYDR-2	18	0	0	0.833	0	1
HYDR-2	19	1	200	0.833	0	1
HYDR-2	20	1	200	0.833	0	1
HYDR-2	21	1	200	0.833	0	1
HYDR-2	22	1	200	0.833	0	1
HYDR-2	23	0	0	0.833	0	1
HYDR-2	24	1	200	0.833	0	1
HYDR-2	25	0	0	0.833	0	1
HYDR-2	26	1	200	0.833	0	1
HYDR-2	27	1	200	0.833	0	1
HYDR-2	28	1	200	0.833	0	1
HYDR-2	29	1	200	0.833	0	1
HYDR-2	30	1	200	0.833	0	1
HYDR-2	31	0	0	0.833	0	1
HYDR-2	32	1	200	0.833	0	1
HYDR-2	33	1	200	0.833	0	1
HYDR-2	34	1	200	0.833	0	1
HYDR-2	35	1	200	0.833	0	1
HYDR-2	36	1	200	0.833	0	1
HYDR-2	37	1	200	0.833	0	1
HYDR-2	38	0	0	0.833	0	1
HYDR-2	39	0	0	0.833	0	1
HYDR-2	40	0	0	0.833	0	1
HYDR-2	41	0	0	0.833	0	1
HYDR-2	42	0	0	0.833	0	1
HYDR-2	43	0	0	0.833	0	1
HYDR-2	44	1	100	0.833	0	1
HYDR-2	45	1	100	0.833	0	1
HYDR-2	46	0	0	0.833	0	1
HYDR-2	47	1	100	0.833	0	1
HYDR-2	48	1	100	0.833	0	1
HYDR-2	49	0	0	0.833	0	1
HYDR-2	50	1	150	0.833	0	1
HYDR-2	51	0	0	0.833	0	1

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

HYDR-2	52	1	200	0.833	0	1
HYDR-2	53	0	0	0.833	0	1
HYDR-2	54	1	250	0.833	0	1
HYDR-2	55	1	300	0.833	0	1
HYDR-2	56	1	300	0.833	0	1
HYDR-2	57	1	300	0.833	0	1
HYDR-2	58	0	0	0.833	0	1
HYDR-2	59	1	200	0.833	0	1
HYDR-2	60	1	300	0.833	0	1
HYDR-2	61	0	0	0.833	0	1
HYDR-2	62	1	200	0.833	0	1
HYDR-2	63	1	300	0.833	0	1
HYDR-2	64	0	0	0.833	0	1
HYDR-2	65	1	200	0.833	0	1
HYDR-2	66	1	300	0.833	0	1
HYDR-2	67	1	300	0.833	0	1
HYDR-2	68	0	0	0.833	0	1
HYDR-2	69	1	200	0.833	0	1
HYDR-2	70	1	300	0.833	0	1
HYDR-2	71	1	200	0.833	0	1
HYDR-2	72	1	300	0.833	0	1
HYDR-2	73	1	200	0.833	0	1
HYDR-2	74	1	300	0.833	0	1
HYDR-2	75	0	0	0.833	0	1
HYDR-2	76	0	0	0.833	0	1
HYDR-2	77	0	0	0.833	0	1
HYDR-2	78	0	0	0.833	0	1
HYDR-2	79	0	0	0.833	0	1
HYDR-2	80	0	0	0.833	0	1
HYDR-2	81	1	200	0.833	0	1
HYDR-2	82	1	200	0.833	0	1
HYDR-2	83	1	200	0.833	0	1
HYDR-2	84	1	200	0.833	0	1
HYDR-2	85	1	200	0.833	0	1
HYDR-2	86	1	200	0.833	0	1
HYDR-2	87	1	200	0.833	0	1
HYDR-2	88	1	200	0.833	0	1
HYDR-2	89	1	200	0.833	0	1
HYDR-2	90	1	300	0.833	0	1
HYDR-2	91	1	200	0.833	0	1

ENDATA10

! DATA TYPE 11 -- INITIAL CONDITIONS

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

! - - - -1- - - -2- - - -3- - - -4- - - -5- - - -6- - - -7- - - -8- - - -9- - - -0- - - -1

! 23456789012345678901234567890123456789012345678901234567890123456789012345678901234567890

! *** -----*****-----*****-----*****-----*****

!	R#	TEMP	SALINITY	DO	NH3	N	NIT	NIT	I	PHOS	CHL	A	MACROPHYTES
INITIAL	1	30.4	0.26	3	0		0				0		0
INITIAL	2	30.4	0.26	3	0		0				0		0
INITIAL	3	30.4	0.26	3	0		0				0		0
INITIAL	4	30.4	0.39	3	0		0				0		0
INITIAL	5	30.4	0.3	3	0		0				0		0
INITIAL	6	30.4	0.39	3	0		0				0		0
INITIAL	7	30.4	0.3	3	0		0				0		0
INITIAL	8	30.4	0.28	3	0		0				0		0
INITIAL	9	30.4	0.3	3	0		0				0		0
INITIAL	10	30.4	0.17	3	0		0				0		0
INITIAL	11	30.4	0.17	3	0		0				10		0
INITIAL	12	30.4	0.17	3	0		0				10		0
INITIAL	13	30.4	0.17	3	0		0				0		0
INITIAL	14	30.4	0.3	3	0		0				0		0
INITIAL	15	30.4	0.17	3	0		0				0		0
INITIAL	16	30.4	0.17	3	0		0				0		0
INITIAL	17	30.4	0.24	3	0		0				10		0
INITIAL	18	30.4	0.27	3	0		0				0		0
INITIAL	19	30.4	0.27	3	0		0				10		0
INITIAL	20	30.4	0.45	3	0		0				10		0
INITIAL	21	30.4	0.3	3	0		0				0		0
INITIAL	22	30.4	1.15	3	0		0				8.8		0
INITIAL	23	30.4	0.3	3	0		0				0		0
INITIAL	24	30.4	2.1	3	0		0				8.8		0
INITIAL	25	30.4	0.3	3	0		0				0		0
INITIAL	26	30.4	0.3	3	0		0				0		0
INITIAL	27	30.4	2.4	3	0		0				8.8		0
INITIAL	28	30.4	2.68	3	0		0				8.8		0
INITIAL	29	30.4	0.3	3	0		0				0		0
INITIAL	30	30.4	3	3	0		0				10		0
INITIAL	31	30.4	0.3	3	0		0				0		0
INITIAL	32	30.4	0.3	3	0		0				10		0
INITIAL	33	30.4	3.1	3	0		0				10		0
INITIAL	34	30.4	3.3	3	0		0				10		0
INITIAL	35	30.4	3.3	3	0		0				10		0
INITIAL	36	30.4	3.62	3	0		0				10		0
INITIAL	37	30.4	3.82	3	0		0				10		0
INITIAL	38	30.4	0.3	3	0		0				0		0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

INITIAL	39	30.4	0.3	3	0	0	0	0
INITIAL	40	30.4	0.3	3	0	0	0	0
INITIAL	41	30.4	0.3	3	0	0	0	0
INITIAL	42	30.4	0.3	3	0	0	0	0
INITIAL	43	30.4	0.3	3	0	0	0	0
INITIAL	44	30.4	0.48	3	0	0	10	0
INITIAL	45	30.4	0.48	3	0	0	10	0
INITIAL	46	30.4	0.3	3	0	0	0	0
INITIAL	47	30.4	0.54	3	0	0	10	0
INITIAL	48	30.4	0.54	3	0	0	10	0
INITIAL	49	30.4	0.3	3	0	0	0	0
INITIAL	50	30.4	1.7	3	0	0	3.2	0
INITIAL	51	30.4	0.3	3	0	0	0	0
INITIAL	52	30.4	2.9	3	0	0	3.2	0
INITIAL	53	30.4	0.3	3	0	0	0	0
INITIAL	54	30.4	3.09	3	0	0	3.2	0
INITIAL	55	30.4	3.09	3	0	0	3.2	0
INITIAL	56	30.4	3.09	3	0	0	3.2	0
INITIAL	57	30.4	3.09	3	0	0	3.2	0
INITIAL	58	30.4	0.3	3	0	0	0	0
INITIAL	59	30.4	0.3	3	0	0	0	0
INITIAL	60	30.4	2.8	3	0	0	3.2	0
INITIAL	61	30.4	0.3	3	0	0	0	0
INITIAL	62	30.4	0.3	3	0	0	0	0
INITIAL	63	30.4	2.4	3	0	0	3.2	0
INITIAL	64	30.4	0.3	3	0	0	0	0
INITIAL	65	30.4	0.3	3	0	0	0	0
INITIAL	66	30.4	2.12	3	0	0	3.2	0
INITIAL	67	30.4	2.12	3	0	0	10	0
INITIAL	68	30.4	0.3	3	0	0	0	0
INITIAL	69	30.4	0.3	3	0	0	0	0
INITIAL	70	30.4	2.8	3	0	0	10	0
INITIAL	71	30.4	0.3	3	0	0	0	0
INITIAL	72	30.4	3.5	3	0	0	6.8	0
INITIAL	73	30.4	0.3	3	0	0	0	0
INITIAL	74	30.4	4.16	3	0	0	6.8	0
INITIAL	75	30.4	0.3	3	0	0	0	0
INITIAL	76	30.4	0.3	3	0	0	0	0
INITIAL	77	30.4	0.3	3	0	0	0	0
INITIAL	78	30.4	0.3	3	0	0	0	0
INITIAL	79	30.4	0.3	3	0	0	0	0
INITIAL	80	30.4	1.6	3	0	0	0	0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

INITIAL	81	30.4	3.17	3	0	0	10	0
INITIAL	82	30.4	3.32	3	0	0	10	0
INITIAL	83	30.4	3.47	3	0	0	10	0
INITIAL	84	30.4	0.3	3	0	0	0	0
INITIAL	85	30.4	3.7	3	0	0	10	0
INITIAL	86	30.4	0.3	3	0	0	0	0
INITIAL	87	30.4	0.3	3	0	0	0	0
INITIAL	88	30.4	3.94	3	0	0	10	0
INITIAL	89	30.4	3.94	3	0	0	10	0
INITIAL	90	30.4	4.16	3	0	0	6.8	0
INITIAL	91	30.4	4	3	0	0	7.4	0

ENDATA11

! DATA TYPE 12 -- REAERATION, SEDIMENT OXYGEN DEMAND AND BOD COEFFICIENTS

!-----1-----2-----3-----4-----5-----6-----7-----8-----9

!234567890123456789012345678901234567890123456789012345678901234567890

! *** -----*****----- *****-----*****-----*****-----*****-----*****

!

!	R#	REA	KL	MIN		BOD 1		BOD 1		BOD 2		BOD 2	
!						SOD	DECAY	SETT		DECAY	SETT		
COEF-1	1	15	0	0	0	0.144	0.08	0.05	1	0	0	0	0
COEF-1	2	15	0	0	0	0.086	0.08	0.05	1	0	0	0	0
COEF-1	3	15	0	0	0	1.725	0.08	0.05	1	0	0	0	0
COEF-1	4	15	0	0	0	2.013	0.08	0.05	1	0	0	0	0
COEF-1	5	15	0	0	0	0.144	0.08	0.05	1	0	0	0	0
COEF-1	6	15	0	0	0	2.013	0.08	0.05	1	0	0	0	0
COEF-1	7	15	0	0	0	0.144	0.08	0.05	1	0	0	0	0
COEF-1	8	15	0	0	0	2.013	0.08	0.05	1	0	0	0	0
COEF-1	9	15	0	0	0	0.144	0.08	0.05	1	0	0	0	0
COEF-1	10	15	0	0	0	2.013	0.08	0.05	1	0	0	0	0
COEF-1	11	15	0	0	0	1.208	0.08	0.05	1	0	0	0	0
COEF-1	12	15	0	0	0	1.208	0.08	0.05	1	0	0	0	0
COEF-1	13	15	0	0	0	0.144	0.08	0.05	1	0	0	0	0
COEF-1	14	15	0	0	0	0.144	0.08	0.05	1	0	0	0	0
COEF-1	15	15	0	0	0	0.144	0.08	0.05	1	0	0	0	0
COEF-1	16	15	0	0	0	0.144	0.08	0.05	1	0	0	0	0
COEF-1	17	15	0	0	0	0.805	0.08	0.05	1	0	0	0	0
COEF-1	18	15	0	0	0	0.144	0.08	0.05	1	0	0	0	0
COEF-1	19	15	0	0	0	1.035	0.08	0.05	1	0	0	0	0
COEF-1	20	15	0	0	0	1.035	0.08	0.05	1	0	0	0	0
COEF-1	21	15	0	0	0	0.144	0.08	0.05	1	0	0	0	0
COEF-1	22	11	0	0	0	0.661	0.08	0.05	1	0	0	0	0
COEF-1	23	15	0	0	0	0.144	0.08	0.05	1	0	0	0	0
COEF-1	24	1	0.504	0	0	0.625	0.08	0.05	1	0	0	0	0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

COEF-1	25	15	0	0	0	0.625	0.08	0.05	1	0	0	0	0	0
COEF-1	26	11	0	0	0	0.625	0.08	0.05	1	0	0	0	0	0
COEF-1	27	1	0.504	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	28	1	0.504	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	29	11	0	0	0	0.625	0.08	0.05	1	0	0	0	0	0
COEF-1	30	1	0.477	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	31	15	0	0	0	0.625	0.08	0.05	1	0	0	0	0	0
COEF-1	32	11	0	0	0	0.625	0.08	0.05	1	0	0	0	0	0
COEF-1	33	1	0.477	0	0	0.25	0.08	0.05	1	0	0	0	0	0
COEF-1	34	1	0.477	0	0	0	0.08	0.05	1	0	0	0	0	0
COEF-1	35	1	0.542	0	0	0	0.08	0.05	1	0	0	0	0	0
COEF-1	36	1	0.658	0	0	0.063	0.08	0.05	1	0	0	0	0	0
COEF-1	37	1	0.58	0	0	0	0.08	0.05	1	0	0	0	0	0
COEF-1	38	15	0	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	39	15	0	0	0	0.125	0.08	0.05	1	0	0	0	0	0
COEF-1	40	15	0	0	0	0.625	0.08	0.05	1	0	0	0	0	0
COEF-1	41	15	0	0	0	0.125	0.08	0.05	1	0	0	0	0	0
COEF-1	42	15	0	0	0	0.675	0.08	0.05	1	0	0	0	0	0
COEF-1	43	15	0	0	0	0.125	0.08	0.05	1	0	0	0	0	0
COEF-1	44	15	0	0	0	0.625	0.08	0.05	1	0	0	0	0	0
COEF-1	45	15	0	0	0	0.425	0.08	0.05	1	0	0	0	0	0
COEF-1	46	15	0	0	0	0.125	0.08	0.05	1	0	0	0	0	0
COEF-1	47	11	0	0	0	0.31	0.08	0.05	1	0	0	0	0	0
COEF-1	48	11	0	0	0	0.256	0.08	0.05	1	0	0	0	0	0
COEF-1	49	15	0	0	0	0.388	0.08	0.05	1	0	0	0	0	0
COEF-1	50	11	0	0	0	0.078	0.08	0.05	1	0	0	0	0	0
COEF-1	51	15	0	0	0	0.388	0.08	0.05	1	0	0	0	0	0
COEF-1	52	11	0	0	0	0	0.08	0.05	1	0	0	0	0	0
COEF-1	53	15	0	0	0	0.388	0.08	0.05	1	0	0	0	0	0
COEF-1	54	11	0	0	0	0.031	0.08	0.05	0.4	0	0	0	0	0
COEF-1	55	1	0.355	0	0	0.078	0.08	0.05	0.4	0	0	0	0	0
COEF-1	56	1	0.469	0	0	0.031	0.08	0.05	1	0	0	0	0	0
COEF-1	57	1	0.389	0	0	0	0.08	0.05	1	0	0	0	0	0
COEF-1	58	15	0	0	0	0.388	0.08	0.05	1	0	0	0	0	0
COEF-1	59	11	0	0	0	0.388	0.08	0.05	1	0	0	0	0	0
COEF-1	60	1	0.438	0	0	0	0.08	0.05	1	0	0	0	0	0
COEF-1	61	15	0	0	0	0.388	0.08	0.05	1	0	0	0	0	0
COEF-1	62	11	0	0	0	0.388	0.08	0.05	1	0	0	0	0	0
COEF-1	63	1	0.426	0	0	0	0.08	0.05	1	0	0	0	0	0
COEF-1	64	15	0	0	0	0.388	0.08	0.05	1	0	0	0	0	0
COEF-1	65	11	0	0	0	0.388	0.08	0.05	1	0	0	0	0	0
COEF-1	66	1	0.426	0	0	0.163	0.08	0.05	0.4	0	0	0	0	0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

COEF-1	67	1	0.426	0	0	0.171	0.08	0.05	0	0	0	0	0	0
COEF-1	68	15	0	0	0	0.388	0.08	0.05	1	0	0	0	0	0
COEF-1	69	11	0	0	0	0.388	0.08	0.05	1	0	0	0	0	0
COEF-1	70	1	0.426	0	0	0.155	0.08	0.05	0	0	0	0	0	0
COEF-1	71	11	0	0	0	0.388	0.08	0.05	1	0	0	0	0	0
COEF-1	72	1	0.426	0	0	0	0.08	0.05	0	0	0	0	0	0
COEF-1	73	11	0	0	0	0.388	0.08	0.05	1	0	0	0	0	0
COEF-1	74	1	0.426	0	0	0	0.08	0.05	0	0	0	0	0	0
COEF-1	75	15	0	0	0	0.406	0.08	0.05	1	0	0	0	0	0
COEF-1	76	15	0	0	0	0.406	0.08	0.05	1	0	0	0	0	0
COEF-1	77	15	0	0	0	0.406	0.08	0.05	1	0	0	0	0	0
COEF-1	78	15	0	0	0	0.406	0.08	0.05	1	0	0	0	0	0
COEF-1	79	15	0	0	0	0.406	0.08	0.05	1	0	0	0	0	0
COEF-1	80	15	0	0	0	0.406	0.08	0.05	1	0	0	0	0	0
COEF-1	81	15	0	0	0	0.26	0.08	0.05	1	0	0	0	0	0
COEF-1	82	1	0.801	0	0	0.618	0.08	0.05	1	0	0	0	0	0
COEF-1	83	1	0.606	0	0	0.488	0.08	0.05	1	0	0	0	0	0
COEF-1	84	15	0	0	0	0.406	0.08	0.05	1	0	0	0	0	0
COEF-1	85	1	0.606	0	0	0.244	0.08	0.05	1	0	0	0	0	0
COEF-1	86	15	0	0	0	0.406	0.08	0.05	1	0	0	0	0	0
COEF-1	87	15	0	0	0	0.406	0.08	0.05	1	0	0	0	0	0
COEF-1	88	1	0.606	0	0	0	0.08	0.05	1	0	0	0	0	0
COEF-1	89	1	0.606	0	0	0	0.08	0.05	1	0	0	0	0	0
COEF-1	90	1	0.426	0	0	0	0.08	0.05	0	0	0	0	0	0
COEF-1	91	1	0.503	0	0	0	0.08	0.05	0	0	0	0	0	0

ENDATA12

! DATA TYPE 13 -- NITROGEN AND PHOSPHOURS COEFFICIENTS

! - - - -1- - - - -2- - - - -3- - - - -4- - - - -5- - - - -6- - - - -7- - - - -8- - - - -9- - - - -0- - - - -1

! 234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890

! *** -----*****-----*****-----*****-----

! NBOD NBOD

! R# DECAV SETT

COEF-2	1	0.03	0.05	0	0	0	0	0	0	0	0	0	0	0
COEF-2	2	0.03	0.05	0	0	0	0	0	0	0	0	0	0	0
COEF-2	3	0.03	0.05	0	0	0	0	0	0	0	0	0	0	0
COEF-2	4	0.03	0.05	0	0	0	0	0	0	0	0	0	0	0
COEF-2	5	0.03	0.05	0	0	0	0	0	0	0	0	0	0	0
COEF-2	6	0.03	0.1	0	0	0	0	0	0	0	0	0	0	0
COEF-2	7	0.03	0.05	0	0	0	0	0	0	0	0	0	0	0
COEF-2	8	0.03	0.1	0	0	0	0	0	0	0	0	0	0	0
COEF-2	9	0.03	0.05	0	0	0	0	0	0	0	0	0	0	0
COEF-2	10	0.03	0.05	0	0	0	0	0	0	0	0	0	0	0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

COEF-2	11	0.03	0.15	0	0	0	0	0	0
COEF-2	12	0.03	0.15	0	0	0	0	0	0
COEF-2	13	0.03	0.05	0	0	0	0	0	0
COEF-2	14	0.03	0.05	0	0	0	0	0	0
COEF-2	15	0.03	0.05	0	0	0	0	0	0
COEF-2	16	0.03	0.05	0	0	0	0	0	0
COEF-2	17	0.03	0.15	0	0	0	0	0	0
COEF-2	18	0.03	0.05	0	0	0	0	0	0
COEF-2	19	0.03	0.15	0	0	0	0	0	0
COEF-2	20	0.03	0.05	0	0	0	0	0	0
COEF-2	21	0.03	0.05	0	0	0	0	0	0
COEF-2	22	0.03	0.05	0	0	0	0	0	0
COEF-2	23	0.03	0.05	0	0	0	0	0	0
COEF-2	24	0.03	0.05	0	0	0	0	0	0
COEF-2	25	0.03	0.05	0	0	0	0	0	0
COEF-2	26	0.03	0.05	0	0	0	0	0	0
COEF-2	27	0.03	0.05	0	0	0	0	0	0
COEF-2	28	0.03	0.05	0	0	0	0	0	0
COEF-2	29	0.03	0.05	0	0	0	0	0	0
COEF-2	30	0.03	0.05	0	0	0	0	0	0
COEF-2	31	0.03	0.05	0	0	0	0	0	0
COEF-2	32	0.03	0.05	0	0	0	0	0	0
COEF-2	33	0.03	0.05	0	0	0	0	0	0
COEF-2	34	0.03	0.05	0	0	0	0	0	0
COEF-2	35	0.03	0.05	0	0	0	0	0	0
COEF-2	36	0.03	0.05	0	0	0	0	0	0
COEF-2	37	0.03	0.05	0	0	0	0	0	0
COEF-2	38	0.03	0.05	0	0	0.1	0	0	0
COEF-2	39	0.03	0.05	0	0	0.1	0	0	0
COEF-2	40	0.03	0.05	0	0	0.1	0	0	0
COEF-2	41	0.03	0.05	0	0	0.1	0	0	0
COEF-2	42	0.03	0.05	0	0	0.1	0	0	0
COEF-2	43	0.03	0.05	0	0	0.1	0	0	0
COEF-2	44	0.03	0.05	0	0	0.1	0	0	0
COEF-2	45	0.03	0.05	0	0	0.1	0	0	0
COEF-2	46	0.03	0.05	0	0	0.1	0	0	0
COEF-2	47	0.03	0.05	0	0	0.1	0	0	0
COEF-2	48	0.03	0.05	0	0	0.1	0	0	0
COEF-2	49	0.03	0.05	0	0	0.1	0	0	0
COEF-2	50	0.03	0.05	0	0	0.1	0	0	0
COEF-2	51	0.03	0.05	0	0	0.1	0	0	0
COEF-2	52	0.03	0.05	0	0	0.1	0	0	0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

COEF-2	53	0.03	0.05	0	0	0.1	0	0	0
COEF-2	54	0.03	0.05	0	0	0.1	0	0	0
COEF-2	55	0.03	0.05	0	0	0.1	0	0	0
COEF-2	56	0.03	0.05	0	0	0.1	0	0	0
COEF-2	57	0.03	0.05	0	0	0.1	0	0	0
COEF-2	58	0.03	0.05	0	0	0.1	0	0	0
COEF-2	59	0.03	0.05	0	0	0.1	0	0	0
COEF-2	60	0.03	0.05	0	0	0.1	0	0	0
COEF-2	61	0.03	0.05	0	0	0.1	0	0	0
COEF-2	62	0.03	0.05	0	0	0.1	0	0	0
COEF-2	63	0.03	0.05	0	0	0.1	0	0	0
COEF-2	64	0.03	0.05	0	0	0.1	0	0	0
COEF-2	65	0.03	0.05	0	0	0.1	0	0	0
COEF-2	66	0.03	0.05	0	0	0.1	0	0	0
COEF-2	67	0.03	0.05	0	0	0.1	0	0	0
COEF-2	68	0.03	0.05	0	0	0.1	0	0	0
COEF-2	69	0.03	0.05	0	0	0.1	0	0	0
COEF-2	70	0.03	0.05	0	0	0.1	0	0	0
COEF-2	71	0.03	0.05	0	0	0.1	0	0	0
COEF-2	72	0.03	0.05	0	0	0.1	0	0	0
COEF-2	73	0.03	0.05	0	0	0.1	0	0	0
COEF-2	74	0.03	0.05	0	0	0.1	0	0	0
COEF-2	75	0.03	0.05	0	0	0.1	0	0	0
COEF-2	76	0.03	0.05	0	0	0.1	0	0	0
COEF-2	77	0.03	0.05	0	0	0.1	0	0	0
COEF-2	78	0.03	0.05	0	0	0.1	0	0	0
COEF-2	79	0.03	0.05	0	0	0.1	0	0	0
COEF-2	80	0.03	0.05	0	0	0.1	0	0	0
COEF-2	81	0.03	0.05	0	0	0.1	0	0	0
COEF-2	82	0.03	0.05	0	0	0.1	0	0	0
COEF-2	83	0.03	0.05	0	0	0.1	0	0	0
COEF-2	84	0.03	0.05	0	0	0.1	0	0	0
COEF-2	85	0.03	0.05	0	0	0.1	0	0	0
COEF-2	86	0.03	0.05	0	0	0.1	0	0	0
COEF-2	87	0.03	0.05	0	0	0.1	0	0	0
COEF-2	88	0.03	0.05	0	0	0.1	0	0	0
COEF-2	89	0.03	0.05	0	0	0.1	0	0	0
COEF-2	90	0.03	0.05	0	0	0.1	0	0	0
COEF-2	91	0.03	0.05	0	0	0	0	0	0

ENDATA13

! DATA TYPE 14 -- ALGAE AND MACROPHYTE COEFFICIENTS

ENDATA14

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

! DATA TYPE 15 -- COLIFORM AND NONCONSERVATIVE COEFFICIENTS

! - - - -1- - - - -2- - - - -3- - - - -4- - - - -5- - - - -6- - - - -7- - - - -8- - - - -9- - - - -0- - - - -1
 ! 234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
 ! *** -----*****-----*****

ENDATA15

! DATA TYPE 16 -- INCREMENTAL DATA FOR FLOW, TEMPERATURE, SALINITY, AND CONSERVATIVES

! - - - -1- - - - -2- - - - -3- - - - -4- - - - -5- - - - -6- - - - -7- - - - -8- - - - -9- - - - -0- - - - -1
 ! 234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
 ! *** -----*****-----*****

! R# OUTFLOW INFLOW TEMP SALINITY CHLORIDE COND

ENDATA16

! DATA TYPE 17 -- INCREMENTAL DATA FOR DO, BOD, AND NITROGEN

! - - - -1- - - - -2- - - - -3- - - - -4- - - - -5- - - - -6- - - - -7- - - - -8- - - - -9- - - - -0- - - - -1
 ! 234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
 ! *** -----*****-----*****

! R# DO BOD 1 NBOD NH3 N NIT NIT BOD 2

ENDATA17

! DATA TYPE 18 -- Incremental Data

! - - - -1- - - - -2- - - - -3- - - - -4- - - - -5- - - - -6- - - - -7- - - - -8- - - - -9- - - - -0- - - - -1
 ! 234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
 ! *** -----*****-----*****

! R# PHOSPH CHL A COLIFORM NONCONSERVATIVE

ENDATA18

! DATA TYPE 19 -- NONPOINT SOURCE DATA

! - - - -1- - - - -2- - - - -3- - - - -4- - - - -5- - - - -6- - - - -7- - - - -8- - - - -9- - - - -0- - - - -1
 ! 234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
 ! *** -----*****-----*****

!	R#	BOD 1	NBOD	COLIFORM	NONCONS	DO	BOD 2
NONPOINT	1	0.187	0.078	0	0	0	0
NONPOINT	2	0.037	0.014	0	0	0	0
NONPOINT	3	0.403	0.014	0	0	0	0
NONPOINT	4	0.403	0.014	0	0	0	0
NONPOINT	5	0.086	0.038	0	0	0	0
NONPOINT	6	0.403	0.04	0	0	0	0
NONPOINT	7	0.032	0.014	0	0	0	0
NONPOINT	8	0.489	0.04	0	0	0	0
NONPOINT	9	0.086	0.038	0	0	0	0
NONPOINT	10	0.029	0.014	0	0	0	0
NONPOINT	11	0.23	0.043	0	0	0	0
NONPOINT	12	0.403	0.259	0	0	0	0
NONPOINT	13	0.106	0.046	0	0	0	0
NONPOINT	14	0.043	0.019	0	0	0	0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

NONPOINT	15	0.072	0.029	0	0	0	0
NONPOINT	16	0.081	0.032	0	0	0	0
NONPOINT	17	0.029	0	0	0	0	0
NONPOINT	18	0.075	0.034	0	0	0	0
NONPOINT	19	3.364	1.093	0	0	0	0
NONPOINT	20	6.469	0.604	0	0	0	0
NONPOINT	21	0.049	0.018	0	0	0	0
NONPOINT	22	38.813	4.888	0	0	0	0
NONPOINT	23	0.013	0.006	0	0	0	0
NONPOINT	24	200	22.5	0	0	0	0
NONPOINT	25	0.185	0.081	0	0	0	0
NONPOINT	26	2.313	0.768	0	0	0	0
NONPOINT	27	157.5	20	0	0	0	0
NONPOINT	28	182.5	18.75	0	0	0	0
NONPOINT	29	122.5	35	0	0	0	0
NONPOINT	30	125	15	0	0	0	0
NONPOINT	31	0.206	0.089	0	0	0	0
NONPOINT	32	7.125	2.15	0	0	0	0
NONPOINT	33	175	18.75	0	0	0	0
NONPOINT	34	350	37.5	0	0	0	0
NONPOINT	35	406.25	50	0	0	0	0
NONPOINT	36	406.25	6.25	0	0	0	0
NONPOINT	37	0	0	0	0	0	0
NONPOINT	38	0.5	0.35	0	0	0	0
NONPOINT	39	0.088	0.039	0	0	0	0
NONPOINT	40	0.5	0.475	0	0	0	0
NONPOINT	41	0.011	0.005	0	0	0	0
NONPOINT	42	2.7	3	0	0	0	0
NONPOINT	43	0.099	0.043	0	0	0	0
NONPOINT	44	0.85	1	0	0	0	0
NONPOINT	45	10	0.875	0	0	0	0
NONPOINT	46	0.085	0.037	0	0	0	0
NONPOINT	47	4.65	1.55	0	0	0	0
NONPOINT	48	49.6	3.875	0	0	0	0
NONPOINT	49	0.034	0.015	0	0	0	0
NONPOINT	50	19.375	2.325	0	0	0	0
NONPOINT	51	0.163	0.072	0	0	0	0
NONPOINT	52	29.45	2.325	0	0	0	0
NONPOINT	53	0.492	0.215	0	0	0	0
NONPOINT	54	75.95	2.325	0	0	0	0
NONPOINT	55	58.125	2.325	0	0	0	0
NONPOINT	56	31	1.55	0	0	0	0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

NONPOINT	57	93	1.55	0	0	0	0
NONPOINT	58	0.023	0.01	0	0	0	0
NONPOINT	59	1.395	0.426	0	0	0	0
NONPOINT	60	170.5	27.125	0	0	0	0
NONPOINT	61	0.115	0.05	0	0	0	0
NONPOINT	62	1.783	0.574	0	0	0	0
NONPOINT	63	31	9.3	0	0	0	0
NONPOINT	64	0.057	0.026	0	0	0	0
NONPOINT	65	0.667	0.217	0	0	0	0
NONPOINT	66	170.5	27.9	0	0	0	0
NONPOINT	67	0	13.175	0	0	0	0
NONPOINT	68	0.057	0.026	0	0	0	0
NONPOINT	69	0.225	0.077	0	0	0	0
NONPOINT	70	19.375	10.075	0	0	0	0
NONPOINT	71	2.596	0.69	0	0	0	0
NONPOINT	72	38.75	9.3	0	0	0	0
NONPOINT	73	22.475	6.2	0	0	0	0
NONPOINT	74	116.25	0	0	0	0	0
NONPOINT	75	0.172	0.079	0	0	0	0
NONPOINT	76	0.488	0.207	0	0	0	0
NONPOINT	77	0.112	0.049	0	0	0	0
NONPOINT	78	0.325	0.114	0	0	0	0
NONPOINT	79	0.211	0.093	0	0	0	0
NONPOINT	80	0.069	0.041	0	0	0	0
NONPOINT	81	67.844	11.781	0	0	0	0
NONPOINT	82	30.063	3.25	0	0	0	0
NONPOINT	83	17.875	3.25	0	0	0	0
NONPOINT	84	2.438	0.731	0	0	0	0
NONPOINT	85	28.438	6.906	0	0	0	0
NONPOINT	86	3.738	1.081	0	0	0	0
NONPOINT	87	2.925	0.894	0	0	0	0
NONPOINT	88	121.875	28.438	0	0	0	0
NONPOINT	89	130	24.375	0	0	0	0
NONPOINT	90	121.875	0	0	0	0	0
NONPOINT	91	0	0	0	0	0	0

ENDATA19

! DATA TYPE 20 -- HEADWATER DATA FOR FLOW, TEMPERATURE, SAALINITY, AND CONSERVATIVES

! - - - -1- - - -2- - - -3- - - -4- - - -5- - - -6- - - -7- - - -8- - - -9- - - -0- - - -1

! 234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890

! **** ----- *** -----*****-----*****-----

!	E#	NAME	FLOW	TEMP	SALIN	CHLORIDE	COND
HDWTR-1	1	B VINCENT & BONFOUCA	0.00028333	8	0.26	520.9	7.23

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

HDWTR-1	67	BROWNS VILL RD (DD2)	0.00028333.8	0.26	520.9	7.23
HDWTR-1	102	DRAINAGE DITCH 8	0.00028333.8	0.26	520.9	7.23
HDWTR-1	119	DRAINAGE DITCH 9	0.00028333.8	0.26	520.9	7.23
HDWTR-1	159	UPPER B BONFOUCA	0.00283233.8	0.26	520.9	7.23
HDWTR-1	183	DRAINAGE DITCH 23	0.00028333.8	0.26	520.9	7.23
HDWTR-1	221	HIGHWAY 190(DD 5)	0.00028333.8	0.26	520.9	7.23
HDWTR-1	260	WEST DRAINAGE CANAL	0.00028333.8	0.26	520.9	7.23
HDWTR-1	284	DRAINAGE DITCH 6	0.00028333.8	0.26	520.9	7.23
HDWTR-1	295	TRIBUTARY 2	0.00028333.8	0.26	520.9	7.23
HDWTR-1	324	CANAL 26	0.00028333.8	0.26	520.9	7.23
HDWTR-1	346	TRIBUTARY 4	0.00028333.8	0.26	520.9	7.23
HDWTR-1	433	BAYOU LIBERTY	0.00283233.8	0.26	520.9	7.23
HDWTR-1	439	TRIBUTARY 1	0.00028333.8	0.26	520.9	7.23
HDWTR-1	470	DRAINAGE DITCH 22	0.00028333.8	0.26	520.9	7.23
HDWTR-1	482	DRAINAGE DITCH 20	0.00028333.8	0.26	520.9	7.23
HDWTR-1	536	HIGHWAY 190	0.00028333.8	0.26	520.9	7.23
HDWTR-1	576	DRAINAGE DITCH 18	0.00028333.8	0.26	520.9	7.23
HDWTR-1	585	DRAINAGE DITCH 19	0.00028333.8	0.26	520.9	7.23
HDWTR-1	601	DRAINAGE DITCH 4	0.00028333.8	0.26	520.9	7.23
HDWTR-1	667	TRIBUTARY 9	0.00028333.8	0.26	520.9	7.23
HDWTR-1	680	TRIBUTARY 6	0.00028333.8	0.26	520.9	7.23
HDWTR-1	698	TRIBUTARY 10	0.00028333.8	0.26	520.9	7.23
HDWTR-1	715	TRIBUTARY 8	0.00028333.8	0.26	520.9	7.23
HDWTR-1	727	MARINA 1	0.00028333.8	0.26	520.9	7.23
HDWTR-1	730	MARINA 2	0.00028333.8	0.26	520.9	7.23
HDWTR-1	762	HWY 190	0.00028333.8	0.26	520.9	7.23
HDWTR-1	797	DRAINAGE DITCH 16	0.00028333.8	0.26	520.9	7.23
HDWTR-1	819	DRAINAGE DITCH 17	0.00028333.8	0.26	520.9	7.23
HDWTR-1	861	TRIBUTARY 24	0.00028333.8	0.26	520.9	7.23
HDWTR-1	868	TRIBUTARY 25	0.00028333.8	0.26	520.9	7.23

ENDATA20

! DATA TYPE 21 -- HEADWATER DATA FOR DO, BOD, AND NITROGEN

! - - - -1- - - - -2- - - - -3- - - - -4- - - - -5- - - - -6- - - - -7- - - - -8- - - - -9- - - - -0- - - - -1

!234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890

! **** -----*****-----*****-----*****

!	E#	DO	BOD 1	NBOD	NH3 N	NIT NIT	BOD 2
HDWTR-2	1	6	0.63	0.29			
HDWTR-2	67	6	0.63	0.29			
HDWTR-2	102	6	0.63	0.29			
HDWTR-2	119	6	0.63	0.29			
HDWTR-2	159	6	0.63	0.29			
HDWTR-2	183	6	0.63	0.29			

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

HDWTR-2	221	6	0.63	0.29
HDWTR-2	260	6	0.63	0.29
HDWTR-2	284	6	2.75	1.25
HDWTR-2	295	6	2.75	1.25
HDWTR-2	324	6	2.75	1.25
HDWTR-2	346	6	2.75	1.25
HDWTR-2	433	6	0.55	0.25
HDWTR-2	439	6	0.55	0.25
HDWTR-2	470	6	0.55	0.25
HDWTR-2	482	6	0.55	0.25
HDWTR-2	536	6	0.55	0.25
HDWTR-2	576	6	1.71	0.78
HDWTR-2	585	6	1.71	0.78
HDWTR-2	601	6	1.71	0.78
HDWTR-2	667	6	1.71	0.78
HDWTR-2	680	6	1.71	0.78
HDWTR-2	698	6	1.71	0.78
HDWTR-2	715	6	1.71	0.78
HDWTR-2	727	6	1.71	0.78
HDWTR-2	730	6	1.71	0.78
HDWTR-2	762	6	1.79	0.81
HDWTR-2	797	6	1.79	0.81
HDWTR-2	819	6	1.79	0.81
HDWTR-2	861	6	1.79	0.81
HDWTR-2	868	6	1.79	0.81

ENDATA21

! DATA TYPE 22 -- HEADWATER DATA FOR PHOSPHORUS, CHLOROPHYLL, COLIFORM, AND NCM

! - - - -1- - - - -2- - - - -3- - - - -4- - - - -5- - - - -6- - - - -7- - - - -8- - - - -9- - - - -0- - - - -1

! 234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890

! **** -----*****-----*****

! E# PHOSPHOR CHL A COLIFORM NCM

HDWTR-3	1			0	0	0
HDWTR-3	67			0	0	0
HDWTR-3	102			0	0	0
HDWTR-3	119			0	0	0
HDWTR-3	159			0	0	0
HDWTR-3	183			0	0	0
HDWTR-3	221			0	0	0
HDWTR-3	260			0	0	0
HDWTR-3	284			0	0	0
HDWTR-3	295			0	0	0
HDWTR-3	324			0	0	0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

HDWTR-3	346	0	0	0
HDWTR-3	433	0	0	0
HDWTR-3	439	0	0	0
HDWTR-3	470	0	0	0
HDWTR-3	482	0	0	0
HDWTR-3	536	0	0	0
HDWTR-3	576	0	0	0
HDWTR-3	585	0	0	0
HDWTR-3	601	0	0	0
HDWTR-3	667	0	0	0
HDWTR-3	680	0	0	0
HDWTR-3	698	0	0	0
HDWTR-3	715	0	0	0
HDWTR-3	727	0	0	0
HDWTR-3	730	0	0	0
HDWTR-3	762	0	0	0
HDWTR-3	797	0	0	0
HDWTR-3	819	0	0	0
HDWTR-3	861	0	0	0
HDWTR-3	868	0	0	0

ENDATA22

! DATA TYPE 23 -- JUNCTION DATA

JUNCTION	88	66	DRAINAGE DITCH	2
JUNCTION	110	101	DRAINAGE DITCH	8
JUNCTION	140	118	DRAINAGE DITCH	9
JUNCTION	193	182	DRAINAGE DITCH	23
JUNCTION	219	158	UPPER BAYOU BONFOUCA	
JUNCTION	239	220	HIGHWAY 190 (DRAINAGE DITCH	5)
JUNCTION	263	259	WEST DRAINAGE CANAL	
JUNCTION	287	283	DRAINAGE DITCH	6
JUNCTION	310	294	TRIBUTARY	2
JUNCTION	344	323	CANAL	26
JUNCTION	365	345	TRIBUTARY	4
JUNCTION	463	438	TRIBUTARY	1
JUNCTION	473	469	DRAINAGE DITCH	22
JUNCTION	509	481	DRAINAGE DITCH	20
JUNCTION	559	535	HIGHWAY 190 (DRAINAGE DITCH	14)
JUNCTION	579	575	DRAINAGE DITCH	18
JUNCTION	599	584	DRAINAGE DITCH	19
JUNCTION	643	600	DRAINAGE DITCH	4
JUNCTION	672	666	TRIBUTARY	9
JUNCTION	696	679	TRIBUTARY	6

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

JUNCTION 705 697 TRIBUTARY 10
 JUNCTION 721 714 TRIBUTARY 8
 JUNCTION 729 726 MARINA 1
 JUNCTION 748 729 MARINA 2
 JUNCTION 806 796 DRAINAGE DITCH 16
 JUNCTION 836 818 DRAINAGE DITCH 17
 JUNCTION 865 860 CHANNEL 1
 JUNCTION 878 867 CHANNEL 2
 JUNCTION 888 761 BAYOU PAQUET
 JUNCTION 899 432 BAYOU LIBERTY

ENDATA23

! DATA TYPE 24

! - - - -1- - - - -2- - - - -3- - - - -4- - - - -5- - - - -6- - - - -7- - - - -8- - - - -9- - - - -0- - - - -1

! 234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890

! **** -----*****-----*****-----*****

!	E#	NAME	FLOW	TEMP	SALINITY	CHLORIDE	COND
WSTLD-1	1	V H SEAL APARTMENTS	0.000041030		0.39	753.6	63.3
WSTLD-1	40	GROUNDWATER	0.0055	33.8	0.26	520.9	7.23
WSTLD-1	48	EAGLE LAKE MHP	0.003450230		0.4	774	34.4
WSTLD-1	63	J&K MANAGEMENT LLC	0.000009830		0.39	753.6	63.3
WSTLD-1	67	STONES THROW APTS	0.001051530		0.39	753.6	63.3
WSTLD-1	73	GOOD VALUE AUTO SALE	0.000003230		0.39	753.6	63.3
WSTLD-1	74	ADAMS MHP	0.000115030		0.39	753.6	63.3
WSTLD-1	79	WADLEIGH OFFSHORE	0.000043830		0.39	753.6	63.3
WSTLD-1	80	EXXONMOBIL #51367	0.000136930		0.39	753.6	63.3
WSTLD-1	81	LCR-M PLUMBING SUPP	0.000006530		0.39	753.6	63.3
WSTLD-1	83	BAKER-ELLIS-SHAMROCK	0.000023030		0.39	753.6	63.3
WSTLD-1	84	NORTHSHORE CHEMICAL	0.000003030		0.39	753.6	63.3
WSTLD-1	85	MANHEIM AUTO AUCTION	0	30	0.39	753.6	63.3
WSTLD-1	87	WADLEIGH FITNESS	0.000016430		0.39	753.6	63.3
WSTLD-1	102	JUBILEE #4815	0.000093130		0.39	753.6	63.3
WSTLD-1	107	JOHNSON-BLDG 2	0.000076630		0.39	753.6	63.3
WSTLD-1	119	CHARTER-JOHN'S AUTO	0.000009530		0.39	753.6	63.3
WSTLD-1	125	I-12 SHELL	0.000008730		0.39	753.6	63.3
WSTLD-1	135	ST TAM PAR SCH MAINT	0.000005430		0.39	753.6	63.3
WSTLD-1	136	J&D-VETS HEALTH/OMNI	0.000041630		0.39	753.6	63.3
WSTLD-1	183	GOOD SHEPHERD CHURCH	0.000060230		0.39	753.6	63.3
WSTLD-1	221	JOLLY APARTMENTS	0.000312130		0.39	753.6	63.3
WSTLD-1	222	PINEY RIDGE MHP	0.000509330		0.39	753.6	63.3
WSTLD-1	223	STARLING PLAZA	0.000156630		0.39	753.6	63.3
WSTLD-1	224	PO FOLKS SEAFOOD	0.000026830		0.39	753.6	63.3
WSTLD-1	227	SOUTH SEAS RSTRNT	0.000106730		0.39	753.6	63.3

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

WSTLD-1	228	SHADY PINES MHP	0.000575030	0.39	753.6	63.3
WSTLD-1	230	1421HWY190-ARMACOAT	0.000035030	0.39	753.6	63.3
WSTLD-1	231	FACDIR-STTAMBRACKETAG0	0.000004330	0.39	753.6	63.3
WSTLD-1	232	NEW LIFE MINISTRIES	0.000026830	0.39	753.6	63.3
WSTLD-1	233	PEACE LUTH CHURCH	0.000129730	0.39	753.6	63.3
WSTLD-1	234	ERNEST WALDER	0.000019730	0.39	753.6	63.3
WSTLD-1	235	STOR N LOCK-TYMELESS0	0.000007630	0.39	753.6	63.3
WSTLD-1	260	BONFOUCA SUPFND SITE0	0.000630930	0.22	437.3	23.5
WSTLD-1	281	DOTD BNFCA BRIDGE	0.000001030	0.39	753.6	63.3
WSTLD-1	282	SLIDELL MARINE	0.000202630	0.39	753.6	63.3
WSTLD-1	284	ARC MECH CONTRACTORS0	0.000005430	0.39	753.6	200
WSTLD-1	289	PEARL RIVER NAV	0.000191630	0.39	753.6	63.3
WSTLD-1	295	STP CONST BUILDING	0.000043830	0.39	753.6	63.3
WSTLD-1	346	ACADIAN GRDNS CONDOS0	0.000410730	0.39	753.6	63.3
WSTLD-1	351	OAKWOOD ESTATES	0.000679030	0.39	753.6	63.3
WSTLD-1	389	COIN DU LESTIN SUB	0.004381230	0.32	628.1	54.3
WSTLD-1	439	NORTHSHORE SQUADRON	0.000001330	0.39	753.6	63.3
WSTLD-1	442	ANDY KNIGHT	0.000002130	0.39	753.6	63.3
WSTLD-1	470	THE MEADOWS SUB	0.015115330	0.55	1053	150
WSTLD-1	482	ROYAL GOLF CLUB	0.000237630	0.39	753.6	63.3
WSTLD-1	494	NATFINANCE-TEXTRON	0.000219030	0.39	753.6	63.3
WSTLD-1	495	GUARDIAN ANGELS	0.000050930	0.39	753.6	63.3
WSTLD-1	498	OAKMONT SUBDIVISIO	0.003866430	0.32	619.5	47
WSTLD-1	536	ASSUNTA'S RESTAURANT0	0.000158830	0.39	753.6	63.3
WSTLD-1	544	INDIAN HILLS RV PARK0	0.000431230	0.39	753.6	63.3
WSTLD-1	546	J&J AUTO BROKERS	0.000002130	0.39	753.6	63.3
WSTLD-1	548	7THDAY & DOLLAR GEN	0.000075030	0.39	753.6	63.3
WSTLD-1	550	OMNI STORAGE VI	0.000016430	0.39	753.6	63.3
WSTLD-1	551	ABC SUPPLY CO	0.000007630	0.39	753.6	63.3
WSTLD-1	552	LION CONSULTING	0.000002130	0.39	753.6	63.3
WSTLD-1	553	CHILL RITE	0.000012030	0.39	753.6	63.3
WSTLD-1	555	HERRON-2315/17/19	0.000031230	0.39	753.6	63.3
WSTLD-1	556	THOMGROC-ST POL JURY0	0.000005430	0.39	753.6	63.3
WSTLD-1	557	PITSTOP3-REFLECTMIR	0.000076630	0.39	753.6	63.3
WSTLD-1	576	ALL AM ELKS LODGE	0.000087630	0.39	753.6	63.3
WSTLD-1	585	LAKE CASTLE SCHOOL	0.000476430	0.39	753.6	63.3
WSTLD-1	601	BLUEBELL-NULITE	0.000047030	0.39	753.6	63.3
WSTLD-1	602	ALBERS AC & HEATING	0.000006530	0.39	753.6	63.3
WSTLD-1	611	BAKER SALES WRHSE	0.000002130	0.39	753.6	63.3
WSTLD-1	614	CLECO SERVICE CENTER0	0.000010930	0.39	753.6	63.3
WSTLD-1	615	G&S-UNITED MEDICAL	0.000019730	0.39	753.6	63.3
WSTLD-1	616	AIRGAS-HANNA-SUNBELT0	0.000865230	0.39	753.6	63.3

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

WSTLD-1	617	AVC ELECTRIC	0.000001030	0.39	753.6	63.3
WSTLD-1	619	M&R-WAGNERSHOPCTR	0.000109030	0.39	753.6	63.3
WSTLD-1	620	CALWES CENTER	0.000227030	0.39	753.6	63.3
WSTLD-1	621	BEAU'S-LA LUMBER	0.000029530	0.39	753.6	63.3
WSTLD-1	625	ADVANCE AUTO	0.000005430	0.39	753.6	63.3
WSTLD-1	633	HUNTWYCK VILLAGE	0.015224830	0.3	582.3	52.5
WSTLD-1	667	B LIBERTY WATER ASSN	0.000009830	0.39	753.6	63.3
WSTLD-1	680	THOMPSON RD BAPTIST	0.000043830	0.39	753.6	63.3
WSTLD-1	698	LIBERTY FOOD STORE	0.000031230	0.39	753.6	63.3
WSTLD-1	715	A-1 REMODELING & BLD	0.000010930	0.39	753.6	63.3
WSTLD-1	723	ST GENEVIEVE CATH CH	0.000164230	0.39	753.6	63.3
WSTLD-1	728	BAYOU LIBERTY MARINA	0.000001030	0.39	753.6	63.3
WSTLD-1	746	A BONFOUCA MARINA	0.000047030	0.39	753.6	63.3
WSTLD-1	762	WASTE MGMT OF LA	0.000027330	0.39	753.6	63.3
WSTLD-1	763	ACALIGN-ALLAM-CT-M&D	0.000009830	0.39	753.6	63.3
WSTLD-1	767	K-BAR-B YOUTH RANCH	0.000125930	0.39	753.6	63.3
WSTLD-1	776	BAYOU PAQUET HEADWAT	0.002832 33.8	0.26	520.9	7.23
WSTLD-1	797	ACTS 1 TAX SERVICE	0.000003230	0.39	753.6	63.3
WSTLD-1	819	TIMBER RIDGE SUB	0.002431630	0.45	864.7	41.6

ENDATA24

! DATA TYPE 25

! - - - -1- - - - -2- - - - -3- - - - -4- - - - -5- - - - -6- - - - -7- - - - -8- - - - -9- - - - -0- - - - -1

! 234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890

! *****

!	E#	DO	BOD 1	NBOD	NH3 N	NIT NIT	BOD 2
WSTLD-2	1	2	23	0	21.5		
WSTLD-2	40	6	2.7	0	1.19		
WSTLD-2	48	5	11.5	0	8.6		
WSTLD-2	63	2	23	0	21.5		
WSTLD-2	67	2	23	0	8.6		
WSTLD-2	73	2	23	0	21.5		
WSTLD-2	74	2	23	0	21.5		
WSTLD-2	79	2	23	0	21.5		
WSTLD-2	80	2	23	0	21.5		
WSTLD-2	81	2	23	0	21.5		
WSTLD-2	83	2	23	0	21.5		
WSTLD-2	84	2	23	0	21.5		
WSTLD-2	85	2	23	0	21.5		
WSTLD-2	87	2	23	0	21.5		
WSTLD-2	102	2	23	0	21.5		
WSTLD-2	107	2	23	0	21.5		
WSTLD-2	119	2	23	0	21.5		

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

WSTLD-2	125	2	23	0	21.5
WSTLD-2	135	2	23	0	21.5
WSTLD-2	136	2	23	0	21.5
WSTLD-2	183	2	23	0	21.5
WSTLD-2	221	2	23	0	8.6
WSTLD-2	222	2	23	0	8.6
WSTLD-2	223	2	23	0	21.5
WSTLD-2	224	2	23	0	21.5
WSTLD-2	227	2	23	0	21.5
WSTLD-2	228	2	23	0	8.6
WSTLD-2	230	2	23	0	21.5
WSTLD-2	231	2	23	0	21.5
WSTLD-2	232	2	23	0	21.5
WSTLD-2	233	2	23	0	21.5
WSTLD-2	234	2	23	0	21.5
WSTLD-2	235	2	23	0	21.5
WSTLD-2	260	2	1.33	0	1.74
WSTLD-2	281	2	46	0	43
WSTLD-2	282	2	46	0	43
WSTLD-2	284	2	69	0	64.5
WSTLD-2	289	2	69	0	64.5
WSTLD-2	295	2	69	0	64.5
WSTLD-2	346	2	69	0	64.5
WSTLD-2	351	2	23	0	43.0
WSTLD-2	389	2	23	0	43.0
WSTLD-2	439	2	23	0	21.5
WSTLD-2	442	2	23	0	21.5
WSTLD-2	470	2	11.5	0	8.6
WSTLD-2	482	2	23	0	21.5
WSTLD-2	494	2	23	0	21.5
WSTLD-2	495	2	23	0	21.5
WSTLD-2	498	2	11.5	0	8.6
WSTLD-2	536	2	23	0	43
WSTLD-2	544	2	23	0	21.5
WSTLD-2	546	2	23	0	43
WSTLD-2	548	2	23	0	43
WSTLD-2	550	2	23	0	43
WSTLD-2	551	2	23	0	43
WSTLD-2	552	2	23	0	43
WSTLD-2	553	2	23	0	43
WSTLD-2	555	2	23	0	43
WSTLD-2	556	2	23	0	43

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

WSTLD-2	557	2	23	0	43
WSTLD-2	576	2	23	0	43
WSTLD-2	585	2	23	0	21.5
WSTLD-2	601	2	23	0	43
WSTLD-2	602	2	23	0	43
WSTLD-2	611	2	23	0	43
WSTLD-2	614	2	23	0	43
WSTLD-2	615	2	23	0	43
WSTLD-2	616	2	23	0	25.3
WSTLD-2	617	2	23	0	43
WSTLD-2	619	2	23	0	43
WSTLD-2	620	2	23	0	43
WSTLD-2	621	2	23	0	43
WSTLD-2	625	2	23	0	43
WSTLD-2	633	2	23	0	8.6
WSTLD-2	667	2	23	0	43
WSTLD-2	680	2	23	0	43
WSTLD-2	698	2	23	0	43
WSTLD-2	715	2	23	0	43
WSTLD-2	723	2	23	0	43
WSTLD-2	728	2	23	0	43
WSTLD-2	746	2	23	0	43
WSTLD-2	762	2	23	0	43
WSTLD-2	763	2	23	0	43
WSTLD-2	767	2	23	0	43
WSTLD-2	776	6	1.76	0	0.77
WSTLD-2	797	2	23	0	43
WSTLD-2	819	2	23	0	8.6

ENDATA25

! DATA TYPE 26 -- WASTELOAD DATA FOR PHOSPHORUS, CHLOROPHYLL, COLIFORM, AND NCM

! - - - -1- - - - -2- - - - -3- - - - -4- - - - -5- - - - -6- - - - -7- - - - -8- - - - -9- - - - -0- - - - -1

! 234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890

! **** -----*****-----*****

! E# PHOSPHOR CHL A COLIFORM NONCONSERVATIVE

WSTLD-3	1
WSTLD-3	40
WSTLD-3	48
WSTLD-3	63
WSTLD-3	67
WSTLD-3	73
WSTLD-3	74
WSTLD-3	79

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

WSTLD-3 80
WSTLD-3 81
WSTLD-3 83
WSTLD-3 84
WSTLD-3 85
WSTLD-3 87
WSTLD-3 102
WSTLD-3 107
WSTLD-3 119
WSTLD-3 125
WSTLD-3 135
WSTLD-3 136
WSTLD-3 183
WSTLD-3 221
WSTLD-3 222
WSTLD-3 223
WSTLD-3 224
WSTLD-3 227
WSTLD-3 228
WSTLD-3 230
WSTLD-3 231
WSTLD-3 232
WSTLD-3 233
WSTLD-3 234
WSTLD-3 235
WSTLD-3 260
WSTLD-3 281
WSTLD-3 282
WSTLD-3 284
WSTLD-3 289
WSTLD-3 295
WSTLD-3 346
WSTLD-3 351
WSTLD-3 389
WSTLD-3 439
WSTLD-3 442
WSTLD-3 470
WSTLD-3 482
WSTLD-3 494
WSTLD-3 495
WSTLD-3 498
WSTLD-3 536

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

WSTLD-3 544
WSTLD-3 546
WSTLD-3 548
WSTLD-3 550
WSTLD-3 551
WSTLD-3 552
WSTLD-3 553
WSTLD-3 555
WSTLD-3 556
WSTLD-3 557
WSTLD-3 576
WSTLD-3 585
WSTLD-3 601
WSTLD-3 602
WSTLD-3 611
WSTLD-3 614
WSTLD-3 615
WSTLD-3 616
WSTLD-3 617
WSTLD-3 619
WSTLD-3 620
WSTLD-3 621
WSTLD-3 625
WSTLD-3 633
WSTLD-3 667
WSTLD-3 680
WSTLD-3 698
WSTLD-3 715
WSTLD-3 723
WSTLD-3 728
WSTLD-3 746
WSTLD-3 762
WSTLD-3 763
WSTLD-3 767
WSTLD-3 776
WSTLD-3 797
WSTLD-3 819
ENDATA26

! DATA TYPE 27 -- Lower Boundary Conditions

LOWER BC TEMPERATURE = 29.98
LOWER BC SALINITY = 3.94
LOWER BC CONSERVATIVE MATERIAL I = 7096

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

LOWER BC CONSERVATIVE MATERIAL II = 2200
LOWER BC DISSOLVED OXYGEN = 6.8
LOWER BC BOD1 BIOCHEMICAL OXYGEN DEMAND = 7.82
LOWER BC BOD2 BIOCHEMICAL OXYGEN DEMAND = 0
LOWER BC PHYTOPLANKTON = 5.55
LOWER BC COLIFORM = 0
LOWER BC NONCONSERVATIVE MATERIAL = 0
LOWER BC NBOD = 1.8

ENDATA27

! DATA TYPE 28 -- Dam Data

! - - - -1- - - - -2- - - - -3- - - - -4- - - - -5- - - - -6- - - - -7- - - - -8- - - - -9- - - - -0- - - - -1
!234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
! *****

ENDATA28

! DATA TYPE 29 -- SENSITIVITY ANALYSIS DATA

SENSITIV BASEFLOW 30 -30

ENDATA29

! DATA TYPE 30 -- Plot Control Data

! - - - -1- - - - -2- - - - -3- - - - -4- - - - -5- - - - -6- - - - -7- - - - -8- - - - -9- - - - -0- - - - -1
!234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
! ** ** ** **

PLOT1 BAYOU VINCENT-BONFOUCA

RCH 1 2 3 4 6 8 10 11 12 17 19 20 22 24 27 28 30 33 34 35 36 37 91

PLOT2 UPPER BAYOU BONFOUCA

RCH 13 15 16

PLOT3 BAYOU LIBERTY

RCH 38 40 42 44 45 47 48 50 52 54 55 56 57 60 63 66 67 70 72 74 90

PLOT4 BAYOU PAQUET & HEADWATERS

RCH 75 76 78 80 81 82 83 85 88 89

ENDATA30

!

! DATA TYPE 31 -- Overlay Plot Data

! - - - -1- - - - -2- - - - -3- - - - -4- - - - -5- - - - -6- - - - -7- - - - -8- - - - -9- - - - -0- - - - -1
!234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890

OVERLAY1 VINCENT-BONFOUCA.OVL

OVERLAY2 UPPER_BONFOUCA.OVL

OVERLAY3 LIBERTY.OVL

OVERLAY4 PAQUET.OVL

ENDATA31

BAYOU BONFOUCA AND BAYOU LIBERTY SUMMER PROJECTION OUTPUT DATA SET

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

LA-QUAL Version 9.09

Louisiana Department of Environmental Quality

Input file is \\Deqshares\owreng\Waterbody\Lake Pontchartrain-04\Bayou Bonfouca and Bayou Liberty\Input Files\Projection\NoRedBayou_Bonfouca_sum5and4DO.in

Running in steady-state mode using LA defaults

Output produced at 07:22 on 08/18/2011

\$\$\$ DATA TYPE 1 (TITLES AND CONTROL CARDS) \$\$\$

CARD TYPE	CONTROL	TITLES
TITLE01		WATER QUALITY/HYDRAULIC MODEL FOR:
TITLE02		BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET
CONTROL	YES	METRIC UNITS
CONTROL	YES	USE EFFECTIVE CONCENTRATION
ENDATA01		

\$\$\$ DATA TYPE 2 (MODEL OPTIONS) \$\$\$

CARD TYPE	MODEL OPTION
MODEPT01	NO TEMPERATURE
MODEPT02	YES SALINITY
MODEPT03	YES CONSERVATIVE MATERIAL I = CONDUCTIVITY IN COND
MODEPT04	YES CONSERVATIVE MATERIAL II = CHLORIDES IN CL
MODEPT05	YES DISSOLVED OXYGEN
MODEPT06	YES BOD1 BIOCHEMICAL OXYGEN DEMAND
MODEPT07	NO BOD2 BIOCHEMICAL OXYGEN DEMAND
MODEPT08	YES NBOD
MODEPT09	NO PHOSPHORUS SERIES
MODEPT10	NO PHYTOPLANKTON
MODEPT11	NO PERIPHYTON
MODEPT12	NO COLIFORM
MODEPT13	NO NONCONSERVATIVE MATERIAL
ENDATA02	

\$\$\$ DATA TYPE 3 (PROGRAM CONSTANTS) \$\$\$

CARD TYPE	DESCRIPTION OF CONSTANT	VALUE
PROGRAM	K2 MAXIMUM =	25.00000 per day
PROGRAM	DISPERSION EQUATION =	3.00000 (values entered as a function of D,Q,Vmean)
PROGRAM	TIDE HEIGHT =	0.10000 meters
PROGRAM	TIDAL PERIOD =	19.75000 hours
PROGRAM	PERIOD OF TIDAL RISE =	10.50000 hours
PROGRAM	S OXYGEN DEPENDENCE THRESHOLD =	1.00000 mg/L
PROGRAM	SOD MAXIMUM RATE =	50.00000 gm/sq m/day
PROGRAM	PHYTOPLANKTON OXYGEN PROD =	0.05000 mg O/ug chl a/day
PROGRAM	PERIPHYTON OXYGEN PROD =	0.00000 mg O/mg periphyton/day
ENDATA03		

\$\$\$ DATA TYPE 4 (TEMPERATURE CORRECTION CONSTANTS FOR RATE COEFFICIENTS) \$\$\$

CARD TYPE	RATE CODE	THETA VALUE
ENDATA04		

\$\$\$ CONSTANTS TYPE 5 (TEMPERATURE DATA) \$\$\$

CARD TYPE	DESCRIPTION OF CONSTANT	VALUE
ENDATA05		

\$\$\$ DATA TYPE 6 (PHYTOPLANKTON CONSTANTS) \$\$\$

CARD TYPE	DESCRIPTION OF CONSTANT	VALUE
ENDATA06		

\$\$\$ DATA TYPE 7 (PERIPHYTON CONSTANTS) \$\$\$

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

CARD TYPE	DESCRIPTION OF CONSTANT		VALUE							
CARD TYPE	REACH	ID	NAME	BEGIN REACH km	END REACH km	ELEM LENGTH km	REACH LENGTH km	ELEMS PER RCH	BEGIN ELEM NUM	END ELEM NUM
REACH ID	1	DD	DRAINAGE DITCH 1	24.20	20.30	0.1000	3.90	39	1	39
REACH ID	2	BV	VINCENT FROM RKM 20.0 TO BV01	20.30	19.50	0.1000	0.80	8	40	47
REACH ID	3	BV	VINCENT FROM BV01 RKM 18.5	19.50	18.50	0.1000	1.00	10	48	57
REACH ID	4	BV	VINCENT FROM RKM 18.5 TO BV02	18.50	17.60	0.1000	0.90	9	58	66
REACH ID	5	DD	DRAINAGE DITCH 2	2.10	0.00	0.1000	2.10	21	67	87
REACH ID	6	BV	VINCENT FROM BV02 TO DD 8	17.60	16.90	0.0500	0.70	14	88	101
REACH ID	7	DD	DRAINAGE DITCH 8	0.80	0.00	0.1000	0.80	8	102	109
REACH ID	8	BV	VINCENT FROM DD 8 TO DD 9	16.90	16.00	0.1000	0.90	9	110	118
REACH ID	9	DD	DRAINAGE DITCH 9	2.10	0.00	0.1000	2.10	21	119	139
REACH ID	10	BV	VINCENT FROM DD 9 TO RKM 15.2	16.00	15.20	0.1000	0.80	8	140	147
REACH ID	11	BV	VINCENT FROM RKM 15.2 TO BV03	15.20	14.90	0.0500	0.30	6	148	153
REACH ID	12	BV	VINCENT FROM BV03 TO BONFOUCA	14.90	14.40	0.1000	0.50	5	154	158
REACH ID	13	UB	UB FROM RKM 5.0 TO DD 23	5.00	2.60	0.1000	2.40	24	159	182
REACH ID	14	DD	DRAINAGE DITCH 23	1.00	0.00	0.1000	1.00	10	183	192
REACH ID	15	UB	UB FROM DD 23 TO BB01	2.60	1.10	0.1000	1.50	15	193	207
REACH ID	16	UB	UB FROM BB01 TO BAYOU VINCENT	1.10	0.00	0.1000	1.10	11	208	218
REACH ID	17	BB	BONFOUCA FROM BV TO HWY 190	14.40	14.20	0.1000	0.20	2	219	220
REACH ID	18	DD	HWY 190 (DRAINAGE DITCH 5)	1.80	0.00	0.1000	1.80	18	221	238
REACH ID	19	BB	BONFOUCA FROM HWY 190 TO BB02	14.20	13.30	0.1000	0.90	9	239	247
REACH ID	20	BB	BONFOUCA FROM BB02 TO WD	13.30	12.10	0.1000	1.20	12	248	259
REACH ID	21	WD	WEST DRAINAGE CANAL	0.30	0.00	0.1000	0.30	3	260	262
REACH ID	22	BB	BONFOUCA FROM WD TO DD6	12.10	10.00	0.1000	2.10	21	263	283
REACH ID	23	DD	DRAINAGE DITCH 6	0.30	0.00	0.1000	0.30	3	284	286
REACH ID	24	BB	BONFOUCA FROM DD 6 TO TRIB 2	10.00	9.20	0.1000	0.80	8	287	294
REACH ID	25	DD	DRAINAGE DITCH 7 - UPLAND	1.50	0.50	0.1000	1.00	10	295	304
REACH ID	26	TR	TRIBUTARY 2 - TIDAL	0.50	0.00	0.1000	0.50	5	305	309
REACH ID	27	BB	BONFOUCA FROM TRIB 2 TO BB03	9.20	8.60	0.1000	0.60	6	310	315
REACH ID	28	BB	BONFOUCA FROM BB03 TO CANAL 26	8.60	7.80	0.1000	0.80	8	316	323
REACH ID	29	C	CANAL 26	2.00	0.00	0.1000	2.00	20	324	343
REACH ID	30	BB	BONFOUCA FROM CANAL 26 TO TRIB 4	7.80	7.60	0.1000	0.20	2	344	345
REACH ID	31	TR	TRIBUTARY 10 - UPLAND	1.90	0.80	0.1000	1.10	11	346	356
REACH ID	32	TR	TRIBUTARY 4 - TIDAL	0.80	0.00	0.1000	0.80	8	357	364
REACH ID	33	BB	BONFOUCA FROM TRIB 4 TO BB04	7.60	6.80	0.1000	0.80	8	365	372
REACH ID	34	BB	BONFOUCA FROM BB04 TO RKM 5.6	6.80	5.60	0.1000	1.20	12	373	384
REACH ID	35	BB	BONFOUCA FROM RKM 5.6 TO BB05	5.60	4.50	0.1000	1.10	11	385	395
REACH ID	36	BB	BONFOUCA FROM BB05 TO RKM 2.7	4.50	2.70	0.1000	1.80	18	396	413
REACH ID	37	BB	BONFOUCA FROM RKM 2.7 TO LIBERTY	2.70	0.80	0.1000	1.90	19	414	432
REACH ID	38	BL	LIBERTY FROM RKM 15.0 TO TRIB 1	15.00	14.40	0.1000	0.60	6	433	438
REACH ID	39	TR	TRIBUTARY 1	2.40	0.00	0.1000	2.40	24	439	462
REACH ID	40	BL	LIBERTY FROM RKM 14.4 TO DD22	14.40	13.70	0.1000	0.70	7	463	469
REACH ID	41	DD	DD22	0.30	0.00	0.1000	0.30	3	470	472
REACH ID	42	BL	LIBERTY FROM DD22 TO DD20	13.70	12.80	0.1000	0.90	9	473	481
REACH ID	43	DD	DD20	2.70	0.00	0.1000	2.70	27	482	508
REACH ID	44	BL	LIBERTY FROM DD20 TO BL03	12.80	12.60	0.1000	0.20	2	509	510
REACH ID	45	BL	LIBERTY FROM BL03 TO HWY 190	12.60	10.10	0.1000	2.50	25	511	535
REACH ID	46	DD	HWY 190 (DRAINAGE DITCH 14)	2.30	0.00	0.1000	2.30	23	536	558
REACH ID	47	BL	LIBERTY FROM HWY 190 TO BL04	10.10	10.00	0.1000	0.10	1	559	559
REACH ID	48	BL	LIBERTY FROM BL04 TO DD18	10.00	8.40	0.1000	1.60	16	560	575
REACH ID	49	DD	DD18	0.30	0.00	0.1000	0.30	3	576	578
REACH ID	50	BL	LIBERTY FROM DD18 TO DD19	8.40	7.80	0.1000	0.60	6	579	584
REACH ID	51	DD	DD19	1.40	0.00	0.1000	1.40	14	585	598
REACH ID	52	BL	LIBERTY FROM DD19 TO DD04	7.80	7.60	0.1000	0.20	2	599	600
REACH ID	53	DD	DD04	4.20	0.00	0.1000	4.20	42	601	642
REACH ID	54	BL	LIBERTY FROM DD04 TO BL05	7.60	6.90	0.1000	0.70	7	643	649
REACH ID	55	BL	LIBERTY FROM BL05 TO RKM 6.3	6.90	6.30	0.1000	0.60	6	650	655
REACH ID	56	BL	LIBERTY FROM RKM 6.3 TO RKM 6.0	6.30	6.00	0.1000	0.30	3	656	658
REACH ID	57	BL	LIBERTY FROM RKM 6.0 TO TRIB 9	6.00	5.20	0.1000	0.80	8	659	666
REACH ID	58	DD	DRAINAGE DITCH 3 - UPLAND	0.50	0.30	0.1000	0.20	2	667	668
REACH ID	59	TR	TRIBUTARY 9 - TIDAL	0.30	0.00	0.1000	0.30	3	669	671
REACH ID	60	BL	LIBERTY FROM TRIB 9 TO TRIB 6	5.20	4.40	0.1000	0.80	8	672	679

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

REACH ID	DD	DRAINAGE DITCH 11 - UPLAND	1.60	TO	0.60	0.1000	1.00	10	680	689
REACH ID 62	TR	TRIBUTARY 6 - TIDAL	0.60	TO	0.00	0.1000	0.60	6	690	695
REACH ID 63	BL	LIBERTY FROM TRIB 6 TO TRIB 10	4.40	TO	4.20	0.1000	0.20	2	696	697
REACH ID 64	TR	TRIBUTARY 10 - UPLAND	0.70	TO	0.20	0.1000	0.50	5	698	702
REACH ID 65	TR	TRIBUTARY 10 - TIDAL	0.20	TO	0.00	0.1000	0.20	2	703	704
REACH ID 66	BL	LIBERTY FROM TRIB 10 TO BL07	4.20	TO	3.30	0.1000	0.90	9	705	713
REACH ID 67	BL	LIBERTY FROM BL07 TO TRIB 8	3.30	TO	3.20	0.1000	0.10	1	714	714
REACH ID 68	TR	TRIBUTARY 8 - UPLAND	0.60	TO	0.10	0.1000	0.50	5	715	719
REACH ID 69	TR	TRIBUTARY 8 - TIDAL	0.10	TO	0.00	0.1000	0.10	1	720	720
REACH ID 70	BL	LIBERTY FROM TRIB 8 TO M1	3.20	TO	2.60	0.1000	0.60	6	721	726
REACH ID 71	M	MARINA 1 - TIDAL	0.20	TO	0.00	0.1000	0.20	2	727	728
REACH ID 72	BL	LIBERTY FROM M1 TO M2	2.60	TO	2.50	0.1000	0.10	1	729	729
REACH ID 73	M	MARINA02 - TIDAL	1.80	TO	0.00	0.1000	1.80	18	730	747
REACH ID 74	BL	LIBERTY FROM M2 TO B PAQUET	2.50	TO	1.10	0.1000	1.40	14	748	761
REACH ID 75	DD	HWY 190 (DDL3-PAQUET HEADWATERS)	8.60	TO	7.20	0.1000	1.40	14	762	775
REACH ID 76	BP	PAQUET FROM HWY 190 TO DD16	7.20	TO	5.10	0.1000	2.10	21	776	796
REACH ID 77	DD	DD16	0.90	TO	0.00	0.1000	0.90	9	797	805
REACH ID 78	BP	PAQUET FROM RKM 5.1 TO DD17	5.10	TO	3.80	0.1000	1.30	13	806	818
REACH ID 79	DD	DD17	1.70	TO	0.00	0.1000	1.70	17	819	835
REACH ID 80	BP	PAQUET FROM DD17 TO TIDAL REACH	3.80	TO	3.40	0.1000	0.40	4	836	839
REACH ID 81	BP	PAQUET TIDAL REACH TO BP02	3.40	TO	2.40	0.1000	1.00	10	840	849
REACH ID 82	BP	PAQUET FROM BP02 TO BP03	2.40	TO	1.60	0.1000	0.80	8	850	857
REACH ID 83	BP	PAQUET FROM BP03 TO TRIB 24	1.60	TO	1.30	0.1000	0.30	3	858	860
REACH ID 84	C	TRIB 24 FROM TOP TO PAQUET	0.40	TO	0.00	0.1000	0.40	4	861	864
REACH ID 85	BP	PAQUET FROM TRIB 24 TO TRIB 25	1.30	TO	1.00	0.1000	0.30	3	865	867
REACH ID 86	C	TRIB 25 FROM TOP TO RKM 0.3	1.00	TO	0.30	0.1000	0.70	7	868	874
REACH ID 87	C	TRIB 25 FROM RKM 0.3 TO PAQUET	0.30	TO	0.00	0.1000	0.30	3	875	877
REACH ID 88	BP	PAQUET FROM TRIB 25 TO BP04	1.00	TO	0.20	0.1000	0.80	8	878	885
REACH ID 89	BP	PAQUET FROM BP04 TO LIBERTY	0.20	TO	0.00	0.1000	0.20	2	886	887
REACH ID 90	BL	LIBERTY FROM PAQUET TO BONFOUCA	1.10	TO	0.00	0.1000	1.10	11	888	898
REACH ID 91	BB	BONFOUCA FROM LIBERTY TO BB06	0.80	TO	0.00	0.1000	0.80	8	899	906

\$\$\$ DATA TYPE 9 (ADVECTIVE HYDRAULIC COEFFICIENTS) \$\$\$

CARD TYPE	REACH	ID	WIDTH "A"	WIDTH "B"	WIDTH "C"	DEPTH "D"	DEPTH "E"	DEPTH "F"	SLOPE	MANNINGS "N"
HYDR-1	1	DD	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	2	BV	4.765	0.300	0.000	0.326	0.360	0.000	0.00001	0.030
HYDR-1	3	BV	4.765	0.300	0.000	0.326	0.360	0.000	0.00001	0.030
HYDR-1	4	BV	4.765	0.300	0.000	0.326	0.360	0.000	0.00001	0.030
HYDR-1	5	DD	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	6	BV	4.765	0.300	0.000	0.326	0.360	0.000	0.00001	0.030
HYDR-1	7	DD	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	8	BV	4.765	0.300	0.000	0.326	0.360	0.000	0.00001	0.030
HYDR-1	9	DD	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	10	BV	4.765	0.300	0.000	0.326	0.360	0.000	0.00001	0.030
HYDR-1	11	BV	0.000	0.000	4.724	0.000	0.000	0.271	0.00001	0.030
HYDR-1	12	BV	0.000	0.000	4.724	0.000	0.000	0.271	0.00001	0.030
HYDR-1	13	UB	5.813	0.300	0.000	0.413	0.360	0.000	0.00001	0.030
HYDR-1	14	DD	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	15	UB	5.813	0.300	0.000	0.413	0.360	0.000	0.00001	0.030
HYDR-1	16	UB	8.719	0.300	0.000	0.620	0.360	0.000	0.00001	0.030
HYDR-1	17	BB	0.000	0.000	10.840	0.000	0.000	0.870	0.00001	0.030
HYDR-1	18	DD	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	19	BB	0.000	0.000	10.840	0.000	0.000	0.870	0.00001	0.030
HYDR-1	20	BB	0.000	0.000	10.840	0.000	0.000	0.870	0.00001	0.030
HYDR-1	21	WD	0.000	0.000	3.000	0.000	0.000	0.150	0.00001	0.030
HYDR-1	22	BB	0.000	0.000	54.250	0.000	0.000	1.240	0.00001	0.030
HYDR-1	23	DD	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	24	BB	0.000	0.000	93.080	0.000	0.000	1.603	0.00001	0.030
HYDR-1	25	DD	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	26	TR	0.000	0.000	12.000	0.000	0.000	0.600	0.00001	0.030
HYDR-1	27	BB	0.000	0.000	93.080	0.000	0.000	1.603	0.00001	0.030
HYDR-1	28	BB	0.000	0.000	93.080	0.000	0.000	1.603	0.00001	0.030
HYDR-1	29	C	0.000	0.000	114.000	0.000	0.000	1.000	0.00001	0.030
HYDR-1	30	BB	0.000	0.000	76.510	0.000	0.000	1.870	0.00001	0.030
HYDR-1	31	TR	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	32	TR	0.000	0.000	18.000	0.000	0.000	0.900	0.00001	0.030

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

HYDR-1	33	BB	0.000	0.000	76.510	0.000	0.000	1.870	0.00001	0.030
HYDR-1	34	BB	0.000	0.000	91.400	0.000	0.000	1.890	0.00001	0.030
HYDR-1	35	BB	0.000	0.000	114.300	0.000	0.000	1.670	0.00001	0.030
HYDR-1	36	BB	0.000	0.000	77.700	0.000	0.000	1.440	0.00001	0.030
HYDR-1	37	BB	0.000	0.000	88.000	0.000	0.000	1.600	0.00001	0.030
HYDR-1	38	BL	8.720	0.300	0.000	0.620	0.360	0.000	0.00001	0.030
HYDR-1	39	TR	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	40	BL	8.720	0.300	0.000	0.620	0.360	0.000	0.00001	0.030
HYDR-1	41	DD	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	42	BL	17.438	0.300	0.000	0.992	0.360	0.000	0.00001	0.030
HYDR-1	43	DD	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	44	BL	0.000	0.000	8.840	0.000	0.000	0.472	0.00001	0.030
HYDR-1	45	BL	0.000	0.000	8.840	0.000	0.000	0.472	0.00001	0.030
HYDR-1	46	DD	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	47	BL	0.000	0.000	18.600	0.000	0.000	1.400	0.00001	0.030
HYDR-1	48	BL	0.000	0.000	18.600	0.000	0.000	1.400	0.00001	0.030
HYDR-1	49	DD	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	50	BL	0.000	0.000	18.600	0.000	0.000	1.400	0.00001	0.030
HYDR-1	51	DD	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	52	BL	0.000	0.000	42.670	0.000	0.000	2.280	0.00001	0.030
HYDR-1	53	DD	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	54	BL	0.000	0.000	42.670	0.000	0.000	2.280	0.00001	0.030
HYDR-1	55	BL	0.000	0.000	42.670	0.000	0.000	2.280	0.00001	0.030
HYDR-1	56	BL	0.000	0.000	39.690	0.000	0.000	1.700	0.00001	0.030
HYDR-1	57	BL	0.000	0.000	47.550	0.000	0.000	2.080	0.00001	0.030
HYDR-1	58	DD	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	59	TR	0.000	0.000	16.000	0.000	0.000	0.800	0.00001	0.030
HYDR-1	60	BL	0.000	0.000	47.550	0.000	0.000	2.080	0.00001	0.030
HYDR-1	61	DD	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	62	TR	0.000	0.000	12.000	0.000	0.000	0.600	0.00001	0.030
HYDR-1	63	BL	0.000	0.000	52.730	0.000	0.000	2.090	0.00001	0.030
HYDR-1	64	TR	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	65	TR	0.000	0.000	13.000	0.000	0.000	0.650	0.00001	0.030
HYDR-1	66	BL	0.000	0.000	52.120	0.000	0.000	2.140	0.00001	0.030
HYDR-1	67	BL	0.000	0.000	52.120	0.000	0.000	2.140	0.00001	0.030
HYDR-1	68	TR	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	69	TR	0.000	0.000	10.000	0.000	0.000	0.500	0.00001	0.030
HYDR-1	70	BL	0.000	0.000	52.120	0.000	0.000	2.140	0.00001	0.030
HYDR-1	71	M	0.000	0.000	32.000	0.000	0.000	1.200	0.00001	0.030
HYDR-1	72	BL	0.000	0.000	56.540	0.000	0.000	2.140	0.00001	0.030
HYDR-1	73	M	0.000	0.000	32.000	0.000	0.000	1.200	0.00001	0.030
HYDR-1	74	BL	0.000	0.000	60.960	0.000	0.000	2.130	0.00001	0.030
HYDR-1	75	DD	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	76	BP	8.720	0.300	0.000	0.620	0.360	0.000	0.00001	0.030
HYDR-1	77	DD	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	78	BP	8.720	0.300	0.000	0.620	0.360	0.000	0.00001	0.030
HYDR-1	79	DD	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	80	BP	8.720	0.300	0.000	0.620	0.360	0.000	0.00001	0.030
HYDR-1	81	BP	0.000	0.000	18.900	0.000	0.000	1.100	0.00001	0.030
HYDR-1	82	BP	0.000	0.000	18.290	0.000	0.000	1.000	0.00001	0.030
HYDR-1	83	BP	0.000	0.000	21.340	0.000	0.000	1.500	0.00001	0.030
HYDR-1	84	C	0.000	0.000	20.100	0.000	0.000	0.740	0.00001	0.030
HYDR-1	85	BP	0.000	0.000	21.340	0.000	0.000	1.500	0.00001	0.030
HYDR-1	86	C	0.000	0.000	16.460	0.000	0.000	0.940	0.00001	0.030
HYDR-1	87	C	0.000	0.000	32.000	0.000	0.000	0.770	0.00001	0.030
HYDR-1	88	BP	0.000	0.000	30.480	0.000	0.000	1.500	0.00001	0.030
HYDR-1	89	BP	0.000	0.000	30.480	0.000	0.000	1.500	0.00001	0.030
HYDR-1	90	BL	0.000	0.000	60.960	0.000	0.000	2.130	0.00001	0.030
HYDR-1	91	BB	0.000	0.000	105.590	0.000	0.000	1.960	0.00001	0.030

ENDATA09

\$\$\$ DATA TYPE 10 (DISPERSIVE HYDRAULIC COEFFICIENTS) \$\$\$

CARD	TYPE	REACH	ID	TIDAL RANGE	DISPERSION "A"	DISPERSION "B"	DISPERSION "C"	DISPERSION "D"
HYDR		1	DD	0.00	0.000	0.833	0.000	1.000
HYDR		2	BV	0.00	0.000	0.833	0.000	1.000
HYDR		3	BV	0.00	0.000	0.833	0.000	1.000
HYDR		4	BV	0.00	0.000	0.833	0.000	1.000

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

HYDR	5	DD	0.00	0.000	0.833	0.000	1.000
HYDR	6	BV	0.00	0.000	0.833	0.000	1.000
HYDR	7	DD	0.00	0.000	0.833	0.000	1.000
HYDR	8	BV	0.00	0.000	0.833	0.000	1.000
HYDR	9	DD	0.00	0.000	0.833	0.000	1.000
HYDR	10	BV	0.00	0.000	0.833	0.000	1.000
HYDR	11	BV	1.00	200.000	0.833	0.000	1.000
HYDR	12	BV	1.00	200.000	0.833	0.000	1.000
HYDR	13	UB	0.00	0.000	0.833	0.000	1.000
HYDR	14	DD	0.00	0.000	0.833	0.000	1.000
HYDR	15	UB	0.00	0.000	0.833	0.000	1.000
HYDR	16	UB	0.00	0.000	0.833	0.000	1.000
HYDR	17	BB	1.00	200.000	0.833	0.000	1.000
HYDR	18	DD	0.00	0.000	0.833	0.000	1.000
HYDR	19	BB	1.00	200.000	0.833	0.000	1.000
HYDR	20	BB	1.00	200.000	0.833	0.000	1.000
HYDR	21	WD	1.00	200.000	0.833	0.000	1.000
HYDR	22	BB	1.00	200.000	0.833	0.000	1.000
HYDR	23	DD	0.00	0.000	0.833	0.000	1.000
HYDR	24	BB	1.00	200.000	0.833	0.000	1.000
HYDR	25	DD	0.00	0.000	0.833	0.000	1.000
HYDR	26	TR	1.00	200.000	0.833	0.000	1.000
HYDR	27	BB	1.00	200.000	0.833	0.000	1.000
HYDR	28	BB	1.00	200.000	0.833	0.000	1.000
HYDR	29	C	1.00	200.000	0.833	0.000	1.000
HYDR	30	BB	1.00	200.000	0.833	0.000	1.000
HYDR	31	TR	0.00	0.000	0.833	0.000	1.000
HYDR	32	TR	1.00	200.000	0.833	0.000	1.000
HYDR	33	BB	1.00	200.000	0.833	0.000	1.000
HYDR	34	BB	1.00	200.000	0.833	0.000	1.000
HYDR	35	BB	1.00	200.000	0.833	0.000	1.000
HYDR	36	BB	1.00	200.000	0.833	0.000	1.000
HYDR	37	BB	1.00	200.000	0.833	0.000	1.000
HYDR	38	BL	0.00	0.000	0.833	0.000	1.000
HYDR	39	TR	0.00	0.000	0.833	0.000	1.000
HYDR	40	BL	0.00	0.000	0.833	0.000	1.000
HYDR	41	DD	0.00	0.000	0.833	0.000	1.000
HYDR	42	BL	0.00	0.000	0.833	0.000	1.000
HYDR	43	DD	0.00	0.000	0.833	0.000	1.000
HYDR	44	BL	1.00	100.000	0.833	0.000	1.000
HYDR	45	BL	1.00	100.000	0.833	0.000	1.000
HYDR	46	DD	0.00	0.000	0.833	0.000	1.000
HYDR	47	BL	1.00	100.000	0.833	0.000	1.000
HYDR	48	BL	1.00	100.000	0.833	0.000	1.000
HYDR	49	DD	0.00	0.000	0.833	0.000	1.000
HYDR	50	BL	1.00	150.000	0.833	0.000	1.000
HYDR	51	DD	0.00	0.000	0.833	0.000	1.000
HYDR	52	BL	1.00	200.000	0.833	0.000	1.000
HYDR	53	DD	0.00	0.000	0.833	0.000	1.000
HYDR	54	BL	1.00	250.000	0.833	0.000	1.000
HYDR	55	BL	1.00	300.000	0.833	0.000	1.000
HYDR	56	BL	1.00	300.000	0.833	0.000	1.000
HYDR	57	BL	1.00	300.000	0.833	0.000	1.000
HYDR	58	DD	0.00	0.000	0.833	0.000	1.000
HYDR	59	TR	1.00	200.000	0.833	0.000	1.000
HYDR	60	BL	1.00	300.000	0.833	0.000	1.000
HYDR	61	DD	0.00	0.000	0.833	0.000	1.000
HYDR	62	TR	1.00	200.000	0.833	0.000	1.000
HYDR	63	BL	1.00	300.000	0.833	0.000	1.000
HYDR	64	TR	0.00	0.000	0.833	0.000	1.000
HYDR	65	TR	1.00	200.000	0.833	0.000	1.000
HYDR	66	BL	1.00	300.000	0.833	0.000	1.000
HYDR	67	BL	1.00	300.000	0.833	0.000	1.000
HYDR	68	TR	0.00	0.000	0.833	0.000	1.000
HYDR	69	TR	1.00	200.000	0.833	0.000	1.000
HYDR	70	BL	1.00	300.000	0.833	0.000	1.000
HYDR	71	M	1.00	200.000	0.833	0.000	1.000
HYDR	72	BL	1.00	300.000	0.833	0.000	1.000
HYDR	73	M	1.00	200.000	0.833	0.000	1.000
HYDR	74	BL	1.00	300.000	0.833	0.000	1.000

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

HYDR	75	DD	0.00	0.000	0.833	0.000	1.000
HYDR	76	BP	0.00	0.000	0.833	0.000	1.000
HYDR	77	DD	0.00	0.000	0.833	0.000	1.000
HYDR	78	BP	0.00	0.000	0.833	0.000	1.000
HYDR	79	DD	0.00	0.000	0.833	0.000	1.000
HYDR	80	BP	0.00	0.000	0.833	0.000	1.000
HYDR	81	BP	1.00	200.000	0.833	0.000	1.000
HYDR	82	BP	1.00	200.000	0.833	0.000	1.000
HYDR	83	BP	1.00	200.000	0.833	0.000	1.000
HYDR	84	C	1.00	200.000	0.833	0.000	1.000
HYDR	85	BP	1.00	200.000	0.833	0.000	1.000
HYDR	86	C	1.00	200.000	0.833	0.000	1.000
HYDR	87	C	1.00	200.000	0.833	0.000	1.000
HYDR	88	BP	1.00	200.000	0.833	0.000	1.000
HYDR	89	BP	1.00	200.000	0.833	0.000	1.000
HYDR	90	BL	1.00	300.000	0.833	0.000	1.000
HYDR	91	BB	1.00	200.000	0.833	0.000	1.000
ENDATA10							

\$\$\$ DATA TYPE 11 (INITIAL CONDITIONS) \$\$\$

CARD TYPE	REACH	ID	TEMP deg C	SALIN ppt	DO mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	PERIP g/m ²	BOD1 mg/L	BOD2 mg/L	ORG-N mg/L	ORG-P mg/L	COLI #/100mL	NCM	COND	CL
INITIAL	1	DD	30.40	0.26	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	2	BV	30.40	0.26	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	3	BV	30.40	0.26	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	4	BV	30.40	0.39	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	5	DD	30.40	0.30	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	6	BV	30.40	0.39	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	7	DD	30.40	0.30	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	8	BV	30.40	0.28	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	9	DD	30.40	0.30	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	10	BV	30.40	0.17	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	11	BV	30.40	0.17	3.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	12	BV	30.40	0.17	3.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	13	UB	30.40	0.17	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	14	DD	30.40	0.30	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	15	UB	30.40	0.17	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	16	UB	30.40	0.17	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	17	BB	30.40	0.24	3.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	18	DD	30.40	0.27	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	19	BB	30.40	0.27	3.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	20	BB	30.40	0.45	3.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	21	WD	30.40	0.30	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	22	BB	30.40	1.15	3.00	0.00	0.00	0.00	8.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	23	DD	30.40	0.30	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	24	BB	30.40	2.10	3.00	0.00	0.00	0.00	8.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	25	DD	30.40	0.30	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	26	TR	30.40	0.30	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	27	BB	30.40	2.40	3.00	0.00	0.00	0.00	8.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	28	BB	30.40	2.68	3.00	0.00	0.00	0.00	8.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	29	C	30.40	0.30	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	30	BB	30.40	3.00	3.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	31	TR	30.40	0.30	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	32	TR	30.40	0.30	3.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	33	BB	30.40	3.10	3.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	34	BB	30.40	3.30	3.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	35	BB	30.40	3.30	3.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	36	BB	30.40	3.62	3.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	37	BB	30.40	3.82	3.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	38	BL	30.40	0.30	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	39	TR	30.40	0.30	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	40	BL	30.40	0.30	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	41	DD	30.40	0.30	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	42	BL	30.40	0.30	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	43	DD	30.40	0.30	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	44	BL	30.40	0.48	3.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	45	BL	30.40	0.48	3.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	46	DD	30.40	0.30	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

INITIAL	47	BL	30.40	0.54	3.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	48	BL	30.40	0.54	3.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	49	DD	30.40	0.30	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	50	BL	30.40	1.70	3.00	0.00	0.00	0.00	3.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	51	DD	30.40	0.30	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	52	BL	30.40	2.90	3.00	0.00	0.00	0.00	3.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	53	DD	30.40	0.30	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	54	BL	30.40	3.09	3.00	0.00	0.00	0.00	3.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	55	BL	30.40	3.09	3.00	0.00	0.00	0.00	3.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	56	BL	30.40	3.09	3.00	0.00	0.00	0.00	3.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	57	BL	30.40	3.09	3.00	0.00	0.00	0.00	3.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	58	DD	30.40	0.30	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	59	TR	30.40	0.30	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	60	BL	30.40	2.80	3.00	0.00	0.00	0.00	3.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	61	DD	30.40	0.30	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	62	TR	30.40	0.30	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	63	BL	30.40	2.40	3.00	0.00	0.00	0.00	3.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	64	TR	30.40	0.30	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	65	TR	30.40	0.30	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	66	BL	30.40	2.12	3.00	0.00	0.00	0.00	3.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	67	BL	30.40	2.12	3.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	68	TR	30.40	0.30	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	69	TR	30.40	0.30	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	70	BL	30.40	2.80	3.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	71	M	30.40	0.30	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	72	BL	30.40	3.50	3.00	0.00	0.00	0.00	6.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	73	M	30.40	0.30	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	74	BL	30.40	4.16	3.00	0.00	0.00	0.00	6.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	75	DD	30.40	0.30	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	76	BP	30.40	0.30	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	77	DD	30.40	0.30	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	78	BP	30.40	0.30	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	79	DD	30.40	0.30	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	80	BP	30.40	1.60	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	81	BP	30.40	3.17	3.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	82	BP	30.40	3.32	3.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	83	BP	30.40	3.47	3.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	84	C	30.40	0.30	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	85	BP	30.40	3.70	3.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	86	C	30.40	0.30	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	87	C	30.40	0.30	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	88	BP	30.40	3.94	3.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	89	BP	30.40	3.94	3.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	90	BL	30.40	4.16	3.00	0.00	0.00	0.00	6.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	91	BB	30.40	4.00	3.00	0.00	0.00	0.00	7.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

\$\$\$ DATA TYPE 12 (REAERATION, SEDIMENT OXYGEN DEMAND, BOD COEFFICIENTS) \$\$\$

CARD	RCH	RCH	K2		K2	K2	BKGRND	AEROB		SETTLD	ANAER	AEROB		ANAER	BOD2	HYDR TO
TYPE	NUM	ID	OPT	"A"	"B"	"C"	SOD	DECAY	SETT	AVAIL	DECAY	DECAY	SETT	DECAY	DECAY	BOD1
							g/m ² /d	per day	m/d	frac	per day	per day	m/d	per day	per day	
COEF-1	1	DD	15	LOUISIANA	0.000	0.000	0.000	0.144	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	2	BV	15	LOUISIANA	0.000	0.000	0.000	0.086	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	3	BV	15	LOUISIANA	0.000	0.000	0.000	1.725	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	4	BV	15	LOUISIANA	0.000	0.000	0.000	2.013	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	5	DD	15	LOUISIANA	0.000	0.000	0.000	0.144	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	6	BV	15	LOUISIANA	0.000	0.000	0.000	2.013	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	7	DD	15	LOUISIANA	0.000	0.000	0.000	0.144	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	8	BV	15	LOUISIANA	0.000	0.000	0.000	2.013	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	9	DD	15	LOUISIANA	0.000	0.000	0.000	0.144	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	10	BV	15	LOUISIANA	0.000	0.000	0.000	2.013	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	11	BV	15	LOUISIANA	0.000	0.000	0.000	1.208	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	12	BV	15	LOUISIANA	0.000	0.000	0.000	1.208	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	13	UB	15	LOUISIANA	0.000	0.000	0.000	0.144	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	14	DD	15	LOUISIANA	0.000	0.000	0.000	0.144	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	15	UB	15	LOUISIANA	0.000	0.000	0.000	0.144	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	16	UB	15	LOUISIANA	0.000	0.000	0.000	0.144	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	17	BB	15	LOUISIANA	0.000	0.000	0.000	0.805	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

COEF-1	88	BP	1	K2=a	0.606	0.000	0.000	0.000	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	89	BP	1	K2=a	0.606	0.000	0.000	0.000	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	90	BL	1	K2=a	0.426	0.000	0.000	0.000	0.080	0.050	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	91	BB	1	K2=a	0.503	0.000	0.000	0.000	0.080	0.050	0.000	0.000	0.000	0.000	0.000	0.000
ENDATA12																

\$\$\$ DATA TYPE 13 (NITROGEN AND PHOSPHORUS COEFFICIENTS) \$\$\$

CARD TYPE	REACH	ID	NBOD		SETTLD	NH3	BKGRND		DENIT	ORGP	ORGP	SETTLD
			DECA	SETT	AVAIL		SRCE	PO4				SRCE
			per day	m/d	frac	per day	g/m ² /d	g/m ² /d	per day	per day	m/d	frac
COEF-2	1	DD	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	2	BV	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	3	BV	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	4	BV	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	5	DD	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	6	BV	0.030	0.100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	7	DD	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	8	BV	0.030	0.100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	9	DD	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	10	BV	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	11	BV	0.030	0.150	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	12	BV	0.030	0.150	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	13	UB	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	14	DD	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	15	UB	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	16	UB	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	17	BB	0.030	0.150	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	18	DD	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	19	BB	0.030	0.150	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	20	BB	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	21	WD	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	22	BB	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	23	DD	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	24	BB	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	25	DD	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	26	TR	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	27	BB	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	28	BB	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	29	C	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	30	BB	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	31	TR	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	32	TR	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	33	BB	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	34	BB	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	35	BB	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	36	BB	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	37	BB	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	38	BL	0.030	0.050	0.000	0.000	0.000	0.000	0.100	0.000	0.000	0.000
COEF-2	39	TR	0.030	0.050	0.000	0.000	0.000	0.000	0.100	0.000	0.000	0.000
COEF-2	40	BL	0.030	0.050	0.000	0.000	0.000	0.000	0.100	0.000	0.000	0.000
COEF-2	41	DD	0.030	0.050	0.000	0.000	0.000	0.000	0.100	0.000	0.000	0.000
COEF-2	42	BL	0.030	0.050	0.000	0.000	0.000	0.000	0.100	0.000	0.000	0.000
COEF-2	43	DD	0.030	0.050	0.000	0.000	0.000	0.000	0.100	0.000	0.000	0.000
COEF-2	44	BL	0.030	0.050	0.000	0.000	0.000	0.000	0.100	0.000	0.000	0.000
COEF-2	45	BL	0.030	0.050	0.000	0.000	0.000	0.000	0.100	0.000	0.000	0.000
COEF-2	46	DD	0.030	0.050	0.000	0.000	0.000	0.000	0.100	0.000	0.000	0.000
COEF-2	47	BL	0.030	0.050	0.000	0.000	0.000	0.000	0.100	0.000	0.000	0.000
COEF-2	48	BL	0.030	0.050	0.000	0.000	0.000	0.000	0.100	0.000	0.000	0.000
COEF-2	49	DD	0.030	0.050	0.000	0.000	0.000	0.000	0.100	0.000	0.000	0.000
COEF-2	50	BL	0.030	0.050	0.000	0.000	0.000	0.000	0.100	0.000	0.000	0.000
COEF-2	51	DD	0.030	0.050	0.000	0.000	0.000	0.000	0.100	0.000	0.000	0.000
COEF-2	52	BL	0.030	0.050	0.000	0.000	0.000	0.000	0.100	0.000	0.000	0.000
COEF-2	53	DD	0.030	0.050	0.000	0.000	0.000	0.000	0.100	0.000	0.000	0.000
COEF-2	54	BL	0.030	0.050	0.000	0.000	0.000	0.000	0.100	0.000	0.000	0.000
COEF-2	55	BL	0.030	0.050	0.000	0.000	0.000	0.000	0.100	0.000	0.000	0.000
COEF-2	56	BL	0.030	0.050	0.000	0.000	0.000	0.000	0.100	0.000	0.000	0.000
COEF-2	57	BL	0.030	0.050	0.000	0.000	0.000	0.000	0.100	0.000	0.000	0.000
COEF-2	58	DD	0.030	0.050	0.000	0.000	0.000	0.000	0.100	0.000	0.000	0.000

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

COEF-2	59	TR	0.030	0.050	0.000	0.000	0.000	0.000	0.100	0.000	0.000	0.000
COEF-2	60	BL	0.030	0.050	0.000	0.000	0.000	0.000	0.100	0.000	0.000	0.000
COEF-2	61	DD	0.030	0.050	0.000	0.000	0.000	0.000	0.100	0.000	0.000	0.000
COEF-2	62	TR	0.030	0.050	0.000	0.000	0.000	0.000	0.100	0.000	0.000	0.000
COEF-2	63	BL	0.030	0.050	0.000	0.000	0.000	0.000	0.100	0.000	0.000	0.000
COEF-2	64	TR	0.030	0.050	0.000	0.000	0.000	0.000	0.100	0.000	0.000	0.000
COEF-2	65	TR	0.030	0.050	0.000	0.000	0.000	0.000	0.100	0.000	0.000	0.000
COEF-2	66	BL	0.030	0.050	0.000	0.000	0.000	0.000	0.100	0.000	0.000	0.000
COEF-2	67	BL	0.030	0.050	0.000	0.000	0.000	0.000	0.100	0.000	0.000	0.000
COEF-2	68	TR	0.030	0.050	0.000	0.000	0.000	0.000	0.100	0.000	0.000	0.000
COEF-2	69	TR	0.030	0.050	0.000	0.000	0.000	0.000	0.100	0.000	0.000	0.000
COEF-2	70	BL	0.030	0.050	0.000	0.000	0.000	0.000	0.100	0.000	0.000	0.000
COEF-2	71	M	0.030	0.050	0.000	0.000	0.000	0.000	0.100	0.000	0.000	0.000
COEF-2	72	BL	0.030	0.050	0.000	0.000	0.000	0.000	0.100	0.000	0.000	0.000
COEF-2	73	M	0.030	0.050	0.000	0.000	0.000	0.000	0.100	0.000	0.000	0.000
COEF-2	74	BL	0.030	0.050	0.000	0.000	0.000	0.000	0.100	0.000	0.000	0.000
COEF-2	75	DD	0.030	0.050	0.000	0.000	0.000	0.000	0.100	0.000	0.000	0.000
COEF-2	76	BP	0.030	0.050	0.000	0.000	0.000	0.000	0.100	0.000	0.000	0.000
COEF-2	77	DD	0.030	0.050	0.000	0.000	0.000	0.000	0.100	0.000	0.000	0.000
COEF-2	78	BP	0.030	0.050	0.000	0.000	0.000	0.000	0.100	0.000	0.000	0.000
COEF-2	79	DD	0.030	0.050	0.000	0.000	0.000	0.000	0.100	0.000	0.000	0.000
COEF-2	80	BP	0.030	0.050	0.000	0.000	0.000	0.000	0.100	0.000	0.000	0.000
COEF-2	81	BP	0.030	0.050	0.000	0.000	0.000	0.000	0.100	0.000	0.000	0.000
COEF-2	82	BP	0.030	0.050	0.000	0.000	0.000	0.000	0.100	0.000	0.000	0.000
COEF-2	83	BP	0.030	0.050	0.000	0.000	0.000	0.000	0.100	0.000	0.000	0.000
COEF-2	84	C	0.030	0.050	0.000	0.000	0.000	0.000	0.100	0.000	0.000	0.000
COEF-2	85	BP	0.030	0.050	0.000	0.000	0.000	0.000	0.100	0.000	0.000	0.000
COEF-2	86	C	0.030	0.050	0.000	0.000	0.000	0.000	0.100	0.000	0.000	0.000
COEF-2	87	C	0.030	0.050	0.000	0.000	0.000	0.000	0.100	0.000	0.000	0.000
COEF-2	88	BP	0.030	0.050	0.000	0.000	0.000	0.000	0.100	0.000	0.000	0.000
COEF-2	89	BP	0.030	0.050	0.000	0.000	0.000	0.000	0.100	0.000	0.000	0.000
COEF-2	90	BL	0.030	0.050	0.000	0.000	0.000	0.000	0.100	0.000	0.000	0.000
COEF-2	91	BB	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

ENDATA13

\$\$\$ DATA TYPE 14 (ALGAE PHYTOPLANKTON AND PERIPHYTON COEFFICIENTS) \$\$\$

CARD TYPE	REACH	ID	SECCHI	CHL A:	PHYTO	PHYTO	PHYTO	PHYTO	PERIP	PERIP	PERIP	BANK
			DEPTH	ALGAE	SETT	DEATH	GROW	RESP	DEATH	GROW	RESP	SHADING
			m	frac	m/d	per day	frac					

ENDATA14

\$\$\$ DATA TYPE 15 (COLIFORM AND NONCONSERVATIVE COEFFICIENTS) \$\$\$

CARD TYPE	REACH	ID	COLIFORM	NCM	NCM
			DIE-OFF	DECAY	SETT
			per day	per day	m/d

ENDATA15

\$\$\$ DATA TYPE 16 (INCREMENTAL DATA FOR FLOW, TEMPERATURE, SALINITY, AND CONSERVATIVES) \$\$\$

CARD TYPE	REACH	ID	OUTFLOW	INFLOW	TEMP	SALIN	COND	CL	IN/DIST	OUT/DIST
			m ³ /s	m ³ /s	deg C	ppt				

ENDATA16

\$\$\$ DATA TYPE 17 (INCREMENTAL DATA FOR DO, BOD, AND NITROGEN) \$\$\$

CARD TYPE	REACH	ID	DO	BOD1	NBOD		BOD2
			mg/L	mg/L	mg/L	mg/L	mg/L

ENDATA17

\$\$\$ DATA TYPE 18 (INCREMENTAL DATA FOR PHOSPHORUS, PHYTOPLANKTON, COLIFORM, AND NONCONSERVATIVES) \$\$\$

CARD TYPE	REACH	ID	PO4	PHYTO	COLI	NCM	ORGP
			mg/L	CHL A	μg/L	#/100mL	mg/L

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011
 ENDDATA18

\$\$\$ DATA TYPE 19 (NONPOINT SOURCE DATA) \$\$\$

CARD	TYPE	REACH	ID	BOD1 kg/d	NBOD kg/d	COLI #/day	NCM	DO kg/d	BOD2 kg/d	ORG-P kg/d
NONPOINT		1	DD	0.19	0.08	0.00	0.00	0.00	0.00	0.00
NONPOINT		2	BV	0.04	0.01	0.00	0.00	0.00	0.00	0.00
NONPOINT		3	BV	0.40	0.01	0.00	0.00	0.00	0.00	0.00
NONPOINT		4	BV	0.40	0.01	0.00	0.00	0.00	0.00	0.00
NONPOINT		5	DD	0.09	0.04	0.00	0.00	0.00	0.00	0.00
NONPOINT		6	BV	0.40	0.04	0.00	0.00	0.00	0.00	0.00
NONPOINT		7	DD	0.03	0.01	0.00	0.00	0.00	0.00	0.00
NONPOINT		8	BV	0.49	0.04	0.00	0.00	0.00	0.00	0.00
NONPOINT		9	DD	0.09	0.04	0.00	0.00	0.00	0.00	0.00
NONPOINT		10	BV	0.03	0.01	0.00	0.00	0.00	0.00	0.00
NONPOINT		11	BV	0.23	0.04	0.00	0.00	0.00	0.00	0.00
NONPOINT		12	BV	0.40	0.26	0.00	0.00	0.00	0.00	0.00
NONPOINT		13	UB	0.11	0.05	0.00	0.00	0.00	0.00	0.00
NONPOINT		14	DD	0.04	0.02	0.00	0.00	0.00	0.00	0.00
NONPOINT		15	UB	0.07	0.03	0.00	0.00	0.00	0.00	0.00
NONPOINT		16	UB	0.08	0.03	0.00	0.00	0.00	0.00	0.00
NONPOINT		17	BB	0.03	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT		18	DD	0.08	0.03	0.00	0.00	0.00	0.00	0.00
NONPOINT		19	BB	3.36	1.09	0.00	0.00	0.00	0.00	0.00
NONPOINT		20	BB	6.47	0.60	0.00	0.00	0.00	0.00	0.00
NONPOINT		21	WD	0.05	0.02	0.00	0.00	0.00	0.00	0.00
NONPOINT		22	BB	38.81	4.89	0.00	0.00	0.00	0.00	0.00
NONPOINT		23	DD	0.01	0.01	0.00	0.00	0.00	0.00	0.00
NONPOINT		24	BB	200.00	22.50	0.00	0.00	0.00	0.00	0.00
NONPOINT		25	DD	0.19	0.08	0.00	0.00	0.00	0.00	0.00
NONPOINT		26	TR	2.31	0.77	0.00	0.00	0.00	0.00	0.00
NONPOINT		27	BB	157.50	20.00	0.00	0.00	0.00	0.00	0.00
NONPOINT		28	BB	182.50	18.75	0.00	0.00	0.00	0.00	0.00
NONPOINT		29	C	122.50	35.00	0.00	0.00	0.00	0.00	0.00
NONPOINT		30	BB	125.00	15.00	0.00	0.00	0.00	0.00	0.00
NONPOINT		31	TR	0.21	0.09	0.00	0.00	0.00	0.00	0.00
NONPOINT		32	TR	7.12	2.15	0.00	0.00	0.00	0.00	0.00
NONPOINT		33	BB	175.00	18.75	0.00	0.00	0.00	0.00	0.00
NONPOINT		34	BB	350.00	37.50	0.00	0.00	0.00	0.00	0.00
NONPOINT		35	BB	406.25	50.00	0.00	0.00	0.00	0.00	0.00
NONPOINT		36	BB	406.25	6.25	0.00	0.00	0.00	0.00	0.00
NONPOINT		37	BB	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT		38	BL	0.50	0.35	0.00	0.00	0.00	0.00	0.00
NONPOINT		39	TR	0.09	0.04	0.00	0.00	0.00	0.00	0.00
NONPOINT		40	BL	0.50	0.47	0.00	0.00	0.00	0.00	0.00
NONPOINT		41	DD	0.01	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT		42	BL	2.70	3.00	0.00	0.00	0.00	0.00	0.00
NONPOINT		43	DD	0.10	0.04	0.00	0.00	0.00	0.00	0.00
NONPOINT		44	BL	0.85	1.00	0.00	0.00	0.00	0.00	0.00
NONPOINT		45	BL	10.00	0.88	0.00	0.00	0.00	0.00	0.00
NONPOINT		46	DD	0.09	0.04	0.00	0.00	0.00	0.00	0.00
NONPOINT		47	BL	4.65	1.55	0.00	0.00	0.00	0.00	0.00
NONPOINT		48	BL	49.60	3.88	0.00	0.00	0.00	0.00	0.00
NONPOINT		49	DD	0.03	0.01	0.00	0.00	0.00	0.00	0.00
NONPOINT		50	BL	19.38	2.33	0.00	0.00	0.00	0.00	0.00
NONPOINT		51	DD	0.16	0.07	0.00	0.00	0.00	0.00	0.00
NONPOINT		52	BL	29.45	2.33	0.00	0.00	0.00	0.00	0.00
NONPOINT		53	DD	0.49	0.22	0.00	0.00	0.00	0.00	0.00
NONPOINT		54	BL	75.95	2.33	0.00	0.00	0.00	0.00	0.00
NONPOINT		55	BL	58.12	2.33	0.00	0.00	0.00	0.00	0.00
NONPOINT		56	BL	31.00	1.55	0.00	0.00	0.00	0.00	0.00
NONPOINT		57	BL	93.00	1.55	0.00	0.00	0.00	0.00	0.00
NONPOINT		58	DD	0.02	0.01	0.00	0.00	0.00	0.00	0.00
NONPOINT		59	TR	1.39	0.43	0.00	0.00	0.00	0.00	0.00
NONPOINT		60	BL	170.50	27.12	0.00	0.00	0.00	0.00	0.00
NONPOINT		61	DD	0.12	0.05	0.00	0.00	0.00	0.00	0.00
NONPOINT		62	TR	1.78	0.57	0.00	0.00	0.00	0.00	0.00
NONPOINT		63	BL	31.00	9.30	0.00	0.00	0.00	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

NONPOINT	64	TR	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	65	TR	0.67	0.22	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	66	BL	170.50	27.90	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	67	BL	0.00	13.18	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	68	TR	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	69	TR	0.22	0.08	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	70	BL	19.38	10.07	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	71	M	2.60	0.69	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	72	BL	38.75	9.30	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	73	M	22.48	6.20	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	74	BL	116.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	75	DD	0.17	0.08	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	76	BP	0.49	0.21	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	77	DD	0.11	0.05	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	78	BP	0.32	0.11	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	79	DD	0.21	0.09	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	80	BP	0.07	0.04	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	81	BP	67.84	11.78	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	82	BP	30.06	3.25	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	83	BP	17.88	3.25	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	84	C	2.44	0.73	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	85	BP	28.44	6.91	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	86	C	3.74	1.08	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	87	C	2.92	0.89	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	88	BP	121.88	28.44	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	89	BP	130.00	24.38	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	90	BL	121.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	91	BB	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ENDATA19										

\$\$\$ DATA TYPE 20 (HEADWATER FOR FLOW, TEMPERATURE, SALINITY AND CONSERVATIVES) \$\$\$

CARD TYPE	ELEMENT	NAME	UNIT	FLOW m ³ /s	FLOW cfs	TEMP deg C	SALIN ppt	COND	CL	HDW DISP EXCHG frac
HDWTR-1	1	B VINCENT & BONFOUCA	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1	67	BROWNS VILL RD (DD2)	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1	102	DRAINAGE DITCH 8	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1	119	DRAINAGE DITCH 9	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1	159	UPPER B BONFOUCA	0	0.00283	0.10000	33.80	0.26	520.900	7.230	0.000
HDWTR-1	183	DRAINAGE DITCH 23	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1	221	HIGHWAY 190(DD 5)	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1	260	WEST DRAINAGE CANAL	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1	284	DRAINAGE DITCH 6	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1	295	TRIBUTARY 2	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1	324	CANAL 26	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1	346	TRIBUTARY 4	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1	433	BAYOU LIBERTY	0	0.00283	0.10000	33.80	0.26	520.900	7.230	0.000
HDWTR-1	439	TRIBUTARY 1	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1	470	DRAINAGE DITCH 22	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1	482	DRAINAGE DITCH 20	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1	536	HIGHWAY 190	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1	576	DRAINAGE DITCH 18	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1	585	DRAINAGE DITCH 19	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1	601	DRAINAGE DITCH 4	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1	667	TRIBUTARY 9	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1	680	TRIBUTARY 6	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1	698	TRIBUTARY 10	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1	715	TRIBUTARY 8	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1	727	MARINA 1	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1	730	MARINA 2	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1	762	HWY 190	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1	797	DRAINAGE DITCH 16	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1	819	DRAINAGE DITCH 17	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1	861	TRIBUTARY 24	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1	868	TRIBUTARY 25	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
ENDATA20										

\$\$\$ DATA TYPE 21 (HEADWATER DATA FOR DO, BOD, AND NITROGEN) \$\$\$

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

CARD TYPE	ELEMENT	NAME	DO mg/L	BOD#1 mg/L	NBOD mg/L	mg/L	mg/L	BOD2 mg/L
HDWTR-2	1	B VINCENT & BONFOUCA	6.00	0.63	0.29	0.00	0.00	0.00
HDWTR-2	67	BROWNS VILL RD (DD2)	6.00	0.63	0.29	0.00	0.00	0.00
HDWTR-2	102	DRAINAGE DITCH 8	6.00	0.63	0.29	0.00	0.00	0.00
HDWTR-2	119	DRAINAGE DITCH 9	6.00	0.63	0.29	0.00	0.00	0.00
HDWTR-2	159	UPPER B BONFOUCA	6.00	0.63	0.29	0.00	0.00	0.00
HDWTR-2	183	DRAINAGE DITCH 23	6.00	0.63	0.29	0.00	0.00	0.00
HDWTR-2	221	HIGHWAY 190(DD 5)	6.00	0.63	0.29	0.00	0.00	0.00
HDWTR-2	260	WEST DRAINAGE CANAL	6.00	0.63	0.29	0.00	0.00	0.00
HDWTR-2	284	DRAINAGE DITCH 6	6.00	2.75	1.25	0.00	0.00	0.00
HDWTR-2	295	TRIBUTARY 2	6.00	2.75	1.25	0.00	0.00	0.00
HDWTR-2	324	CANAL 26	6.00	2.75	1.25	0.00	0.00	0.00
HDWTR-2	346	TRIBUTARY 4	6.00	2.75	1.25	0.00	0.00	0.00
HDWTR-2	433	BAYOU LIBERTY	6.00	0.55	0.25	0.00	0.00	0.00
HDWTR-2	439	TRIBUTARY 1	6.00	0.55	0.25	0.00	0.00	0.00
HDWTR-2	470	DRAINAGE DITCH 22	6.00	0.55	0.25	0.00	0.00	0.00
HDWTR-2	482	DRAINAGE DITCH 20	6.00	0.55	0.25	0.00	0.00	0.00
HDWTR-2	536	HIGHWAY 190	6.00	0.55	0.25	0.00	0.00	0.00
HDWTR-2	576	DRAINAGE DITCH 18	6.00	1.71	0.78	0.00	0.00	0.00
HDWTR-2	585	DRAINAGE DITCH 19	6.00	1.71	0.78	0.00	0.00	0.00
HDWTR-2	601	DRAINAGE DITCH 4	6.00	1.71	0.78	0.00	0.00	0.00
HDWTR-2	667	TRIBUTARY 9	6.00	1.71	0.78	0.00	0.00	0.00
HDWTR-2	680	TRIBUTARY 6	6.00	1.71	0.78	0.00	0.00	0.00
HDWTR-2	698	TRIBUTARY 10	6.00	1.71	0.78	0.00	0.00	0.00
HDWTR-2	715	TRIBUTARY 8	6.00	1.71	0.78	0.00	0.00	0.00
HDWTR-2	727	MARINA 1	6.00	1.71	0.78	0.00	0.00	0.00
HDWTR-2	730	MARINA 2	6.00	1.71	0.78	0.00	0.00	0.00
HDWTR-2	762	HWY 190	6.00	1.79	0.81	0.00	0.00	0.00
HDWTR-2	797	DRAINAGE DITCH 16	6.00	1.79	0.81	0.00	0.00	0.00
HDWTR-2	819	DRAINAGE DITCH 17	6.00	1.79	0.81	0.00	0.00	0.00
HDWTR-2	861	TRIBUTARY 24	6.00	1.79	0.81	0.00	0.00	0.00
HDWTR-2	868	TRIBUTARY 25	6.00	1.79	0.81	0.00	0.00	0.00
ENDATA21								

\$\$\$ DATA TYPE 22 (HEADWATER DATA FOR PHOSPHORUS, PHYTOPLANKTON, COLIFORM, AND NONCONSERVATIVES) \$\$\$

CARD TYPE	ELEMENT	NAME	PHYTO PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM	ORG-P mg/L
HDWTR-3	1	B VINCENT & BONFOUCA	0.00	0.00	0.00	0.00	0.00
HDWTR-3	67	BROWNS VILL RD (DD2)	0.00	0.00	0.00	0.00	0.00
HDWTR-3	102	DRAINAGE DITCH 8	0.00	0.00	0.00	0.00	0.00
HDWTR-3	119	DRAINAGE DITCH 9	0.00	0.00	0.00	0.00	0.00
HDWTR-3	159	UPPER B BONFOUCA	0.00	0.00	0.00	0.00	0.00
HDWTR-3	183	DRAINAGE DITCH 23	0.00	0.00	0.00	0.00	0.00
HDWTR-3	221	HIGHWAY 190(DD 5)	0.00	0.00	0.00	0.00	0.00
HDWTR-3	260	WEST DRAINAGE CANAL	0.00	0.00	0.00	0.00	0.00
HDWTR-3	284	DRAINAGE DITCH 6	0.00	0.00	0.00	0.00	0.00
HDWTR-3	295	TRIBUTARY 2	0.00	0.00	0.00	0.00	0.00
HDWTR-3	324	CANAL 26	0.00	0.00	0.00	0.00	0.00
HDWTR-3	346	TRIBUTARY 4	0.00	0.00	0.00	0.00	0.00
HDWTR-3	433	BAYOU LIBERTY	0.00	0.00	0.00	0.00	0.00
HDWTR-3	439	TRIBUTARY 1	0.00	0.00	0.00	0.00	0.00
HDWTR-3	470	DRAINAGE DITCH 22	0.00	0.00	0.00	0.00	0.00
HDWTR-3	482	DRAINAGE DITCH 20	0.00	0.00	0.00	0.00	0.00
HDWTR-3	536	HIGHWAY 190	0.00	0.00	0.00	0.00	0.00
HDWTR-3	576	DRAINAGE DITCH 18	0.00	0.00	0.00	0.00	0.00
HDWTR-3	585	DRAINAGE DITCH 19	0.00	0.00	0.00	0.00	0.00
HDWTR-3	601	DRAINAGE DITCH 4	0.00	0.00	0.00	0.00	0.00
HDWTR-3	667	TRIBUTARY 9	0.00	0.00	0.00	0.00	0.00
HDWTR-3	680	TRIBUTARY 6	0.00	0.00	0.00	0.00	0.00
HDWTR-3	698	TRIBUTARY 10	0.00	0.00	0.00	0.00	0.00
HDWTR-3	715	TRIBUTARY 8	0.00	0.00	0.00	0.00	0.00
HDWTR-3	727	MARINA 1	0.00	0.00	0.00	0.00	0.00
HDWTR-3	730	MARINA 2	0.00	0.00	0.00	0.00	0.00
HDWTR-3	762	HWY 190	0.00	0.00	0.00	0.00	0.00
HDWTR-3	797	DRAINAGE DITCH 16	0.00	0.00	0.00	0.00	0.00
HDWTR-3	819	DRAINAGE DITCH 17	0.00	0.00	0.00	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

HDWTR-3	861	TRIBUTARY 24	0.00	0.00	0.00	0.00	0.00
HDWTR-3	868	TRIBUTARY 25	0.00	0.00	0.00	0.00	0.00
ENDATA22							

\$\$\$ DATA TYPE 23 (JUNCTION DATA) \$\$\$

CARD TYPE	JUNCTION ELEMENT	UPSTRM ELEMENT	RIVER KILOM	NAME
JUNCTION	88	66	17.60	DRAINAGE DITCH 2
JUNCTION	110	101	16.90	DRAINAGE DITCH 8
JUNCTION	140	118	16.00	DRAINAGE DITCH 9
JUNCTION	193	182	2.60	DRAINAGE DITCH 23
JUNCTION	219	158	14.40	UPPER BAYOU BONFOUCA
JUNCTION	239	220	14.20	HIGHWAY 190 (DRAINAGE DITCH 5)
JUNCTION	263	259	12.10	WEST DRAINAGE CANAL
JUNCTION	287	283	10.00	DRAINAGE DITCH 6
JUNCTION	310	294	9.20	TRIBUTARY 2
JUNCTION	344	323	7.80	CANAL 26
JUNCTION	365	345	7.60	TRIBUTARY 4
JUNCTION	463	438	14.40	TRIBUTARY 1
JUNCTION	473	469	13.70	DRAINAGE DITCH 22
JUNCTION	509	481	12.80	DRAINAGE DITCH 20
JUNCTION	559	535	10.10	HIGHWAY 190 (DRAINAGE DITCH 14)
JUNCTION	579	575	8.40	DRAINAGE DITCH 18
JUNCTION	599	584	7.80	DRAINAGE DITCH 19
JUNCTION	643	600	7.60	DRAINAGE DITCH 4
JUNCTION	672	666	5.20	TRIBUTARY 9
JUNCTION	696	679	4.40	TRIBUTARY 6
JUNCTION	705	697	4.20	TRIBUTARY 10
JUNCTION	721	714	3.20	TRIBUTARY 8
JUNCTION	729	726	2.60	MARINA 1
JUNCTION	748	729	2.50	MARINA 2
JUNCTION	806	796	5.10	DRAINAGE DITCH 16
JUNCTION	836	818	3.80	DRAINAGE DITCH 17
JUNCTION	865	860	1.30	CHANNEL 1
JUNCTION	878	867	1.00	CHANNEL 2
JUNCTION	888	761	1.10	BAYOU PAQUET
JUNCTION	899	432	0.80	BAYOU LIBERTY
ENDATA23				

\$\$\$ DATA TYPE 24 (WASTELOAD DATA FOR FLOW, TEMPERATURE, SALINITY, AND CONSERVATIVES) \$\$\$

CARD TYPE	ELEMENT	RKILO	NAME	FLOW m ³ /s	FLOW cfs	FLOW MGD	TEMP deg C	SALIN ppt	COND	CL
WSTLD-1	1	24.20	V H SEAL APARTMENTS	0.00004	0.00145	0.001	30.00	0.39	753.600	63.300
WSTLD-1	40	20.30	GROUNDWATER	0.00550	0.19421	0.126	33.80	0.26	520.900	7.230
WSTLD-1	48	19.50	EAGLE LAKE MHP	0.00345	0.12183	0.079	30.00	0.40	774.000	34.400
WSTLD-1	63	18.00	J&K MANAGEMENT LLC	0.00001	0.00035	0.000	30.00	0.39	753.600	63.300
WSTLD-1	67	2.10	STONES THROW APTS	0.00105	0.03713	0.024	30.00	0.39	753.600	63.300
WSTLD-1	73	1.50	GOOD VALUE AUTO SALE	0.00000	0.00011	0.000	30.00	0.39	753.600	63.300
WSTLD-1	74	1.40	ADAMS MHP	0.00012	0.00406	0.003	30.00	0.39	753.600	63.300
WSTLD-1	79	0.90	WADLEIGH OFFSHORE	0.00004	0.00155	0.001	30.00	0.39	753.600	63.300
WSTLD-1	80	0.80	EXXONMOBIL #51367	0.00014	0.00483	0.003	30.00	0.39	753.600	63.300
WSTLD-1	81	0.70	LCR-M PLUMBING SUPP	0.00001	0.00023	0.000	30.00	0.39	753.600	63.300
WSTLD-1	83	0.50	BAKER-ELLIS-SHAMROCK	0.00002	0.00081	0.001	30.00	0.39	753.600	63.300
WSTLD-1	84	0.40	NORTHSHORE CHEMICAL	0.00000	0.00011	0.000	30.00	0.39	753.600	63.300
WSTLD-1	85	0.30	MANHEIM AUTO AUCTION	0.00000	0.00000	0.000	30.00	0.39	753.600	63.300
WSTLD-1	87	0.10	WADLEIGH FITNESS	0.00002	0.00058	0.000	30.00	0.39	753.600	63.300
WSTLD-1	102	0.80	JUBILEE #4815	0.00009	0.00329	0.002	30.00	0.39	753.600	63.300
WSTLD-1	107	0.30	JOHNSON-BLDG 2	0.00008	0.00270	0.002	30.00	0.39	753.600	63.300
WSTLD-1	119	2.10	CHARTER-JOHN'S AUTO	0.00001	0.00034	0.000	30.00	0.39	753.600	63.300
WSTLD-1	125	1.50	I-12 SHELL	0.00001	0.00031	0.000	30.00	0.39	753.600	63.300
WSTLD-1	135	0.50	ST TAM PAR SCH MAINT	0.00001	0.00019	0.000	30.00	0.39	753.600	63.300
WSTLD-1	136	0.40	J&D-VETS HEALTH/OMNI	0.00004	0.00147	0.001	30.00	0.39	753.600	63.300
WSTLD-1	183	1.00	GOOD SHEPHERD CHURCH	0.00006	0.00213	0.001	30.00	0.39	753.600	63.300
WSTLD-1	221	1.80	JOLLY APARTMENTS	0.00031	0.01102	0.007	30.00	0.39	753.600	63.300
WSTLD-1	222	1.70	PINEY RIDGE MHP	0.00051	0.01798	0.012	30.00	0.39	753.600	63.300
WSTLD-1	223	1.60	STARLING PLAZA	0.00016	0.00553	0.004	30.00	0.39	753.600	63.300

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

WSTLD-1	224	1.50	PO FOLKS SEAFOOD	0.00003	0.00095	0.001	30.00	0.39	753.600	63.300
WSTLD-1	227	1.20	SOUTH SEAS RSTRNT	0.00011	0.00377	0.002	30.00	0.39	753.600	63.300
WSTLD-1	228	1.10	SHADY PINES MHP	0.00058	0.02030	0.013	30.00	0.39	753.600	63.300
WSTLD-1	230	0.90	1421HWY190-ARMACOAT	0.00004	0.00124	0.001	30.00	0.39	753.600	63.300
WSTLD-1	231	0.80	FACDIR-STTAMBRACKETAG	0.00000	0.00015	0.000	30.00	0.39	753.600	63.300
WSTLD-1	232	0.70	NEW LIFE MINISTRIES	0.00003	0.00095	0.001	30.00	0.39	753.600	63.300
WSTLD-1	233	0.60	PEACE LUTH CHURCH	0.00013	0.00458	0.003	30.00	0.39	753.600	63.300
WSTLD-1	234	0.50	ERNEST WALDER	0.00002	0.00070	0.000	30.00	0.39	753.600	63.300
WSTLD-1	235	0.40	STOR N LOCK-TYMELESS	0.00001	0.00027	0.000	30.00	0.39	753.600	63.300
WSTLD-1	260	0.30	BONFOUCA SUPFND SITE	0.00063	0.02228	0.014	30.00	0.22	437.300	23.500
WSTLD-1	281	10.30	DOTD BNFCA BRIDGE	0.00000	0.00004	0.000	30.00	0.39	753.600	63.300
WSTLD-1	282	10.20	SLIDELL MARINE	0.00020	0.00715	0.005	30.00	0.39	753.600	63.300
WSTLD-1	284	0.30	ARC MECH CONTRACTORS	0.00001	0.00019	0.000	30.00	0.39	753.600	200.000
WSTLD-1	289	9.80	PEARL RIVER NAV	0.00019	0.00677	0.004	30.00	0.39	753.600	63.300
WSTLD-1	295	1.50	STP CONST BUILDING	0.00004	0.00155	0.001	30.00	0.39	753.600	63.300
WSTLD-1	346	1.90	ACADIAN GRDNS CONDOS	0.00041	0.01450	0.009	30.00	0.39	753.600	63.300
WSTLD-1	351	1.40	OAKWOOD ESTATES	0.00068	0.02398	0.015	30.00	0.39	753.600	63.300
WSTLD-1	389	5.20	COIN DU LESTIN SUB	0.00438	0.15470	0.100	30.00	0.32	628.100	54.300
WSTLD-1	439	2.40	NORTHSHORE SQUADRON	0.00000	0.00005	0.000	30.00	0.39	753.600	63.300
WSTLD-1	442	2.10	ANDY KNIGHT	0.00000	0.00007	0.000	30.00	0.39	753.600	63.300
WSTLD-1	470	0.30	THE MEADOWS SUB	0.01512	0.53373	0.345	30.00	0.55	1053.000	150.000
WSTLD-1	482	2.70	ROYAL GOLF CLUB	0.00024	0.00839	0.005	30.00	0.39	753.600	63.300
WSTLD-1	494	1.50	NATFINANCE-TEXTRON	0.00022	0.00773	0.005	30.00	0.39	753.600	63.300
WSTLD-1	495	1.40	GUARDIAN ANGELS	0.00005	0.00180	0.001	30.00	0.39	753.600	63.300
WSTLD-1	498	1.10	OAKMONT SUBDIVISIO	0.00387	0.13653	0.088	30.00	0.32	619.500	47.000
WSTLD-1	536	2.30	ASSUNTA'S RESTAURANT	0.00016	0.00561	0.004	30.00	0.39	753.600	63.300
WSTLD-1	544	1.50	INDIAN HILLS RV PARK	0.00043	0.01523	0.010	30.00	0.39	753.600	63.300
WSTLD-1	546	1.30	J&J AUTO BROKERS	0.00000	0.00007	0.000	30.00	0.39	753.600	63.300
WSTLD-1	548	1.10	7THDAY & DOLLAR GEN	0.00008	0.00265	0.002	30.00	0.39	753.600	63.300
WSTLD-1	550	0.90	OMNI STORAGE VI	0.00002	0.00058	0.000	30.00	0.39	753.600	63.300
WSTLD-1	551	0.80	ABC SUPPLY CO	0.00001	0.00027	0.000	30.00	0.39	753.600	63.300
WSTLD-1	552	0.70	LION CONSULTING	0.00000	0.00007	0.000	30.00	0.39	753.600	63.300
WSTLD-1	553	0.60	CHILL RITE	0.00001	0.00042	0.000	30.00	0.39	753.600	63.300
WSTLD-1	555	0.40	HERRON-2315/17/19	0.00003	0.00110	0.001	30.00	0.39	753.600	63.300
WSTLD-1	556	0.30	THOMGROC-ST POL JURY	0.00001	0.00019	0.000	30.00	0.39	753.600	63.300
WSTLD-1	557	0.20	PITSTOP3-REFLECTMIR	0.00008	0.00270	0.002	30.00	0.39	753.600	63.300
WSTLD-1	576	0.30	ALL AM ELKS LODGE	0.00009	0.00309	0.002	30.00	0.39	753.600	63.300
WSTLD-1	585	1.40	LAKE CASTLE SCHOOL	0.00048	0.01682	0.011	30.00	0.39	753.600	63.300
WSTLD-1	601	4.20	BLUEBELL-NULITE	0.00005	0.00166	0.001	30.00	0.39	753.600	63.300
WSTLD-1	602	4.10	ALBERS AC & HEATING	0.00001	0.00023	0.000	30.00	0.39	753.600	63.300
WSTLD-1	611	3.20	BAKER SALES WRHSE	0.00000	0.00007	0.000	30.00	0.39	753.600	63.300
WSTLD-1	614	2.90	CLECO SERVICE CENTER	0.00001	0.00038	0.000	30.00	0.39	753.600	63.300
WSTLD-1	615	2.80	G&S-UNITED MEDICAL	0.00002	0.00070	0.000	30.00	0.39	753.600	63.300
WSTLD-1	616	2.70	AIRGAS-HANNA-SUNBELT	0.00087	0.03055	0.020	30.00	0.39	753.600	63.300
WSTLD-1	617	2.60	AVC ELECTRIC	0.00000	0.00004	0.000	30.00	0.39	753.600	63.300
WSTLD-1	619	2.40	M&R-WAGNERSHOPCTR	0.00011	0.00385	0.002	30.00	0.39	753.600	63.300
WSTLD-1	620	2.30	CALWES CENTER	0.00023	0.00802	0.005	30.00	0.39	753.600	63.300
WSTLD-1	621	2.20	BEAU'S-LA LUMBER	0.00003	0.00104	0.001	30.00	0.39	753.600	63.300
WSTLD-1	625	1.80	ADVANCE AUTO	0.00001	0.00019	0.000	30.00	0.39	753.600	63.300
WSTLD-1	633	1.00	HUNTWYCK VILLAGE	0.01522	0.53760	0.348	30.00	0.30	582.300	52.500
WSTLD-1	667	0.50	B LIBERTY WATER ASSN	0.00001	0.00035	0.000	30.00	0.39	753.600	63.300
WSTLD-1	680	1.60	THOMPSON RD BAPTIST	0.00004	0.00155	0.001	30.00	0.39	753.600	63.300
WSTLD-1	698	0.70	LIBERTY FOOD STORE	0.00003	0.00110	0.001	30.00	0.39	753.600	63.300
WSTLD-1	715	0.60	A-1 REMODELING & BLD	0.00001	0.00038	0.000	30.00	0.39	753.600	63.300
WSTLD-1	723	3.00	ST GENEVIEVE CATH CH	0.00016	0.00580	0.004	30.00	0.39	753.600	63.300
WSTLD-1	728	0.10	BAYOU LIBERTY MARINA	0.00000	0.00004	0.000	30.00	0.39	753.600	63.300
WSTLD-1	746	0.20	A BONFOUCA MARINA	0.00005	0.00166	0.001	30.00	0.39	753.600	63.300
WSTLD-1	762	8.60	WASTE MGMT OF LA	0.00003	0.00096	0.001	30.00	0.39	753.600	63.300
WSTLD-1	763	8.50	ACALIGN-ALLAM-CT-M&D	0.00001	0.00035	0.000	30.00	0.39	753.600	63.300
WSTLD-1	767	8.10	K-BAR-B YOUTH RANCH	0.00013	0.00445	0.003	30.00	0.39	753.600	63.300
WSTLD-1	776	7.20	BAYOU PAQUET HEADWAT	0.00283	0.10000	0.065	33.80	0.26	520.900	7.230
WSTLD-1	797	0.90	ACTS 1 TAX SERVICE	0.00000	0.00011	0.000	30.00	0.39	753.600	63.300
WSTLD-1	819	1.70	TIMBER RIDGE SUB	0.00243	0.08586	0.056	30.00	0.45	864.700	41.600

ENDATA24

\$\$\$ DATA TYPE 25 (WASTELOAD DATA FOR DO, BOD, AND NITROGEN) \$\$\$

CARD TYPE	ELEMENT	NAME	DO	BOD	% BOD	NBOD	%	NITRIF	BOD2
			mg/L	mg/L	RMVL	mg/L	mg/L		mg/L

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

WSTLD-2	1	V H SEAL APARTMENTS	2.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00
WSTLD-2	40	GROUNDWATER	6.00	2.70	0.00	1.19	0.00	0.00	0.00	0.00
WSTLD-2	48	EAGLE LAKE MHP	5.00	11.50	0.00	8.60	0.00	0.00	0.00	0.00
WSTLD-2	63	J&K MANAGEMENT LLC	2.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00
WSTLD-2	67	STONES THROW APTS	2.00	23.00	0.00	8.60	0.00	0.00	0.00	0.00
WSTLD-2	73	GOOD VALUE AUTO SALE	2.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00
WSTLD-2	74	ADAMS MHP	2.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00
WSTLD-2	79	WADLEIGH OFFSHORE	2.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00
WSTLD-2	80	EXXONMOBIL #51367	2.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00
WSTLD-2	81	LCR-M PLUMBING SUPP	2.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00
WSTLD-2	83	BAKER-ELLIS-SHAMROCK	2.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00
WSTLD-2	84	NORTHSHORE CHEMICAL	2.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00
WSTLD-2	85	MANHEIM AUTO AUCTION	2.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00
WSTLD-2	87	WADLEIGH FITNESS	2.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00
WSTLD-2	102	JUBILEE #4815	2.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00
WSTLD-2	107	JOHNSON-BLDG 2	2.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00
WSTLD-2	119	CHARTER-JOHN'S AUTO	2.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00
WSTLD-2	125	I-12 SHELL	2.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00
WSTLD-2	135	ST TAM PAR SCH MAINT	2.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00
WSTLD-2	136	J&D-VETS HEALTH/OMNI	2.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00
WSTLD-2	183	GOOD SHEPHERD CHURCH	2.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00
WSTLD-2	221	JOLLY APARTMENTS	2.00	23.00	0.00	8.60	0.00	0.00	0.00	0.00
WSTLD-2	222	PINEY RIDGE MHP	2.00	23.00	0.00	8.60	0.00	0.00	0.00	0.00
WSTLD-2	223	STARLING PLAZA	2.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00
WSTLD-2	224	PO FOLKS SEAFOOD	2.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00
WSTLD-2	227	SOUTH SEAS RSTRNT	2.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00
WSTLD-2	228	SHADY PINES MHP	2.00	23.00	0.00	8.60	0.00	0.00	0.00	0.00
WSTLD-2	230	1421HWY190-ARMACOAT	2.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00
WSTLD-2	231	FACDIR-STTAMBRACKETAG	2.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00
WSTLD-2	232	NEW LIFE MINISTRIES	2.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00
WSTLD-2	233	PEACE LUTH CHURCH	2.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00
WSTLD-2	234	ERNEST WALDER	2.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00
WSTLD-2	235	STOR N LOCK-TYMELESS	2.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00
WSTLD-2	260	BONFOUCA SUPFND SITE	2.00	1.33	0.00	1.74	0.00	0.00	0.00	0.00
WSTLD-2	281	DOTD BNFCA BRIDGE	2.00	46.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	282	SLIDELL MARINE	2.00	46.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	284	ARC MECH CONTRACTORS	2.00	69.00	0.00	64.50	0.00	0.00	0.00	0.00
WSTLD-2	289	PEARL RIVER NAV	2.00	69.00	0.00	64.50	0.00	0.00	0.00	0.00
WSTLD-2	295	STP CONST BUILDING	2.00	69.00	0.00	64.50	0.00	0.00	0.00	0.00
WSTLD-2	346	ACADIAN GRDNS CONDOS	2.00	69.00	0.00	64.50	0.00	0.00	0.00	0.00
WSTLD-2	351	OAKWOOD ESTATES	2.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	389	COIN DU LESTIN SUB	2.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	439	NORTHSHORE SQUADRON	2.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00
WSTLD-2	442	ANDY KNIGHT	2.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00
WSTLD-2	470	THE MEADOWS SUB	2.00	11.50	0.00	8.60	0.00	0.00	0.00	0.00
WSTLD-2	482	ROYAL GOLF CLUB	2.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00
WSTLD-2	494	NATFINANCE-TEXTRON	2.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00
WSTLD-2	495	GUARDIAN ANGELS	2.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00
WSTLD-2	498	OAKMONT SUBDIVISIO	2.00	11.50	0.00	8.60	0.00	0.00	0.00	0.00
WSTLD-2	536	ASSUNTA'S RESTAURANT	2.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	544	INDIAN HILLS RV PARK	2.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00
WSTLD-2	546	J&J AUTO BROKERS	2.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	548	7THDAY & DOLLAR GEN	2.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	550	OMNI STORAGE VI	2.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	551	ABC SUPPLY CO	2.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	552	LION CONSULTING	2.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	553	CHILL RITE	2.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	555	HERRON-2315/17/19	2.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	556	THOMGROC-ST POL JURY	2.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	557	PITSTOP3-REFLECTMIR	2.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	576	ALL AM ELKS LODGE	2.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	585	LAKE CASTLE SCHOOL	2.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00
WSTLD-2	601	BLUEBELL-NULITE	2.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	602	ALBERS AC & HEATING	2.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	611	BAKER SALES WRHSE	2.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	614	CLECO SERVICE CENTER	2.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	615	G&S-UNITED MEDICAL	2.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	616	AIRGAS-HANNA-SUNBELT	2.00	23.00	0.00	25.30	0.00	0.00	0.00	0.00
WSTLD-2	617	AVC ELECTRIC	2.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	619	M&R-WAGNERSHOPCTR	2.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

WSTLD-2	620	CALWES CENTER	2.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	621	BEAU'S-LA LUMBER	2.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	625	ADVANCE AUTO	2.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	633	HUNTWYCK VILLAGE	2.00	23.00	0.00	8.60	0.00	0.00	0.00	0.00
WSTLD-2	667	B LIBERTY WATER ASSN	2.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	680	THOMPSON RD BAPTIST	2.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	698	LIBERTY FOOD STORE	2.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	715	A-1 REMODELING & BLD	2.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	723	ST GENEVIEVE CATH CH	2.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	728	BAYOU LIBERTY MARINA	2.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	746	A BONFOUCA MARINA	2.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	762	WASTE MGMT OF LA	2.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	763	ACALIGN-ALLAM-CT-M&D	2.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	767	K-BAR-B YOUTH RANCH	2.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	776	BAYOU PAQUET HEADWAT	6.00	1.76	0.00	0.77	0.00	0.00	0.00	0.00
WSTLD-2	797	ACTS 1 TAX SERVICE	2.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	819	TIMBER RIDGE SUB	2.00	23.00	0.00	8.60	0.00	0.00	0.00	0.00
ENDATA25										

\$\$\$ DATA TYPE 26 (WASTELOAD DATA FOR PHOSPHORUS, PHYTOPLANTON, COLIFORM, AND NONCONSERVATIVES) \$\$\$

CARD TYPE	ELEMENT	NAME	PO4-P mg/L	PHYTO		COLI #/100mL	NCM	ORG-P mg/L
				CHL A µg/L				
WSTLD-3	1	V H SEAL APARTMENTS	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	40	GROUNDWATER	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	48	EAGLE LAKE MHP	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	63	J&K MANAGEMENT LLC	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	67	STONES THROW APTS	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	73	GOOD VALUE AUTO SALE	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	74	ADAMS MHP	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	79	WADLEIGH OFFSHORE	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	80	EXXONMOBIL #51367	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	81	LCR-M PLUMBING SUPP	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	83	BAKER-ELLIS-SHAMROCK	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	84	NORTHSHORE CHEMICAL	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	85	MANHEIM AUTO AUCTION	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	87	WADLEIGH FITNESS	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	102	JUBILEE #4815	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	107	JOHNSON-BLDG 2	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	119	CHARTER-JOHN'S AUTO	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	125	I-12 SHELL	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	135	ST TAM PAR SCH MAINT	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	136	J&D-VETS HEALTH/OMNI	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	183	GOOD SHEPHERD CHURCH	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	221	JOLLY APARTMENTS	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	222	PINEY RIDGE MHP	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	223	STARLING PLAZA	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	224	PO FOLKS SEAFOOD	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	227	SOUTH SEAS RSTRNT	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	228	SHADY PINES MHP	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	230	1421HWY190-ARMACOAT	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	231	FACDIR-STTAMBRACKETAG	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	232	NEW LIFE MINISTRIES	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	233	PEACE LUTH CHURCH	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	234	ERNEST WALDER	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	235	STOR N LOCK-TYMELESS	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	260	BONFOUCA SUPFND SITE	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	281	DOTD BNFCA BRIDGE	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	282	SLIDELL MARINE	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	284	ARC MECH CONTRACTORS	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	289	PEARL RIVER NAV	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	295	STP CONST BUILDING	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	346	ACADIAN GRDNS CONDOS	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	351	OAKWOOD ESTATES	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	389	COIN DU LESTIN SUB	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	439	NORTHSHORE SQUADRON	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	442	ANDY KNIGHT	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	470	THE MEADOWS SUB	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	482	ROYAL GOLF CLUB	0.00	0.00	0.00	0.00	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

WSTLD-3	494	NATFINANCE-TEXTRON	0.00	0.00	0.00	0.00	0.00
WSTLD-3	495	GUARDIAN ANGELS	0.00	0.00	0.00	0.00	0.00
WSTLD-3	498	OAKMONT SUBDIVISIO	0.00	0.00	0.00	0.00	0.00
WSTLD-3	536	ASSUNTA'S RESTAURANT	0.00	0.00	0.00	0.00	0.00
WSTLD-3	544	INDIAN HILLS RV PARK	0.00	0.00	0.00	0.00	0.00
WSTLD-3	546	J&J AUTO BROKERS	0.00	0.00	0.00	0.00	0.00
WSTLD-3	548	7THDAY & DOLLAR GEN	0.00	0.00	0.00	0.00	0.00
WSTLD-3	550	OMNI STORAGE VI	0.00	0.00	0.00	0.00	0.00
WSTLD-3	551	ABC SUPPLY CO	0.00	0.00	0.00	0.00	0.00
WSTLD-3	552	LION CONSULTING	0.00	0.00	0.00	0.00	0.00
WSTLD-3	553	CHILL RITE	0.00	0.00	0.00	0.00	0.00
WSTLD-3	555	HERRON-2315/17/19	0.00	0.00	0.00	0.00	0.00
WSTLD-3	556	THOMGROC-ST POL JURY	0.00	0.00	0.00	0.00	0.00
WSTLD-3	557	PITSTOP3-REFLECTMIR	0.00	0.00	0.00	0.00	0.00
WSTLD-3	576	ALL AM ELKS LODGE	0.00	0.00	0.00	0.00	0.00
WSTLD-3	585	LAKE CASTLE SCHOOL	0.00	0.00	0.00	0.00	0.00
WSTLD-3	601	BLUEBELL-NULITE	0.00	0.00	0.00	0.00	0.00
WSTLD-3	602	ALBERS AC & HEATING	0.00	0.00	0.00	0.00	0.00
WSTLD-3	611	BAKER SALES WRHSE	0.00	0.00	0.00	0.00	0.00
WSTLD-3	614	CLECO SERVICE CENTER	0.00	0.00	0.00	0.00	0.00
WSTLD-3	615	G&S-UNITED MEDICAL	0.00	0.00	0.00	0.00	0.00
WSTLD-3	616	AIRGAS-HANNA-SUNBELT	0.00	0.00	0.00	0.00	0.00
WSTLD-3	617	AVC ELECTRIC	0.00	0.00	0.00	0.00	0.00
WSTLD-3	619	M&R-WAGNERSHOPCTR	0.00	0.00	0.00	0.00	0.00
WSTLD-3	620	CALWES CENTER	0.00	0.00	0.00	0.00	0.00
WSTLD-3	621	BEAU'S-LA LUMBER	0.00	0.00	0.00	0.00	0.00
WSTLD-3	625	ADVANCE AUTO	0.00	0.00	0.00	0.00	0.00
WSTLD-3	633	HUNTWYCK VILLAGE	0.00	0.00	0.00	0.00	0.00
WSTLD-3	667	B LIBERTY WATER ASSN	0.00	0.00	0.00	0.00	0.00
WSTLD-3	680	THOMPSON RD BAPTIST	0.00	0.00	0.00	0.00	0.00
WSTLD-3	698	LIBERTY FOOD STORE	0.00	0.00	0.00	0.00	0.00
WSTLD-3	715	A-1 REMODELING & BLD	0.00	0.00	0.00	0.00	0.00
WSTLD-3	723	ST GENEVIEVE CATH CH	0.00	0.00	0.00	0.00	0.00
WSTLD-3	728	BAYOU LIBERTY MARINA	0.00	0.00	0.00	0.00	0.00
WSTLD-3	746	A BONFOUCA MARINA	0.00	0.00	0.00	0.00	0.00
WSTLD-3	762	WASTE MGMT OF LA	0.00	0.00	0.00	0.00	0.00
WSTLD-3	763	ACALIGN-ALLAM-CT-M&D	0.00	0.00	0.00	0.00	0.00
WSTLD-3	767	K-BAR-B YOUTH RANCH	0.00	0.00	0.00	0.00	0.00
WSTLD-3	776	BAYOU PAQUET HEADWAT	0.00	0.00	0.00	0.00	0.00
WSTLD-3	797	ACTS 1 TAX SERVICE	0.00	0.00	0.00	0.00	0.00
WSTLD-3	819	TIMBER RIDGE SUB	0.00	0.00	0.00	0.00	0.00

ENDATA26

\$\$\$ DATA TYPE 27 (LOWER BOUNDARY CONDITIONS) \$\$\$

CARD TYPE	CONSTITUENT	CONCENTRATION
LOWER BC	TEMPERATURE	= 29.980 deg C
LOWER BC	SALINITY	= 3.940 ppt
LOWER BC	CONSERVATIVE MATERIAL I	= 7096.000
LOWER BC	CONSERVATIVE MATERIAL II	= 2200.000
LOWER BC	DISSOLVED OXYGEN	= 6.800 mg/L
LOWER BC	BOD1 BIOCHEMICAL OXYGEN DEMAND	= 7.820 mg/L
LOWER BC	BOD2 BIOCHEMICAL OXYGEN DEMAND	= 0.000 mg/L
LOWER BC	PHYTOPLANKTON	= 5.550 µg/L
LOWER BC	COLIFORM	= 0.000 #/100 mL
LOWER BC	NONCONSERVATIVE MATERIAL	= 0.000
LOWER BC	NBOD	= 1.800 mg/L

ENDATA27

\$\$\$ DATA TYPE 28 (DAM DATA) \$\$\$

CARD TYPE	ELEMENT	NAME	EQN	"A"	"B"	"H"
-----------	---------	------	-----	-----	-----	-----

ENDATA28

\$\$\$ DATA TYPE 29 (SENSITIVITY ANALYSIS DATA) \$\$\$

CARD TYPE	PARAMETER	COL 1	COL 2	COL 3	COL 4	COL 5	COL 6	COL 7	COL 8
-----------	-----------	-------	-------	-------	-------	-------	-------	-------	-------

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

SENSITIV BASEFLOW 30.0 -30.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

ENDATA29

\$\$\$ DATA TYPE 30 (PLOT CONTROL CARDS) \$\$\$

PLOT1
RCH 1 2 3 4 6 8 10 11 12 17 19 20 22 24 27 28 30 33 34 35 36 37 91
PLOT2
RCH 13 15 16
PLOT3
RCH 38 40 42 44 45 47 48 50 52 54 55 56 57 60 63 66 67 70 72 74 90
PLOT4
RCH 75 76 78 80 81 82 83 85 88 89
ENDATA30

\$\$\$ DATA TYPE 31 (OVERLAY PLOT DATA) \$\$\$

OVERLAY1 VINCENT-BONFOUCA.OVL
OVERLAY2 UPPER_BONFOUCA.OVL
OVERLAY3 LIBERTY.OVL
OVERLAY4 PAQUET.OVL
ENDATA31

.....NO ERRORS DETECTED IN INPUT DATA
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN 3 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED
.....GRAPHICS DATA FOR PLOT 1 WRITTEN TO UNIT 11
.....GRAPHICS DATA FOR PLOT 2 WRITTEN TO UNIT 12
.....GRAPHICS DATA FOR PLOT 3 WRITTEN TO UNIT 13
.....GRAPHICS DATA FOR PLOT 4 WRITTEN TO UNIT 14

FINAL REPORT B VINCENT & BONFOUCA
REACH NO. 1 DRAINAGE DITCH 1

WATER QUALITY/HYDRAULIC MODEL FOR:
BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL mg/L	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
1	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	0.63	0.00	0.63	0.00	0.29	0.00	0.00	0.00	0.00	0.00	0.00
1	WSTLD	0.00004	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
1	24.20	24.10	0.00032	12.7	0.00593	0.20	0.20	0.05	1.04	5.46	104.12	0.05	0.00	0.000	0.000	0.006
2	24.10	24.00	0.00032	12.7	0.00593	0.20	0.39	0.05	1.04	5.46	104.12	0.05	0.00	0.000	0.000	0.006
3	24.00	23.90	0.00032	12.7	0.00593	0.20	0.59	0.05	1.04	5.46	104.12	0.05	0.00	0.000	0.000	0.006
4	23.90	23.80	0.00032	12.7	0.00593	0.20	0.78	0.05	1.04	5.46	104.12	0.05	0.00	0.000	0.000	0.006
5	23.80	23.70	0.00032	12.7	0.00593	0.20	0.98	0.05	1.04	5.46	104.12	0.05	0.00	0.000	0.000	0.006
6	23.70	23.60	0.00032	12.7	0.00593	0.20	1.17	0.05	1.04	5.46	104.12	0.05	0.00	0.000	0.000	0.006
7	23.60	23.50	0.00032	12.7	0.00593	0.20	1.37	0.05	1.04	5.46	104.12	0.05	0.00	0.000	0.000	0.006
8	23.50	23.40	0.00032	12.7	0.00593	0.20	1.56	0.05	1.04	5.46	104.12	0.05	0.00	0.000	0.000	0.006
9	23.40	23.30	0.00032	12.7	0.00593	0.20	1.76	0.05	1.04	5.46	104.12	0.05	0.00	0.000	0.000	0.006
10	23.30	23.20	0.00032	12.7	0.00593	0.20	1.95	0.05	1.04	5.46	104.12	0.05	0.00	0.000	0.000	0.006
11	23.20	23.10	0.00032	12.7	0.00593	0.20	2.15	0.05	1.04	5.46	104.12	0.05	0.00	0.000	0.000	0.006
12	23.10	23.00	0.00032	12.7	0.00593	0.20	2.34	0.05	1.04	5.46	104.12	0.05	0.00	0.000	0.000	0.006

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

13	23.00	22.90	0.00032	12.7	0.00593	0.20	2.54	0.05	1.04	5.46	104.12	0.05	0.00	0.000	0.000	0.006
14	22.90	22.80	0.00032	12.7	0.00593	0.20	2.73	0.05	1.04	5.46	104.12	0.05	0.00	0.000	0.000	0.006
15	22.80	22.70	0.00032	12.7	0.00593	0.20	2.93	0.05	1.04	5.46	104.12	0.05	0.00	0.000	0.000	0.006
16	22.70	22.60	0.00032	12.7	0.00593	0.20	3.12	0.05	1.04	5.46	104.12	0.05	0.00	0.000	0.000	0.006
17	22.60	22.50	0.00032	12.7	0.00593	0.20	3.32	0.05	1.04	5.46	104.12	0.05	0.00	0.000	0.000	0.006
18	22.50	22.40	0.00032	12.7	0.00593	0.20	3.51	0.05	1.04	5.46	104.12	0.05	0.00	0.000	0.000	0.006
19	22.40	22.30	0.00032	12.7	0.00593	0.20	3.71	0.05	1.04	5.46	104.12	0.05	0.00	0.000	0.000	0.006
20	22.30	22.20	0.00032	12.7	0.00593	0.20	3.90	0.05	1.04	5.46	104.12	0.05	0.00	0.000	0.000	0.006
21	22.20	22.10	0.00032	12.7	0.00593	0.20	4.10	0.05	1.04	5.46	104.12	0.05	0.00	0.000	0.000	0.006
22	22.10	22.00	0.00032	12.7	0.00593	0.20	4.29	0.05	1.04	5.46	104.12	0.05	0.00	0.000	0.000	0.006
23	22.00	21.90	0.00032	12.7	0.00593	0.20	4.49	0.05	1.04	5.46	104.12	0.05	0.00	0.000	0.000	0.006
24	21.90	21.80	0.00032	12.7	0.00593	0.20	4.69	0.05	1.04	5.46	104.12	0.05	0.00	0.000	0.000	0.006
25	21.80	21.70	0.00032	12.7	0.00593	0.20	4.88	0.05	1.04	5.46	104.12	0.05	0.00	0.000	0.000	0.006
26	21.70	21.60	0.00032	12.7	0.00593	0.20	5.08	0.05	1.04	5.46	104.12	0.05	0.00	0.000	0.000	0.006
27	21.60	21.50	0.00032	12.7	0.00593	0.20	5.27	0.05	1.04	5.46	104.12	0.05	0.00	0.000	0.000	0.006
28	21.50	21.40	0.00032	12.7	0.00593	0.20	5.47	0.05	1.04	5.46	104.12	0.05	0.00	0.000	0.000	0.006
29	21.40	21.30	0.00032	12.7	0.00593	0.20	5.66	0.05	1.04	5.46	104.12	0.05	0.00	0.000	0.000	0.006
30	21.30	21.20	0.00032	12.7	0.00593	0.20	5.86	0.05	1.04	5.46	104.12	0.05	0.00	0.000	0.000	0.006
31	21.20	21.10	0.00032	12.7	0.00593	0.20	6.05	0.05	1.04	5.46	104.12	0.05	0.00	0.000	0.000	0.006
32	21.10	21.00	0.00032	12.7	0.00593	0.20	6.25	0.05	1.04	5.46	104.12	0.05	0.00	0.000	0.000	0.006
33	21.00	20.90	0.00032	12.7	0.00593	0.20	6.44	0.05	1.04	5.46	104.12	0.05	0.00	0.000	0.000	0.006
34	20.90	20.80	0.00032	12.7	0.00593	0.20	6.64	0.05	1.04	5.46	104.12	0.05	0.00	0.000	0.000	0.006
35	20.80	20.70	0.00032	12.7	0.00593	0.20	6.83	0.05	1.04	5.46	104.12	0.05	0.00	0.000	0.000	0.006
36	20.70	20.60	0.00032	12.7	0.00593	0.20	7.03	0.05	1.04	5.46	104.12	0.05	0.00	0.000	0.000	0.006
37	20.60	20.50	0.00032	12.7	0.00593	0.20	7.22	0.05	1.04	5.46	104.12	0.05	0.00	0.000	0.000	0.006
38	20.50	20.40	0.00032	12.7	0.00593	0.20	7.42	0.05	1.04	5.46	104.12	0.05	0.00	0.000	0.000	0.006
39	20.40	20.30	0.00032	12.7	0.00593	0.20	7.61	0.05	1.04	5.46	104.12	0.05	0.00	0.000	0.000	0.006
TOT							7.61			213.13	4060.69					
AVG				0.0059				0.05	1.04				0.05			

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR 1/da	BOD2 DECAT 1/da	BOD2 SETT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR	ORG-N SETT 1/da	NH3-N DECAT 1/da	NH3-N SRCE 1/da	DENIT RATE	ORG-P HYDR	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da	
1	24.100	7.49	17.28	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.28	0.46	0.46	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	24.000	7.49	17.28	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.28	0.43	0.43	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
3	23.900	7.49	17.28	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.28	0.41	0.41	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4	23.800	7.49	17.28	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.28	0.39	0.39	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
5	23.700	7.49	17.28	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.28	0.37	0.37	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
6	23.600	7.49	17.28	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.28	0.36	0.36	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
7	23.500	7.49	17.28	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.28	0.35	0.35	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
8	23.400	7.49	17.28	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.28	0.35	0.35	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
9	23.300	7.49	17.28	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.28	0.34	0.34	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
10	23.200	7.49	17.28	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.28	0.34	0.34	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
11	23.100	7.49	17.28	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.28	0.33	0.33	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12	23.000	7.49	17.28	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.28	0.33	0.33	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
13	22.900	7.49	17.28	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.28	0.33	0.33	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
14	22.800	7.49	17.28	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.28	0.33	0.33	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
15	22.700	7.49	17.28	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.28	0.32	0.32	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
16	22.600	7.49	17.28	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.28	0.32	0.32	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
17	22.500	7.49	17.28	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.28	0.32	0.32	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
18	22.400	7.49	17.28	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.28	0.32	0.32	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
19	22.300	7.49	17.28	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.28	0.32	0.32	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
20	22.200	7.49	17.28	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.28	0.32	0.32	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
21	22.100	7.49	17.28	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.28	0.32	0.32	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
22	22.000	7.49	17.28	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.28	0.32	0.32	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
23	21.900	7.49	17.28	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.28	0.32	0.32	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
24	21.800	7.49	17.28	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.28	0.32	0.32	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
25	21.700	7.49	17.28	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.28	0.32	0.32	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
26	21.600	7.49	17.28	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.28	0.32	0.32	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
27	21.500	7.49	17.28	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.28	0.32	0.32	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
28	21.400	7.49	17.28	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.28	0.32	0.32	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
29	21.300	7.49	17.28	0.1																							

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

32	21.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
33	20.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
34	20.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
35	20.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
36	20.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
37	20.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
38	20.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
39	20.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT B VINCENT & BONFOUCA
REACH NO. 2 VINCENT FROM RKM 20.0 TO BV01

WATER QUALITY/HYDRAULIC MODEL FOR:
BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
40	UPR RCH	0.00032	30.40	0.28	550.35	14.33	7.14	0.65	0.00	0.65	0.00	0.29	0.00	0.00	0.00	0.00	0.00	0.00
40	WSTLD	0.00550	33.80	0.26	520.90	7.23	6.00	2.70	0.00	2.70	0.00	1.19	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
40	20.30	20.20	0.00582	95.1	0.11209	0.01	7.62	0.05	1.02	5.20	101.77	0.05	0.00	0.000	0.000	0.112
41	20.20	20.10	0.00582	95.1	0.11209	0.01	7.63	0.05	1.02	5.20	101.77	0.05	0.00	0.000	0.000	0.112
42	20.10	20.00	0.00582	95.1	0.11209	0.01	7.64	0.05	1.02	5.20	101.77	0.05	0.00	0.000	0.000	0.112
43	20.00	19.90	0.00582	95.1	0.11209	0.01	7.65	0.05	1.02	5.20	101.77	0.05	0.00	0.000	0.000	0.112
44	19.90	19.80	0.00582	95.1	0.11209	0.01	7.67	0.05	1.02	5.20	101.77	0.05	0.00	0.000	0.000	0.112
45	19.80	19.70	0.00582	95.1	0.11209	0.01	7.68	0.05	1.02	5.20	101.77	0.05	0.00	0.000	0.000	0.112
46	19.70	19.60	0.00582	95.1	0.11209	0.01	7.69	0.05	1.02	5.20	101.77	0.05	0.00	0.000	0.000	0.112
47	19.60	19.50	0.00582	95.1	0.11209	0.01	7.70	0.05	1.02	5.20	101.77	0.05	0.00	0.000	0.000	0.112
TOT						0.08				41.57	814.18					
AVG				0.1121				0.05	1.02			0.05				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECAT	BOD1 SETT	ABOD1 DECAT	BOD1 HYDR	BOD2 DECAT	ABOD2 SETT	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECAT	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECAT	NCM DECAT	NCM SETT
		mg/L	1/da	1/da	1/da	1/da	1/da	1/da	1/da	*	*	*	1/da	1/da	1/da	1/da	1/da	1/da	1/da	*	**	**	1/da	1/da	1/da
40	20.200	7.50	30.28	0.13	1.25	0.00	0.00	0.00	0.00	0.17	0.33	0.33	0.06	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
41	20.100	7.50	30.28	0.13	1.25	0.00	0.00	0.00	0.00	0.17	0.33	0.33	0.06	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
42	20.000	7.50	30.28	0.13	1.25	0.00	0.00	0.00	0.00	0.17	0.33	0.33	0.06	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
43	19.900	7.50	30.28	0.13	1.25	0.00	0.00	0.00	0.00	0.17	0.32	0.32	0.06	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
44	19.800	7.50	30.28	0.13	1.25	0.00	0.00	0.00	0.00	0.17	0.32	0.32	0.06	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
45	19.700	7.50	30.28	0.13	1.25	0.00	0.00	0.00	0.00	0.17	0.32	0.32	0.06	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
46	19.600	7.50	30.28	0.13	1.25	0.00	0.00	0.00	0.00	0.17	0.32	0.32	0.06	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
47	19.500	7.50	30.28	0.13	1.25	0.00	0.00	0.00	0.00	0.17	0.32	0.32	0.06	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG	20 DEG C RATE	25.00	0.08	0.12	0.00	0.00	0.00	0.00	0.00	0.09			0.03	0.12	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00
*	g/m²/d		**	mg/L/day																					

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL
40	20.200	30.40	0.26	522.54	7.62	6.35	2.56	0.00	2.56	0.00	1.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
41	20.100	30.40	0.26	522.54	7.62	6.57	2.53	0.00	2.53	0.00	1.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
42	20.000	30.40	0.26	522.54	7.62	6.74	2.51	0.00	2.51	0.00	1.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
43	19.900	30.40	0.26	522.54	7.62	6.86	2.48	0.00	2.48	0.00	1.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
44	19.800	30.40	0.26	522.54	7.62	6.96	2.45	0.00	2.45	0.00	1.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
45	19.700	30.40	0.26	522.54	7.62	7.04	2.43	0.00	2.43	0.00	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
46	19.600	30.40	0.26	522.54	7.62	7.09	2.40	0.00	2.40	0.00	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
47	19.500	30.40	0.26	522.54	7.62	7.14	2.38	0.00	2.38	0.00	1.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
40	20.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
41	20.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
42	20.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
43	19.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
44	19.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
45	19.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
46	19.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
47	19.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT B VINCENT & BONFOUCA WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 3 VINCENT FROM BV01 RKM 18.5 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
48	UPR RCH	0.00582	30.40	0.26	522.54	7.62	7.14	2.38	0.00	2.38	0.00	1.05	0.00	0.00	0.00	0.00	0.00	0.00
48	WSTLD	0.00345	30.00	0.40	774.00	34.40	5.00	11.50	0.00	11.50	0.00	8.60	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
48	19.50	19.40	0.00927	96.9	0.13130	0.01	7.71	0.06	1.17	7.06	117.02	0.07	0.00	0.000	0.000	0.131
49	19.40	19.30	0.00927	96.9	0.13130	0.01	7.71	0.06	1.17	7.06	117.02	0.07	0.00	0.000	0.000	0.131
50	19.30	19.20	0.00927	96.9	0.13130	0.01	7.72	0.06	1.17	7.06	117.02	0.07	0.00	0.000	0.000	0.131

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

51	19.20	19.10	0.00927	96.9	0.13130	0.01	7.73	0.06	1.17	7.06	117.02	0.07	0.00	0.000	0.000	0.131
52	19.10	19.00	0.00927	96.9	0.13130	0.01	7.74	0.06	1.17	7.06	117.02	0.07	0.00	0.000	0.000	0.131
53	19.00	18.90	0.00927	96.9	0.13130	0.01	7.75	0.06	1.17	7.06	117.02	0.07	0.00	0.000	0.000	0.131
54	18.90	18.80	0.00927	96.9	0.13130	0.01	7.76	0.06	1.17	7.06	117.02	0.07	0.00	0.000	0.000	0.131
55	18.80	18.70	0.00927	96.9	0.13130	0.01	7.77	0.06	1.17	7.06	117.02	0.07	0.00	0.000	0.000	0.131
56	18.70	18.60	0.00927	96.9	0.13130	0.01	7.78	0.06	1.17	7.06	117.02	0.07	0.00	0.000	0.000	0.131
57	18.60	18.50	0.00927	96.9	0.13130	0.01	7.78	0.06	1.17	7.06	117.02	0.07	0.00	0.000	0.000	0.131

TOT						0.09				70.63	1170.16					
AVG					0.1313				0.06	1.17						0.07

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR 1/da	BOD2 DECAT 1/da	BOD2 SETT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAT 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da		
48	19.400	7.49	30.28	0.13	1.06	0.00	0.00	0.00	0.00	0.00	3.32	3.69	3.69	0.06	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
49	19.300	7.49	30.28	0.13	1.06	0.00	0.00	0.00	0.00	0.00	3.32	3.69	3.69	0.06	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
50	19.200	7.49	30.28	0.13	1.06	0.00	0.00	0.00	0.00	0.00	3.32	3.69	3.69	0.06	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
51	19.100	7.49	30.28	0.13	1.06	0.00	0.00	0.00	0.00	0.00	3.32	3.69	3.69	0.06	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
52	19.000	7.49	30.28	0.13	1.06	0.00	0.00	0.00	0.00	0.00	3.32	3.69	3.69	0.06	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
53	18.900	7.49	30.28	0.13	1.06	0.00	0.00	0.00	0.00	0.00	3.32	3.69	3.69	0.06	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
54	18.800	7.49	30.28	0.13	1.06	0.00	0.00	0.00	0.00	0.00	3.32	3.69	3.69	0.06	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
55	18.700	7.49	30.28	0.13	1.06	0.00	0.00	0.00	0.00	0.00	3.32	3.68	3.68	0.06	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
56	18.600	7.49	30.28	0.13	1.06	0.00	0.00	0.00	0.00	0.00	3.32	3.68	3.68	0.06	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
57	18.500	7.49	30.28	0.13	1.06	0.00	0.00	0.00	0.00	0.00	3.32	3.68	3.68	0.06	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20	DEG C	RATE	25.00	0.08	0.08	0.00	0.00	0.00	0.00	0.00	1.73			0.03	0.08	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00	0.00

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	
48	19.400	30.40	0.31	616.09	17.59	6.15	5.76	0.00	5.76	0.00	3.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
49	19.300	30.40	0.31	616.09	17.59	6.00	5.75	0.00	5.75	0.00	3.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
50	19.200	30.40	0.31	616.09	17.59	5.89	5.74	0.00	5.74	0.00	3.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
51	19.100	30.40	0.31	616.09	17.59	5.79	5.73	0.00	5.73	0.00	3.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
52	19.000	30.40	0.31	616.09	17.59	5.72	5.72	0.00	5.72	0.00	3.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
53	18.900	30.40	0.31	616.09	17.59	5.66	5.71	0.00	5.71	0.00	3.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
54	18.800	30.40	0.31	616.09	17.59	5.62	5.70	0.00	5.70	0.00	3.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
55	18.700	30.40	0.31	616.09	17.59	5.58	5.69	0.00	5.69	0.00	3.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
56	18.600	30.40	0.31	616.09	17.59	5.55	5.68	0.00	5.68	0.00	3.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
57	18.500	30.40	0.31	616.09	17.59	5.53	5.68	0.00	5.68	0.00	3.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
----------	-------------	-----------------	----------------	-------------	--------------	------------	------------	--------------	--------------	----------------	----------------	-----------------	----------------	----------------	------------	-------------	--------------	------------	------------	--------------	--------------	--------------	----------------	----------------	-----------------	----------------	------------------------

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
88	17.60	17.55	0.01097	94.8	0.13900	0.00	7.87	0.06	1.23	3.94	61.52	0.08	0.00	0.000	0.000	0.139
89	17.55	17.50	0.01097	94.8	0.13900	0.00	7.87	0.06	1.23	3.94	61.52	0.08	0.00	0.000	0.000	0.139
90	17.50	17.45	0.01097	94.8	0.13900	0.00	7.88	0.06	1.23	3.94	61.52	0.08	0.00	0.000	0.000	0.139
91	17.45	17.40	0.01097	94.8	0.13900	0.00	7.88	0.06	1.23	3.94	61.52	0.08	0.00	0.000	0.000	0.139
92	17.40	17.35	0.01097	94.8	0.13900	0.00	7.88	0.06	1.23	3.94	61.52	0.08	0.00	0.000	0.000	0.139
93	17.35	17.30	0.01097	94.8	0.13900	0.00	7.89	0.06	1.23	3.94	61.52	0.08	0.00	0.000	0.000	0.139
94	17.30	17.25	0.01097	94.8	0.13900	0.00	7.89	0.06	1.23	3.94	61.52	0.08	0.00	0.000	0.000	0.139
95	17.25	17.20	0.01097	94.8	0.13900	0.00	7.90	0.06	1.23	3.94	61.52	0.08	0.00	0.000	0.000	0.139
96	17.20	17.15	0.01097	94.8	0.13900	0.00	7.90	0.06	1.23	3.94	61.52	0.08	0.00	0.000	0.000	0.139
97	17.15	17.10	0.01097	94.8	0.13900	0.00	7.91	0.06	1.23	3.94	61.52	0.08	0.00	0.000	0.000	0.139
98	17.10	17.05	0.01097	94.8	0.13900	0.00	7.91	0.06	1.23	3.94	61.52	0.08	0.00	0.000	0.000	0.139
99	17.05	17.00	0.01097	94.8	0.13900	0.00	7.91	0.06	1.23	3.94	61.52	0.08	0.00	0.000	0.000	0.139
100	17.00	16.95	0.01097	94.8	0.13900	0.00	7.92	0.06	1.23	3.94	61.52	0.08	0.00	0.000	0.000	0.139
101	16.95	16.90	0.01097	94.8	0.13900	0.00	7.92	0.06	1.23	3.94	61.52	0.08	0.00	0.000	0.000	0.139
TOT						0.06				55.23	861.35					
AVG				0.1390				0.06	1.23			0.08				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECA	BOD1 SETT	ABOD1 DECA	BOD1 HYDR	BOD2 DECA	BOD2 SETT	ABOD2 DECA	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECA	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECA	NCM DECA	NCM SETT		
88	17.550	7.49	30.28	0.13	1.00	0.00	0.00	0.00	0.00	0.00	3.88	4.23	4.23	0.06	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
89	17.500	7.49	30.28	0.13	1.00	0.00	0.00	0.00	0.00	0.00	3.88	4.23	4.23	0.06	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90	17.450	7.49	30.28	0.13	1.00	0.00	0.00	0.00	0.00	0.00	3.88	4.23	4.23	0.06	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
91	17.400	7.49	30.28	0.13	1.00	0.00	0.00	0.00	0.00	0.00	3.88	4.23	4.23	0.06	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
92	17.350	7.49	30.28	0.13	1.00	0.00	0.00	0.00	0.00	0.00	3.88	4.23	4.23	0.06	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
93	17.300	7.49	30.28	0.13	1.00	0.00	0.00	0.00	0.00	0.00	3.88	4.23	4.23	0.06	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
94	17.250	7.49	30.28	0.13	1.00	0.00	0.00	0.00	0.00	0.00	3.88	4.23	4.23	0.06	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95	17.200	7.49	30.28	0.13	1.00	0.00	0.00	0.00	0.00	0.00	3.88	4.23	4.23	0.06	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
96	17.150	7.49	30.28	0.13	1.00	0.00	0.00	0.00	0.00	0.00	3.88	4.23	4.23	0.06	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
97	17.100	7.49	30.28	0.13	1.00	0.00	0.00	0.00	0.00	0.00	3.88	4.23	4.23	0.06	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
98	17.050	7.49	30.28	0.13	1.00	0.00	0.00	0.00	0.00	0.00	3.88	4.23	4.23	0.06	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
99	17.000	7.49	30.28	0.13	1.00	0.00	0.00	0.00	0.00	0.00	3.88	4.23	4.23	0.06	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100	16.950	7.49	30.28	0.13	1.00	0.00	0.00	0.00	0.00	0.00	3.88	4.23	4.23	0.06	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
101	16.900	7.49	30.28	0.13	1.00	0.00	0.00	0.00	0.00	0.00	3.88	4.23	4.23	0.06	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG	20 DEG C	RATE	25.00	0.08	0.06	0.00	0.00	0.00	0.00	0.00	2.01			0.03	0.11	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00		
*	g/m ² /d		**	mg/L/day																								

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO	BOD1	BOD2	EBOD1	EBOD2	ORG-N	NH3-N	NO3-N	TOT-N	EORG-N	ETOT-N	ORG-P	PO4-P	TOT-P	EORG-P	ETOT-P	CHL A	PERIP	COLI	
88	17.550	30.40	0.32	631.30	23.19	5.42	5.49	0.00	5.49	0.00	3.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
89	17.500	30.40	0.32	631.30	23.19	5.40	5.49	0.00	5.49	0.00	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
90	17.450	30.40	0.32	631.30	23.19	5.39	5.50	0.00	5.50	0.00	3.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
91	17.400	30.40	0.32	631.30	23.19	5.38	5.50	0.00	5.50	0.00	3.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
92	17.350	30.40	0.32	631.30	23.19	5.37	5.50	0.00	5.50	0.00	3.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
93	17.300	30.40	0.32	631.30	23.19	5.36	5.51	0.00	5.51	0.00	3.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

94	17.250	30.40	0.32	631.30	23.19	5.35	5.51	0.00	5.51	0.00	3.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95	17.200	30.40	0.32	631.30	23.19	5.34	5.52	0.00	5.52	0.00	3.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
96	17.150	30.40	0.32	631.30	23.19	5.34	5.52	0.00	5.52	0.00	3.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
97	17.100	30.40	0.32	631.30	23.19	5.33	5.53	0.00	5.53	0.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
98	17.050	30.40	0.32	631.30	23.19	5.33	5.53	0.00	5.53	0.00	2.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
99	17.000	30.40	0.32	631.30	23.19	5.32	5.54	0.00	5.54	0.00	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100	16.950	30.40	0.32	631.30	23.19	5.32	5.54	0.00	5.54	0.00	2.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
101	16.900	30.40	0.32	631.30	23.19	5.31	5.54	0.00	5.54	0.00	2.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
88	17.550	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
89	17.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
90	17.450	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
91	17.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
92	17.350	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
93	17.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
94	17.250	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
95	17.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
96	17.150	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
97	17.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
98	17.050	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
99	17.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
100	16.950	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
101	16.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT B VINCENT & BONFOUCA
 REACH NO. 8 VINCENT FROM DD 8 TO DD 9

WATER QUALITY/HYDRAULIC MODEL FOR:
 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
110	UPR RCH	0.01097	30.40	0.32	631.30	23.19	5.31	5.54	0.00	5.54	0.00	2.92	0.00	0.00	0.00	0.00	0.00	0.00
110	TRIB	0.00045	30.40	0.31	608.13	28.25	6.87	3.55	0.00	3.55	0.00	3.25	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
110	16.90	16.80	0.01142	92.6	0.14092	0.01	7.93	0.07	1.25	8.10	124.55	0.08	0.00	0.000	0.000	0.141
111	16.80	16.70	0.01142	92.6	0.14092	0.01	7.94	0.07	1.25	8.10	124.55	0.08	0.00	0.000	0.000	0.141
112	16.70	16.60	0.01142	92.6	0.14092	0.01	7.95	0.07	1.25	8.10	124.55	0.08	0.00	0.000	0.000	0.141
113	16.60	16.50	0.01142	92.6	0.14092	0.01	7.95	0.07	1.25	8.10	124.55	0.08	0.00	0.000	0.000	0.141

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

114	16.50	16.40	0.01142	92.6	0.14092	0.01	7.96	0.07	1.25	8.10	124.55	0.08	0.00	0.000	0.000	0.141
115	16.40	16.30	0.01142	92.6	0.14092	0.01	7.97	0.07	1.25	8.10	124.55	0.08	0.00	0.000	0.000	0.141
116	16.30	16.20	0.01142	92.6	0.14092	0.01	7.98	0.07	1.25	8.10	124.55	0.08	0.00	0.000	0.000	0.141
117	16.20	16.10	0.01142	92.6	0.14092	0.01	7.99	0.07	1.25	8.10	124.55	0.08	0.00	0.000	0.000	0.141
118	16.10	16.00	0.01142	92.6	0.14092	0.01	8.00	0.07	1.25	8.10	124.55	0.08	0.00	0.000	0.000	0.141

TOT						0.07				72.93	1120.97					
AVG				0.1409				0.07	1.25			0.08				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR 1/da	BOD2 DECAT 1/da	BOD2 HYDR 1/da	BOD2 SETT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAT 1/da	NH3-N RATE *	DENIT 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI 1/da	NCM DECAT 1/da	NCM SETT 1/da	
110	16.800	7.49	30.28	0.13	0.98	0.00	0.00	0.00	0.00	0.00	0.00	3.88	4.23	4.23	0.06	1.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
111	16.700	7.49	30.28	0.13	0.98	0.00	0.00	0.00	0.00	0.00	0.00	3.88	4.23	4.23	0.06	1.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
112	16.600	7.49	30.28	0.13	0.98	0.00	0.00	0.00	0.00	0.00	0.00	3.88	4.23	4.23	0.06	1.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
113	16.500	7.49	30.28	0.13	0.98	0.00	0.00	0.00	0.00	0.00	0.00	3.88	4.23	4.23	0.06	1.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
114	16.400	7.49	30.28	0.13	0.98	0.00	0.00	0.00	0.00	0.00	0.00	3.88	4.23	4.23	0.06	1.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
115	16.300	7.49	30.28	0.13	0.98	0.00	0.00	0.00	0.00	0.00	0.00	3.88	4.23	4.23	0.06	1.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
116	16.200	7.49	30.28	0.13	0.98	0.00	0.00	0.00	0.00	0.00	0.00	3.88	4.23	4.23	0.06	1.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
117	16.100	7.49	30.28	0.13	0.98	0.00	0.00	0.00	0.00	0.00	0.00	3.88	4.23	4.23	0.06	1.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
118	16.000	7.49	30.28	0.13	0.98	0.00	0.00	0.00	0.00	0.00	0.00	3.88	4.23	4.23	0.06	1.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20	DEG C	RATE	25.00	0.08	0.09	0.00	0.00	0.00	0.00	0.00	0.00	2.01			0.03	0.17	0.00	0.00	0.00	0.00	0.00	0.00				0.00	0.00	0.00
*	g/m ² /d		**	mg/L/day																								

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL			
110	16.800	30.40	0.32	630.38	23.39	5.36	5.47	0.00	5.47	0.00	2.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
111	16.700	30.40	0.32	630.38	23.39	5.36	5.48	0.00	5.48	0.00	2.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
112	16.600	30.40	0.32	630.38	23.39	5.35	5.48	0.00	5.48	0.00	2.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
113	16.500	30.40	0.32	630.38	23.39	5.34	5.49	0.00	5.49	0.00	2.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
114	16.400	30.40	0.32	630.38	23.39	5.34	5.49	0.00	5.49	0.00	2.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
115	16.300	30.40	0.32	630.38	23.39	5.33	5.50	0.00	5.50	0.00	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
116	16.200	30.40	0.32	630.38	23.39	5.33	5.50	0.00	5.50	0.00	2.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
117	16.100	30.40	0.32	630.38	23.39	5.33	5.50	0.00	5.50	0.00	2.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
118	16.000	30.40	0.32	630.38	23.39	5.33	5.51	0.00	5.51	0.00	2.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
110	16.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
111	16.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
112	16.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
113	16.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO	BOD1	BOD2	EBOD1	EBOD2	ORG-N	NH3-N	NO3-N	TOT-N	EORG-N	ETOT-N	ORG-P	PO4-P	TOT-P	EORG-P	ETOT-P	CHL A	PERIP	COLI	
						mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	g/m ²	#/100mL	
140	15.900	30.40	0.32	628.43	23.23	5.37	5.35	0.00	5.49	0.00	2.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.2	0.0	0.
141	15.800	30.40	0.32	628.43	23.23	5.37	5.31	0.00	5.58	0.00	2.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.5	0.0	0.
142	15.700	30.40	0.32	628.43	23.23	5.37	5.27	0.00	5.67	0.00	2.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.8	0.0	0.
143	15.600	30.40	0.32	628.43	23.23	5.37	5.22	0.00	5.76	0.00	2.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.0	0.0	0.
144	15.500	30.40	0.32	628.43	23.23	5.37	5.18	0.00	5.85	0.00	2.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.2	0.0	0.
145	15.400	30.40	0.32	628.43	23.23	5.37	5.14	0.00	5.94	0.00	2.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.5	0.0	0.
146	15.300	30.40	0.32	628.43	23.23	5.37	5.10	0.00	6.03	0.00	2.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.
147	15.200	30.40	0.32	628.43	23.23	5.34	5.02	0.00	6.08	0.00	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
140	15.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
141	15.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
142	15.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
143	15.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	5.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
144	15.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
145	15.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
146	15.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
147	15.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT B VINCENT & BONFOUCA WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 11 VINCENT FROM RKM 15.2 TO BV03 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO	BOD1	BOD2	EBOD1	EBOD2	ORG-N	NH3-N	NO3-N	PO4-P	CHL A	COLI	NCM
							mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	#/100mL	
148	UPR RCH	0.01177	30.40	0.32	628.43	23.23	5.34	5.02	0.00	6.08	0.00	2.33	0.00	0.00	0.00	10.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
148	15.20	15.15	0.01177	90.4	0.00919	0.06	8.12	0.27	4.72	64.01	236.20	1.28	23.62	0.001	0.620	0.009
149	15.15	15.10	0.01177	90.4	0.00919	0.06	8.19	0.27	4.72	64.01	236.20	1.28	47.24	0.001	0.620	0.009
150	15.10	15.05	0.01177	90.4	0.00919	0.06	8.25	0.27	4.72	64.01	236.20	1.28	70.86	0.002	0.620	0.009
151	15.05	15.00	0.01177	90.4	0.00919	0.06	8.31	0.27	4.72	64.01	236.20	1.28	94.48	0.002	0.620	0.009
152	15.00	14.95	0.01177	90.4	0.00919	0.06	8.38	0.27	4.72	64.01	236.20	1.28	118.10	0.003	0.620	0.009
153	14.95	14.90	0.01177	90.4	0.00919	0.06	8.44	0.27	4.72	64.01	236.20	1.28	141.72	0.003	0.620	0.009

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

TOT 0.38 384.06 1417.20
 AVG 0.0092 0.27 4.72 1.28

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECATY	BOD1 SETT	ABOD1 DECATY	BOD1 HYDR	BOD2 DECATY	BOD2 SETT	ABOD2 DECATY	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECATY	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECATY	NCM DECATY	NCM SETT	
148	15.150	7.49	3.55	0.13	0.24	0.00	0.00	0.00	0.00	0.00	2.33	2.64	2.64	0.06	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00
149	15.100	7.49	3.55	0.13	0.24	0.00	0.00	0.00	0.00	0.00	2.33	2.63	2.63	0.06	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00
150	15.050	7.49	3.55	0.13	0.24	0.00	0.00	0.00	0.00	0.00	2.33	2.63	2.63	0.06	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00
151	15.000	7.49	3.55	0.13	0.24	0.00	0.00	0.00	0.00	0.00	2.33	2.62	2.62	0.06	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00
152	14.950	7.49	3.55	0.13	0.24	0.00	0.00	0.00	0.00	0.00	2.33	2.62	2.62	0.06	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00
153	14.900	7.49	3.55	0.13	0.24	0.00	0.00	0.00	0.00	0.00	2.33	2.62	2.62	0.06	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00
AVG 20	DEG C RATE		2.93	0.08	0.03	0.00	0.00	0.00	0.00	0.00	1.21			0.03	0.09	0.00	0.00	0.00	0.00	0.00	0.00				0.00	0.00	0.00
*	g/m ² /d		**	mg/L/day																							

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL
148	15.150	30.40	0.32	628.43	23.23	5.20	4.88	0.00	5.95	0.00	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.
149	15.100	30.40	0.32	628.43	23.23	5.13	4.81	0.00	5.88	0.00	2.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.
150	15.050	30.40	0.32	628.44	23.23	5.08	4.74	0.00	5.81	0.00	1.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.
151	15.000	30.40	0.32	628.44	23.24	5.04	4.67	0.00	5.74	0.00	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.
152	14.950	30.40	0.32	628.45	23.25	5.00	4.60	0.00	5.67	0.00	1.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.
153	14.900	30.40	0.32	628.47	23.27	4.97	4.53	0.00	5.60	0.00	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
148	15.150	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
149	15.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
150	15.050	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
151	15.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
152	14.950	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
153	14.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20	DEG C RATE									0.000	0.000	0.000	0.000										0.000	0.000	0.000		

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT B VINCENT & BONFOUCA WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 12 VINCENT FROM BV03 TO BONFOUCA BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
154	UPR RCH	0.01177	30.40	0.32	628.47	23.27	4.97	4.53	0.00	5.60	0.00	1.77	0.00	0.00	0.00	10.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
154	14.90	14.80	0.01177	90.4	0.00919	0.13	8.56	0.27	4.72	128.02	472.40	1.28	188.96	0.004	0.620	0.009
155	14.80	14.70	0.01177	90.4	0.00919	0.13	8.69	0.27	4.72	128.02	472.40	1.28	236.20	0.005	0.620	0.009
156	14.70	14.60	0.01177	90.4	0.00919	0.13	8.82	0.27	4.72	128.02	472.40	1.28	283.44	0.006	0.620	0.009
157	14.60	14.50	0.01177	90.4	0.00919	0.13	8.94	0.27	4.72	128.02	472.40	1.28	330.68	0.007	0.645	0.010
158	14.50	14.40	0.01177	90.4	0.00919	0.13	9.07	0.27	4.72	128.02	472.40	1.28	377.92	0.008	0.687	0.010
TOT AVG					0.0092	0.63		0.27	4.72	640.10	2362.00	1.28				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR 1/da	BOD2 DECAT 1/da	BOD2 SETT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAT 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da	
154	14.800	7.49	3.55	0.13	0.24	0.00	0.00	0.00	0.00	0.00	2.33	2.61	2.61	0.06	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	
155	14.700	7.49	3.55	0.13	0.24	0.00	0.00	0.00	0.00	0.00	2.33	2.60	2.60	0.06	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	
156	14.600	7.49	3.55	0.13	0.24	0.00	0.00	0.00	0.00	0.00	2.33	2.59	2.59	0.06	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	
157	14.500	7.49	3.58	0.13	0.24	0.00	0.00	0.00	0.00	0.00	2.33	2.57	2.57	0.06	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	
158	14.400	7.49	3.62	0.13	0.24	0.00	0.00	0.00	0.00	0.00	2.33	2.54	2.54	0.06	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	
AVG 20	DEG C RATE	2.95	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.00	1.21			0.03	0.11	0.00	0.00	0.00	0.00	0.00	0.00				0.00	0.00	0.00
*	g/m²/d		**	mg/L/day																							

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL	
154	14.800	30.40	0.32	628.51	23.32	4.94	4.41	0.00	5.48	0.00	1.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.
155	14.700	30.40	0.32	628.62	23.46	4.92	4.27	0.00	5.34	0.00	1.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.
156	14.600	30.40	0.32	628.90	23.81	4.93	4.09	0.00	5.16	0.00	1.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.
157	14.500	30.40	0.32	629.58	24.65	5.01	3.82	0.00	4.89	0.00	1.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.
158	14.400	30.40	0.32	631.17	26.63	5.24	3.32	0.00	4.38	0.00	1.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
154	14.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
155	14.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
156	14.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO	BOD1	BOD2	EBOD1	EBOD2	ORG-N	NH3-N	NO3-N	TOT-N	EORG-N	ETOT-N	ORG-P	PO4-P	TOT-P	EORG-P	ETOT-P	CHL A	PERIP	COLI
239	14.100	30.40	0.34	661.02	37.98	5.55	2.84	0.00	3.91	0.00	0.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0
240	14.000	30.40	0.35	677.21	43.43	5.50	2.75	0.00	3.82	0.00	0.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0
241	13.900	30.40	0.36	697.75	50.35	5.47	2.68	0.00	3.74	0.00	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0
242	13.800	30.40	0.37	723.20	58.93	5.46	2.61	0.00	3.68	0.00	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0
243	13.700	30.40	0.39	754.16	69.35	5.46	2.56	0.00	3.63	0.00	0.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0
244	13.600	30.40	0.41	791.20	81.84	5.47	2.53	0.00	3.59	0.00	0.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0
245	13.500	30.40	0.44	834.94	96.57	5.47	2.50	0.00	3.57	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0
246	13.400	30.40	0.46	885.99	113.77	5.48	2.49	0.00	3.56	0.00	0.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0
247	13.300	30.40	0.50	944.95	133.64	5.49	2.49	0.00	3.56	0.00	0.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0

***** PHYTOPLANKTON AND PERIPHYTON DATA

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
239	14.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
240	14.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
241	13.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
242	13.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
243	13.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
244	13.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
245	13.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
246	13.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
247	13.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT B VINCENT & BONFOUCA WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 20 BONFOUCA FROM BB02 TO WD BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO	BOD1	BOD2	EBOD1	EBOD2	ORG-N	NH3-N	NO3-N	PO4-P	CHL A	COLI	NCM
248	UPR RCH	0.01713	30.40	0.50	944.95	133.64	5.49	2.49	0.00	3.56	0.00	0.65	0.00	0.00	0.00	10.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
248	13.30	13.20	0.01713	73.6	0.00182	0.64	16.90	0.87	10.84	943.08	1084.00	9.43	1678.72	0.005	0.898	0.005
249	13.20	13.10	0.01713	73.6	0.00182	0.64	17.54	0.87	10.84	943.08	1084.00	9.43	1787.12	0.005	0.954	0.005
250	13.10	13.00	0.01713	73.6	0.00182	0.64	18.17	0.87	10.84	943.08	1084.00	9.43	1895.52	0.006	1.010	0.006
251	13.00	12.90	0.01713	73.6	0.00182	0.64	18.81	0.87	10.84	943.08	1084.00	9.43	2003.92	0.006	1.067	0.006

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

252	12.90	12.80	0.01713	73.6	0.00182	0.64	19.45	0.87	10.84	943.08	1084.00	9.43	2112.32	0.006	1.123	0.006
253	12.80	12.70	0.01713	73.6	0.00182	0.64	20.08	0.87	10.84	943.08	1084.00	9.43	2220.72	0.007	1.180	0.007
254	12.70	12.60	0.01713	73.6	0.00182	0.64	20.72	0.87	10.84	943.08	1084.00	9.43	2329.12	0.007	1.236	0.007
255	12.60	12.50	0.01713	73.6	0.00182	0.64	21.36	0.87	10.84	943.08	1084.00	9.43	2437.52	0.007	1.293	0.007
256	12.50	12.40	0.01713	73.6	0.00182	0.64	22.00	0.87	10.84	943.08	1084.00	9.43	2545.92	0.008	1.350	0.008
257	12.40	12.30	0.01713	73.6	0.00182	0.64	22.63	0.87	10.84	943.08	1084.00	9.43	2654.32	0.008	1.407	0.008
258	12.30	12.20	0.01713	73.6	0.00182	0.64	23.27	0.87	10.84	943.08	1084.00	9.43	2762.72	0.008	1.464	0.008
259	12.20	12.10	0.01713	73.6	0.00182	0.64	23.91	0.87	10.84	943.08	1084.00	9.43	2871.12	0.009	1.521	0.009
TOT							7.64			11316.96	13008.00					
AVG					0.0018			0.87	10.84			9.43				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT DECAT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR 1/da	BOD2 DECAT 1/da	BOD2 SETT DECAT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT DECAT 1/da	NH3-N SRCE *	NH3-N RATE 1/da	DENIT HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da	
248	13.200	7.48	1.02	0.13	0.07	0.00	0.00	0.00	0.00	0.00	1.99	2.15	2.15	0.06	0.07	0.00	0.00	0.00	0.00	0.00	0.80	0.00	0.00	0.00	0.00	
249	13.100	7.48	1.03	0.13	0.07	0.00	0.00	0.00	0.00	0.00	1.99	2.15	2.15	0.06	0.07	0.00	0.00	0.00	0.00	0.00	0.79	0.00	0.00	0.00	0.00	
250	13.000	7.48	1.04	0.13	0.07	0.00	0.00	0.00	0.00	0.00	1.99	2.15	2.15	0.06	0.07	0.00	0.00	0.00	0.00	0.00	0.78	0.00	0.00	0.00	0.00	
251	12.900	7.48	1.04	0.13	0.07	0.00	0.00	0.00	0.00	0.00	1.99	2.15	2.15	0.06	0.07	0.00	0.00	0.00	0.00	0.00	0.77	0.00	0.00	0.00	0.00	
252	12.800	7.48	1.05	0.13	0.07	0.00	0.00	0.00	0.00	0.00	1.99	2.15	2.15	0.06	0.07	0.00	0.00	0.00	0.00	0.00	0.77	0.00	0.00	0.00	0.00	
253	12.700	7.47	1.06	0.13	0.07	0.00	0.00	0.00	0.00	0.00	1.99	2.15	2.15	0.06	0.07	0.00	0.00	0.00	0.00	0.00	0.76	0.00	0.00	0.00	0.00	
254	12.600	7.47	1.06	0.13	0.07	0.00	0.00	0.00	0.00	0.00	1.99	2.15	2.15	0.06	0.07	0.00	0.00	0.00	0.00	0.00	0.75	0.00	0.00	0.00	0.00	
255	12.500	7.47	1.07	0.13	0.07	0.00	0.00	0.00	0.00	0.00	1.99	2.15	2.15	0.06	0.07	0.00	0.00	0.00	0.00	0.00	0.74	0.00	0.00	0.00	0.00	
256	12.400	7.46	1.07	0.13	0.07	0.00	0.00	0.00	0.00	0.00	1.99	2.15	2.15	0.06	0.07	0.00	0.00	0.00	0.00	0.00	0.73	0.00	0.00	0.00	0.00	
257	12.300	7.46	1.08	0.13	0.07	0.00	0.00	0.00	0.00	0.00	1.99	2.14	2.14	0.06	0.07	0.00	0.00	0.00	0.00	0.00	0.73	0.00	0.00	0.00	0.00	
258	12.200	7.45	1.09	0.13	0.07	0.00	0.00	0.00	0.00	0.00	1.99	2.14	2.14	0.06	0.07	0.00	0.00	0.00	0.00	0.00	0.72	0.00	0.00	0.00	0.00	
259	12.100	7.45	1.09	0.13	0.07	0.00	0.00	0.00	0.00	0.00	1.99	2.13	2.13	0.06	0.07	0.00	0.00	0.00	0.00	0.00	0.71	0.00	0.00	0.00	0.00	
AVG 20 DEG C RATE			0.87	0.08	0.00	0.00	0.00	0.00	0.00	0.00	1.03			0.03	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	
*	g/m ² /d		**		mg/L/day																					

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL
248	13.200	30.40	0.53	1012.46	156.38	5.50	2.51	0.00	3.56	0.00	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.9	0.0	0.
249	13.100	30.40	0.58	1089.14	182.21	5.50	2.52	0.00	3.56	0.00	0.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.8	0.0	0.
250	13.000	30.40	0.63	1175.63	211.35	5.51	2.52	0.00	3.56	0.00	0.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.7	0.0	0.
251	12.900	30.40	0.68	1272.56	244.01	5.53	2.52	0.00	3.54	0.00	0.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.6	0.0	0.
252	12.800	30.40	0.74	1380.60	280.41	5.55	2.51	0.00	3.52	0.00	0.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.5	0.0	0.
253	12.700	30.40	0.81	1500.38	320.77	5.57	2.49	0.00	3.49	0.00	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.4	0.0	0.
254	12.600	30.40	0.88	1632.56	365.30	5.60	2.46	0.00	3.46	0.00	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.3	0.0	0.
255	12.500	30.40	0.96	1777.81	414.24	5.64	2.43	0.00	3.41	0.00	0.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.2	0.0	0.
256	12.400	30.40	1.05	1936.80	467.80	5.70	2.39	0.00	3.36	0.00	0.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.1	0.0	0.
257	12.300	30.40	1.15	2110.18	526.22	5.78	2.33	0.00	3.29	0.00	0.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.0	0.0	0.
258	12.200	30.40	1.25	2298.65	589.71	5.89	2.26	0.00	3.21	0.00	0.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.9	0.0	0.
259	12.100	30.40	1.37	2502.87	658.52	6.03	2.18	0.00	3.12	0.00	0.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

***** PHYTOPLANKTON AND PERIPHYTON DATA

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
248	13.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
249	13.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.8	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
250	13.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.7	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
251	12.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.6	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
252	12.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.5	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
253	12.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.4	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
254	12.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.3	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
255	12.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.2	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
256	12.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.1	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
257	12.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
258	12.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.9	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
259	12.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	

20 DEG C RATE 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT B VINCENT & BONFOUCA WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 22 BONFOUCA FROM WD TO DD6 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
263	UPR RCH	0.01713	30.40	1.37	2502.87	658.52	6.03	2.18	0.00	3.12	0.00	0.51	0.00	0.00	0.00	8.80	0.00	0.00
263	TRIB	0.00091	30.40	1.46	2658.19	711.17	6.20	2.09	0.00	3.03	0.00	0.51	0.00	0.00	0.00	8.80	0.00	0.00
281	WSTLD	0.00000	30.00	0.39	753.60	63.30	2.00	46.00	0.00	46.00	0.00	43.00	0.00	0.00	0.00	0.00	0.00	0.00
282	WSTLD	0.00020	30.00	0.39	753.60	63.30	2.00	46.00	0.00	46.00	0.00	43.00	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
263	12.10	12.00	0.01805	73.3	0.00027	4.31	28.22	1.24	54.25	6727.00	5425.00	67.27	3503.62	0.001	0.349	0.001
264	12.00	11.90	0.01805	73.3	0.00027	4.31	32.53	1.24	54.25	6727.00	5425.00	67.27	4046.12	0.002	0.403	0.002
265	11.90	11.80	0.01805	73.3	0.00027	4.31	36.85	1.24	54.25	6727.00	5425.00	67.27	4588.62	0.002	0.457	0.002
266	11.80	11.70	0.01805	73.3	0.00027	4.31	41.16	1.24	54.25	6727.00	5425.00	67.27	5131.12	0.002	0.511	0.002
267	11.70	11.60	0.01805	73.3	0.00027	4.31	45.48	1.24	54.25	6727.00	5425.00	67.27	5673.62	0.002	0.565	0.002
268	11.60	11.50	0.01805	73.3	0.00027	4.31	49.79	1.24	54.25	6727.00	5425.00	67.27	6216.12	0.003	0.619	0.003
269	11.50	11.40	0.01805	73.3	0.00027	4.31	54.10	1.24	54.25	6727.00	5425.00	67.27	6758.62	0.003	0.674	0.003
270	11.40	11.30	0.01805	73.3	0.00027	4.31	58.42	1.24	54.25	6727.00	5425.00	67.27	7301.12	0.003	0.728	0.003
271	11.30	11.20	0.01805	73.3	0.00027	4.31	62.73	1.24	54.25	6727.00	5425.00	67.27	7843.62	0.003	0.782	0.003
272	11.20	11.10	0.01805	73.3	0.00027	4.31	67.04	1.24	54.25	6727.00	5425.00	67.27	8386.12	0.004	0.836	0.003
273	11.10	11.00	0.01805	73.3	0.00027	4.31	71.36	1.24	54.25	6727.00	5425.00	67.27	8928.62	0.004	0.890	0.004
274	11.00	10.90	0.01805	73.3	0.00027	4.31	75.67	1.24	54.25	6727.00	5425.00	67.27	9471.12	0.004	0.945	0.004
275	10.90	10.80	0.01805	73.3	0.00027	4.31	79.99	1.24	54.25	6727.00	5425.00	67.27	10013.62	0.004	0.999	0.004
276	10.80	10.70	0.01805	73.3	0.00027	4.31	84.30	1.24	54.25	6727.00	5425.00	67.27	10556.12	0.004	1.053	0.004
277	10.70	10.60	0.01805	73.3	0.00027	4.31	88.61	1.24	54.25	6727.00	5425.00	67.27	11098.62	0.005	1.107	0.005
278	10.60	10.50	0.01805	73.3	0.00027	4.31	92.93	1.24	54.25	6727.00	5425.00	67.27	11641.12	0.005	1.162	0.005
279	10.50	10.40	0.01805	73.3	0.00027	4.31	97.24	1.24	54.25	6727.00	5425.00	67.27	12183.62	0.005	1.216	0.005
280	10.40	10.30	0.01805	73.3	0.00027	4.31	101.55	1.24	54.25	6727.00	5425.00	67.27	12726.12	0.005	1.270	0.005
281	10.30	10.20	0.01805	73.3	0.00027	4.31	105.87	1.24	54.25	6727.00	5425.00	67.27	13268.62	0.006	1.324	0.006
282	10.20	10.10	0.01825	73.6	0.00027	4.27	110.13	1.24	54.25	6727.00	5425.00	67.27	13811.12	0.006	1.378	0.006
283	10.10	10.00	0.01825	73.6	0.00027	4.27	114.40	1.24	54.25	6727.00	5425.00	67.27	14353.62	0.006	1.433	0.006

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

TOT 90.49 141267.02 113925.00
 AVG 0.0003 1.24 54.25 67.27

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECA 1/da	BOD1 SETT 1/da	ABOD1 DECA 1/da	BOD1 HYDR 1/da	BOD2 DECA 1/da	BOD2 SETT 1/da	ABOD2 DECA 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECA 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI 1/da	NCM DECA 1/da	NCM SETT 1/da
263	12.000	7.45	0.68	0.13	0.05	0.00	0.00	0.00	0.00	0.00	1.27	1.41	1.41	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.00	0.00	0.00	0.00
264	11.900	7.44	0.68	0.13	0.05	0.00	0.00	0.00	0.00	0.00	1.27	1.41	1.41	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.00	0.00	0.00	0.00
265	11.800	7.44	0.68	0.13	0.05	0.00	0.00	0.00	0.00	0.00	1.27	1.41	1.41	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.00	0.00	0.00	0.00
266	11.700	7.44	0.68	0.13	0.05	0.00	0.00	0.00	0.00	0.00	1.27	1.41	1.41	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.00	0.00	0.00	0.00
267	11.600	7.43	0.68	0.13	0.05	0.00	0.00	0.00	0.00	0.00	1.27	1.41	1.41	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.00	0.00	0.00	0.00
268	11.500	7.43	0.68	0.13	0.05	0.00	0.00	0.00	0.00	0.00	1.27	1.41	1.41	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.00	0.00	0.00	0.00
269	11.400	7.43	0.68	0.13	0.05	0.00	0.00	0.00	0.00	0.00	1.27	1.42	1.42	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.00	0.00	0.00	0.00
270	11.300	7.43	0.68	0.13	0.05	0.00	0.00	0.00	0.00	0.00	1.27	1.43	1.43	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.00	0.00	0.00	0.00
271	11.200	7.42	0.68	0.13	0.05	0.00	0.00	0.00	0.00	0.00	1.27	1.44	1.44	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.00	0.00	0.00	0.00
272	11.100	7.42	0.68	0.13	0.05	0.00	0.00	0.00	0.00	0.00	1.27	1.45	1.45	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.00	0.00	0.00	0.00
273	11.000	7.42	0.68	0.13	0.05	0.00	0.00	0.00	0.00	0.00	1.27	1.46	1.46	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.00	0.00	0.00	0.00
274	10.900	7.42	0.68	0.13	0.05	0.00	0.00	0.00	0.00	0.00	1.27	1.47	1.47	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.00	0.00	0.00	0.00
275	10.800	7.42	0.68	0.13	0.05	0.00	0.00	0.00	0.00	0.00	1.27	1.48	1.48	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.00	0.00	0.00	0.00
276	10.700	7.41	0.68	0.13	0.05	0.00	0.00	0.00	0.00	0.00	1.27	1.50	1.50	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.00	0.00	0.00	0.00
277	10.600	7.41	0.68	0.13	0.05	0.00	0.00	0.00	0.00	0.00	1.27	1.52	1.52	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.00	0.00	0.00	0.00
278	10.500	7.41	0.68	0.13	0.05	0.00	0.00	0.00	0.00	0.00	1.27	1.54	1.54	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.00	0.00	0.00	0.00
279	10.400	7.41	0.68	0.13	0.05	0.00	0.00	0.00	0.00	0.00	1.27	1.56	1.56	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.00	0.00	0.00	0.00
280	10.300	7.41	0.68	0.13	0.05	0.00	0.00	0.00	0.00	0.00	1.27	1.59	1.59	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.00	0.00	0.00	0.00
281	10.200	7.40	0.68	0.13	0.05	0.00	0.00	0.00	0.00	0.00	1.27	1.62	1.62	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.00	0.00	0.00	0.00
282	10.100	7.40	0.68	0.13	0.05	0.00	0.00	0.00	0.00	0.00	1.27	1.65	1.65	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.00	0.00	0.00	0.00
283	10.000	7.40	0.68	0.13	0.05	0.00	0.00	0.00	0.00	0.00	1.27	1.69	1.69	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.00	0.00	0.00	0.00
AVG 20	DEG C	RATE	0.56	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.66			0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00
*	g/m ² /d		**	mg/L/day																						

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL
263	12.000	30.40	1.46	2673.29	715.94	6.17	2.10	0.00	3.04	0.00	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.
264	11.900	30.40	1.55	2820.22	765.27	6.24	2.07	0.00	3.01	0.00	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.
265	11.800	30.40	1.62	2957.87	811.49	6.27	2.08	0.00	3.02	0.00	0.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.
266	11.700	30.40	1.70	3087.80	855.11	6.27	2.11	0.00	3.05	0.00	0.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.
267	11.600	30.40	1.77	3211.14	896.52	6.27	2.15	0.00	3.09	0.00	0.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.
268	11.500	30.40	1.83	3328.80	936.03	6.25	2.22	0.00	3.16	0.00	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.
269	11.400	30.40	1.89	3441.49	973.86	6.22	2.31	0.00	3.25	0.00	0.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.
270	11.300	30.40	1.96	3549.78	1010.22	6.19	2.42	0.00	3.36	0.00	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.
271	11.200	30.40	2.01	3654.15	1045.26	6.15	2.55	0.00	3.49	0.00	0.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.
272	11.100	30.40	2.07	3754.98	1079.12	6.10	2.70	0.00	3.64	0.00	0.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.
273	11.000	30.40	2.12	3852.62	1111.90	6.04	2.88	0.00	3.82	0.00	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.
274	10.900	30.40	2.18	3947.35	1143.71	5.98	3.08	0.00	4.02	0.00	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

275	10.800	30.40	2.23	4039.40	1174.61	5.91	3.31	0.00	4.25	0.00	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.0	
276	10.700	30.40	2.28	4128.99	1204.70	5.84	3.57	0.00	4.51	0.00	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.0
277	10.600	30.40	2.33	4216.32	1234.02	5.76	3.86	0.00	4.80	0.00	0.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.0
278	10.500	30.40	2.38	4301.53	1262.63	5.68	4.19	0.00	5.13	0.00	0.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.0
279	10.400	30.40	2.42	4384.78	1290.58	5.59	4.56	0.00	5.50	0.00	1.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.0
280	10.300	30.40	2.47	4466.19	1317.91	5.50	4.97	0.00	5.91	0.00	1.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.0
281	10.200	30.40	2.51	4545.88	1344.67	5.42	5.43	0.00	6.37	0.00	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.0
282	10.100	30.40	2.56	4623.95	1370.88	5.33	5.94	0.00	6.88	0.00	1.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.0
283	10.000	30.40	2.60	4701.34	1396.87	5.25	6.49	0.00	7.43	0.00	1.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.0

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
263	12.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
264	11.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
265	11.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
266	11.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
267	11.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
268	11.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
269	11.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
270	11.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
271	11.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
272	11.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
273	11.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
274	10.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
275	10.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
276	10.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
277	10.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
278	10.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
279	10.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
280	10.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
281	10.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
282	10.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
283	10.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT B VINCENT & BONFOUCA WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 24 BONFOUCA FROM DD 6 TO TRIB 2 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
287	UPR RCH	0.01825	30.40	2.60	4701.34	1396.87	5.25	6.49	0.00	7.43	0.00	1.38	0.00	0.00	0.00	8.80	0.00	0.00
287	TRIB	0.00029	30.40	0.26	525.26	10.84	7.03	2.21	0.00	3.15	0.00	1.34	0.00	0.00	0.00	8.80	0.00	0.00
289	WSTLD	0.00019	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	64.50	0.00	0.00	0.00	0.00	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
287	10.00	9.90	0.01854	72.5	0.00012	9.31	123.71	1.60	93.08	14920.72	9308.00	149.21	15284.42	0.003	0.852	0.003
288	9.90	9.80	0.01854	72.5	0.00012	9.31	133.03	1.60	93.08	14920.72	9308.00	149.21	16215.22	0.003	0.904	0.003
289	9.80	9.70	0.01873	72.8	0.00013	9.22	142.25	1.60	93.08	14920.72	9308.00	149.21	17146.02	0.003	0.956	0.003
290	9.70	9.60	0.01873	72.8	0.00013	9.22	151.47	1.60	93.08	14920.72	9308.00	149.21	18076.82	0.003	1.008	0.003
291	9.60	9.50	0.01873	72.8	0.00013	9.22	160.68	1.60	93.08	14920.72	9308.00	149.21	19007.62	0.004	1.060	0.004
292	9.50	9.40	0.01873	72.8	0.00013	9.22	169.90	1.60	93.08	14920.72	9308.00	149.21	19938.42	0.004	1.112	0.004
293	9.40	9.30	0.01873	72.8	0.00013	9.22	179.12	1.60	93.08	14920.72	9308.00	149.21	20869.22	0.004	1.164	0.004
294	9.30	9.20	0.01873	72.8	0.00013	9.22	188.34	1.60	93.08	14920.72	9308.00	149.21	21800.02	0.004	1.216	0.004
TOT						73.94				119365.80	74464.00					
AVG				0.0001				1.60	93.08			149.21				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECAY	BOD1 SETT	ABOD1 DECAY	BOD1 HYDR	BOD2 DECAY	BOD2 SETT	ABOD2 DECAY	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECAY	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECAY	NCM DECAY	NCM SETT	
287	9.900	7.40	0.61	0.13	0.04	0.00	0.00	0.00	0.00	0.00	1.20	1.65	1.65	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.00	0.00	0.00	0.00	0.00
288	9.800	7.40	0.61	0.13	0.04	0.00	0.00	0.00	0.00	0.00	1.20	1.68	1.68	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.00	0.00	0.00	0.00	0.00
289	9.700	7.40	0.61	0.13	0.04	0.00	0.00	0.00	0.00	0.00	1.20	1.70	1.70	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.00	0.00	0.00	0.00	0.00
290	9.600	7.39	0.61	0.13	0.04	0.00	0.00	0.00	0.00	0.00	1.20	1.72	1.72	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.00	0.00	0.00	0.00	0.00
291	9.500	7.39	0.61	0.13	0.04	0.00	0.00	0.00	0.00	0.00	1.20	1.73	1.73	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.00	0.00	0.00	0.00	0.00
292	9.400	7.39	0.61	0.13	0.04	0.00	0.00	0.00	0.00	0.00	1.20	1.75	1.75	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.00	0.00	0.00	0.00	0.00
293	9.300	7.39	0.61	0.13	0.04	0.00	0.00	0.00	0.00	0.00	1.20	1.76	1.76	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.00	0.00	0.00	0.00	0.00
294	9.200	7.39	0.61	0.13	0.04	0.00	0.00	0.00	0.00	0.00	1.20	1.76	1.76	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.00	0.00	0.00	0.00	0.00
AVG	20 DEG C	RATE	0.50	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.62			0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00
*	g/m ² /d		**	mg/L/day																							

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO	BOD1	BOD2	EBOD1	EBOD2	ORG-N	NH3-N	NO3-N	TOT-N	EORG-N	ETOT-N	ORG-P	PO4-P	TOT-P	EORG-P	ETOT-P	CHL A	PERIP	COLI	
287	9.900	30.40	2.64	4768.08	1419.28	5.19	7.04	0.00	7.98	0.00	1.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.
288	9.800	30.40	2.67	4826.88	1439.02	5.13	7.44	0.00	8.38	0.00	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.
289	9.700	30.40	2.70	4883.18	1457.92	5.08	7.78	0.00	8.72	0.00	1.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.
290	9.600	30.40	2.73	4937.76	1476.24	5.03	8.05	0.00	8.99	0.00	1.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.
291	9.500	30.40	2.76	4990.25	1493.86	4.99	8.28	0.00	9.22	0.00	1.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.
292	9.400	30.40	2.79	5040.83	1510.85	4.96	8.47	0.00	9.41	0.00	1.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.
293	9.300	30.40	2.82	5089.66	1527.24	4.94	8.63	0.00	9.57	0.00	1.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.
294	9.200	30.40	2.84	5136.88	1543.09	4.93	8.76	0.00	9.70	0.00	1.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM	ENDING	BANK	SECCHI	PHYT	PERI																				
------	--------	------	--------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

NO.	DIST	SHADE frac	DEPTH m	N PREF	LIT LIM	N LIM	P LIM	N&P LIM	TOT LIM	GROW 1/da	RESP 1/da	DEATH 1/da	SETT 1/da	P/R RATIO	PHYTO µg/L	N PREF	LIT LIM	N LIM	P LIM	N&P LIM	SPC LIM	TOT LIM	GROW 1/da	RESP 1/da	DEATH 1/da	P/R RATIO	PERIP g/m²
287	9.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
288	9.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
289	9.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
290	9.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
291	9.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
292	9.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
293	9.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
294	9.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20 DEG C RATE										0.000	0.000	0.000	0.000								0.000	0.000	0.000				

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT B VINCENT & BONFOUCA WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 27 BONFOUCA FROM TRIB 2 TO BB03 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
310	UPR RCH	0.01873	30.40	2.84	5136.88	1543.09	4.93	8.76	0.00	9.70	0.00	1.76	0.00	0.00	0.00	8.80	0.00	0.00
310	TRIB	0.00033	30.40	2.87	5176.10	1556.28	4.94	8.72	0.00	9.66	0.00	1.77	0.00	0.00	0.00	8.80	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
310	9.20	9.10	0.01906	71.8	0.00013	9.06	197.40	1.60	93.08	14920.72	9308.00	149.21	23330.82	0.004	1.301	0.004
311	9.10	9.00	0.01906	71.8	0.00013	9.06	206.46	1.60	93.08	14920.72	9308.00	149.21	24261.62	0.005	1.353	0.005
312	9.00	8.90	0.01906	71.8	0.00013	9.06	215.52	1.60	93.08	14920.72	9308.00	149.21	25192.43	0.005	1.405	0.005
313	8.90	8.80	0.01906	71.8	0.00013	9.06	224.58	1.60	93.08	14920.72	9308.00	149.21	26123.23	0.005	1.457	0.005
314	8.80	8.70	0.01906	71.8	0.00013	9.06	233.65	1.60	93.08	14920.72	9308.00	149.21	27054.03	0.005	1.509	0.005
315	8.70	8.60	0.01906	71.8	0.00013	9.06	242.71	1.60	93.08	14920.72	9308.00	149.21	27984.83	0.005	1.561	0.005
TOT						54.37				89524.35	55848.00					
AVG						0.0001		1.60	93.08			149.21				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE 1/da	BOD1 DECA 1/da	BOD1 SETT 1/da	ABOD1 DECA 1/da	BOD1 HYDR 1/da	BOD2 DECA 1/da	BOD2 SETT 1/da	ABOD2 DECA 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECA 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECA 1/da	NCM DECA 1/da	NCM SETT 1/da
310	9.100	7.39	0.61	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.96	1.53	1.53	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.00	0.00	0.00	0.00
311	9.000	7.39	0.61	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.96	1.54	1.54	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.00	0.00	0.00	0.00
312	8.900	7.39	0.61	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.96	1.54	1.54	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.00	0.00	0.00	0.00
313	8.800	7.39	0.61	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.96	1.55	1.55	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.00	0.00	0.00	0.00
314	8.700	7.39	0.61	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.96	1.55	1.55	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.00	0.00	0.00	0.00
315	8.600	7.38	0.61	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.96	1.55	1.55	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.50	0.08	0.01	0.00	0.00	0.00	0.00	0.00	0.50			0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00	

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL		
310	9.100	30.40	2.87	5181.98	1558.24	4.93	8.87	0.00	9.81	0.00	1.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.	
311	9.000	30.40	2.89	5225.94	1572.99	4.93	8.97	0.00	9.91	0.00	1.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.
312	8.900	30.40	2.92	5268.65	1587.33	4.93	9.05	0.00	9.99	0.00	1.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.
313	8.800	30.40	2.94	5310.19	1601.28	4.94	9.10	0.00	10.04	0.00	1.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.
314	8.700	30.40	2.96	5350.63	1614.85	4.94	9.14	0.00	10.08	0.00	1.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.
315	8.600	30.40	2.99	5390.04	1628.08	4.95	9.16	0.00	10.10	0.00	1.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
310	9.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
311	9.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
312	8.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
313	8.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
314	8.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
315	8.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT B VINCENT & BONFOUCA WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 28 BONFOUCA FROM BB03 TO CANAL 26 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
316	UPR RCH	0.01906	30.40	2.99	5390.04	1628.08	4.95	9.16	0.00	10.10	0.00	1.84	0.00	0.00	0.00	8.80	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
316	8.60	8.50	0.01906	71.8	0.00013	9.06	251.77	1.60	93.08	14920.72	9308.00	149.21	28915.63	0.005	1.613	0.005
317	8.50	8.40	0.01906	71.8	0.00013	9.06	260.83	1.60	93.08	14920.72	9308.00	149.21	29846.43	0.006	1.665	0.006
318	8.40	8.30	0.01906	71.8	0.00013	9.06	269.89	1.60	93.08	14920.72	9308.00	149.21	30777.23	0.006	1.717	0.006
319	8.30	8.20	0.01906	71.8	0.00013	9.06	278.95	1.60	93.08	14920.72	9308.00	149.21	31708.03	0.006	1.769	0.006
320	8.20	8.10	0.01906	71.8	0.00013	9.06	288.01	1.60	93.08	14920.72	9308.00	149.21	32638.83	0.006	1.821	0.006
321	8.10	8.00	0.01906	71.8	0.00013	9.06	297.07	1.60	93.08	14920.72	9308.00	149.21	33569.63	0.006	1.873	0.006
322	8.00	7.90	0.01906	71.8	0.00013	9.06	306.13	1.60	93.08	14920.72	9308.00	149.21	34500.43	0.007	1.925	0.006
323	7.90	7.80	0.01906	71.8	0.00013	9.06	315.19	1.60	93.08	14920.72	9308.00	149.21	35431.23	0.007	1.977	0.007
TOT AVG				0.0001		72.49		1.60	93.08	119365.80	74464.00		149.21			

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECATY 1/da	BOD1 SETT DECATY 1/da	ABOD1 1/da	BOD1 HYDR DECATY 1/da	BOD2 DECATY 1/da	BOD2 SETT DECATY 1/da	ABOD2 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECATY 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECATY 1/da	NCM DECATY 1/da	NCM SETT 1/da		
316	8.500	7.38	0.61	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.96	1.55	1.55	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.72	0.00	0.00	0.00	0.00		
317	8.400	7.38	0.61	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.96	1.55	1.55	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.73	0.00	0.00	0.00	0.00		
318	8.300	7.38	0.61	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.96	1.55	1.55	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.00	0.00	0.00	0.00		
319	8.200	7.38	0.61	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.96	1.55	1.55	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.76	0.00	0.00	0.00	0.00		
320	8.100	7.38	0.61	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.96	1.55	1.55	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.77	0.00	0.00	0.00	0.00		
321	8.000	7.38	0.61	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.96	1.55	1.55	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.78	0.00	0.00	0.00	0.00		
322	7.900	7.38	0.61	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.96	1.55	1.55	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.79	0.00	0.00	0.00	0.00		
323	7.800	7.38	0.61	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.96	1.55	1.55	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00		
AVG 20 DEG C RATE			0.50	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.50				0.03	0.00	0.00	0.00	0.00	0.00	0.00				0.00	0.00	0.00	
* g/m ² /d			** mg/L/day																									

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	
316	8.500	30.40	3.01	5428.48	1640.98	4.97	9.17	0.00	10.12	0.00	1.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.9	0.0	0.
317	8.400	30.40	3.03	5465.99	1653.58	4.98	9.17	0.00	10.14	0.00	1.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.1	0.0	0.
318	8.300	30.40	3.05	5502.63	1665.88	5.00	9.18	0.00	10.17	0.00	1.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.2	0.0	0.
319	8.200	30.40	3.07	5538.46	1677.90	5.03	9.19	0.00	10.19	0.00	1.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.4	0.0	0.
320	8.100	30.40	3.09	5573.49	1689.67	5.06	9.20	0.00	10.22	0.00	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.6	0.0	0.
321	8.000	30.40	3.11	5607.79	1701.18	5.09	9.21	0.00	10.24	0.00	1.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.7	0.0	0.
322	7.900	30.40	3.13	5641.37	1712.45	5.13	9.22	0.00	10.27	0.00	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.9	0.0	0.
323	7.800	30.40	3.14	5674.28	1723.50	5.17	9.23	0.00	10.30	0.00	1.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
316	8.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
317	8.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
318	8.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
319	8.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
320	8.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
321	8.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
322	7.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
323	7.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20 DEG C RATE										0.000	0.000	0.000	0.000														

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

***** REACH INPUTS

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
344	UPR RCH	0.01906	30.40	3.14	5674.28	1723.50	5.17	9.23	0.00	10.30	0.00	1.89	0.00	0.00	0.00	10.00	0.00	0.00
344	TRIB	0.00028	30.40	3.16	5696.09	1730.82	5.17	8.68	0.00	9.75	0.00	1.86	0.00	0.00	0.00	10.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
344	7.80	7.70	0.01934	70.7	0.00014	8.56	323.75	1.87	76.51	14307.37	7651.00	143.07	58996.34	0.012	3.905	0.012
345	7.70	7.60	0.01934	70.7	0.00014	8.56	332.32	1.87	76.51	14307.37	7651.00	143.07	59761.44	0.012	3.956	0.012
TOT AVG					0.0001	17.12		1.87	76.51	28614.74	15302.00	143.07				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECAT	BOD1 SETT	ABOD1 DECAT	BOD1 HYDR	BOD2 DECAT	BOD2 SETT	ABOD2 DECAT	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECAT	NH3-N SRCE	NO3-N RATE	DENIT HYDR	ORG-P SETT	ORG-P SRCE	PHYTO PROD	PERIP PROD	COLI DECAT	NCM DECAT	NCM SETT	
344	7.700	7.38	0.58	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.96	1.55	1.55	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00
345	7.600	7.38	0.58	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.96	1.56	1.56	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.48	0.08	0.01	0.00	0.00	0.00	0.00	0.00	0.50			0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00
*	g/m²/d		**	mg/L/day																							

***** WATER QUALITY CONSTITUENT VALUES

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL	
344	7.700	30.40	3.16	5696.87	1731.08	5.21	9.25	0.00	10.31	0.00	1.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.
345	7.600	30.40	3.17	5714.36	1736.95	5.24	9.35	0.00	10.42	0.00	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
344	7.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
345	7.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20 DEG C RATE										0.000	0.000	0.000	0.000										0.000	0.000	0.000		

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

REACH NO. 33 BONFOUCA FROM TRIB 4 TO BB04

BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
365	UPR RCH	0.01934	30.40	3.17	5714.36	1736.95	5.24	9.35	0.00	10.42	0.00	1.91	0.00	0.00	0.00	10.00	0.00	0.00
365	TRIB	0.00137	30.40	3.17	5716.76	1737.75	5.26	9.16	0.00	10.23	0.00	1.91	0.00	0.00	0.00	10.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
365	7.60	7.50	0.02071	71.3	0.00014	7.99	340.31	1.87	76.51	14307.37	7651.00	143.07	61966.54	0.012	4.102	0.012
366	7.50	7.40	0.02071	71.3	0.00014	7.99	348.30	1.87	76.51	14307.37	7651.00	143.07	62731.64	0.012	4.152	0.012
367	7.40	7.30	0.02071	71.3	0.00014	7.99	356.30	1.87	76.51	14307.37	7651.00	143.07	63496.74	0.012	4.203	0.012
368	7.30	7.20	0.02071	71.3	0.00014	7.99	364.29	1.87	76.51	14307.37	7651.00	143.07	64261.84	0.013	4.254	0.013
369	7.20	7.10	0.02071	71.3	0.00014	7.99	372.29	1.87	76.51	14307.37	7651.00	143.07	65026.95	0.013	4.305	0.013
370	7.10	7.00	0.02071	71.3	0.00014	7.99	380.28	1.87	76.51	14307.37	7651.00	143.07	65792.05	0.013	4.355	0.013
371	7.00	6.90	0.02071	71.3	0.00014	7.99	388.27	1.87	76.51	14307.37	7651.00	143.07	66557.15	0.013	4.406	0.013
372	6.90	6.80	0.02071	71.3	0.00014	7.99	396.27	1.87	76.51	14307.37	7651.00	143.07	67322.25	0.013	4.457	0.013
TOT AVG					0.0001	63.95		1.87	76.51	114458.95	61208.00	143.07				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECAT	BOD1 SETT	ABOD1 DECAT	BOD1 HYDR	BOD2 DECAT	BOD2 SETT	ABOD2 DECAT	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECAT	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECAT	NCM DECAT	NCM SETT	
365	7.500	7.38	0.58	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.48	1.08	1.08	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	
366	7.400	7.38	0.58	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.48	1.08	1.08	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	
367	7.300	7.38	0.58	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.48	1.09	1.09	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	
368	7.200	7.38	0.58	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.48	1.09	1.09	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	
369	7.100	7.38	0.58	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.48	1.09	1.09	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	
370	7.000	7.37	0.58	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.48	1.10	1.10	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	
371	6.900	7.37	0.58	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.48	1.10	1.10	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	
372	6.800	7.37	0.58	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.48	1.10	1.10	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	
AVG 20 DEG C RATE			0.48	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.25			0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	
* g/m²/d			**	mg/L/day																							

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL
365	7.500	30.40	3.18	5731.48	1742.70	5.29	9.38	0.00	10.45	0.00	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.
366	7.400	30.40	3.19	5749.41	1748.72	5.33	9.42	0.00	10.49	0.00	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.
367	7.300	30.40	3.20	5767.19	1754.69	5.36	9.47	0.00	10.53	0.00	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.
368	7.200	30.40	3.21	5784.82	1760.61	5.40	9.51	0.00	10.58	0.00	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

369	7.100	30.40	3.22	5802.30	1766.47	5.43	9.55	0.00	10.62	0.00	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0
0.00																								
370	7.000	30.40	3.23	5819.63	1772.29	5.46	9.60	0.00	10.66	0.00	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0
0.00																								
371	6.900	30.40	3.24	5836.82	1778.06	5.50	9.64	0.00	10.71	0.00	1.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0
0.00																								
372	6.800	30.40	3.24	5853.86	1783.79	5.53	9.69	0.00	10.75	0.00	1.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0
0.00																								

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
365	7.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
366	7.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
367	7.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
368	7.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
369	7.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
370	7.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
371	6.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
372	6.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20 DEG C RATE										0.000	0.000	0.000	0.000									0.000	0.000	0.000			

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT B VINCENT & BONFOUCA WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 34 BONFOUCA FROM BB04 TO RKM 5.6 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
373	UPR RCH	0.02071	30.40	3.24	5853.86	1783.79	5.53	9.69	0.00	10.75	0.00	1.92	0.00	0.00	0.00	10.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
373	6.80	6.70	0.02071	71.3	0.00012	9.65	405.92	1.89	91.40	17274.60	9140.00	172.75	68236.25	0.011	3.775	0.011
374	6.70	6.60	0.02071	71.3	0.00012	9.65	415.57	1.89	91.40	17274.60	9140.00	172.75	69150.25	0.011	3.825	0.011
375	6.60	6.50	0.02071	71.3	0.00012	9.65	425.22	1.89	91.40	17274.60	9140.00	172.75	70064.25	0.011	3.876	0.011
376	6.50	6.40	0.02071	71.3	0.00012	9.65	434.87	1.89	91.40	17274.60	9140.00	172.75	70978.25	0.012	3.926	0.012
377	6.40	6.30	0.02071	71.3	0.00012	9.65	444.53	1.89	91.40	17274.60	9140.00	172.75	71892.25	0.012	3.977	0.012
378	6.30	6.20	0.02071	71.3	0.00012	9.65	454.18	1.89	91.40	17274.60	9140.00	172.75	72806.25	0.012	4.027	0.012
379	6.20	6.10	0.02071	71.3	0.00012	9.65	463.83	1.89	91.40	17274.60	9140.00	172.75	73720.25	0.012	4.078	0.012
380	6.10	6.00	0.02071	71.3	0.00012	9.65	473.48	1.89	91.40	17274.60	9140.00	172.75	74634.25	0.012	4.129	0.012
381	6.00	5.90	0.02071	71.3	0.00012	9.65	483.13	1.89	91.40	17274.60	9140.00	172.75	75548.25	0.012	4.179	0.012
382	5.90	5.80	0.02071	71.3	0.00012	9.65	492.79	1.89	91.40	17274.60	9140.00	172.75	76462.25	0.012	4.230	0.012
383	5.80	5.70	0.02071	71.3	0.00012	9.65	502.44	1.89	91.40	17274.60	9140.00	172.75	77376.25	0.013	4.280	0.013
384	5.70	5.60	0.02071	71.3	0.00012	9.65	512.09	1.89	91.40	17274.60	9140.00	172.75	78290.25	0.013	4.331	0.013
TOT AVG					0.0001	115.82		1.89	91.40	207295.17	109680.00	172.75				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR 1/da	BOD2 DECAT 1/da	BOD2 SETT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAT 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da
373	6.700	7.37	0.58	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.62	0.62	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00
374	6.600	7.37	0.58	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.63	0.63	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00
375	6.500	7.37	0.58	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.63	0.63	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00
376	6.400	7.37	0.58	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.63	0.63	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00
377	6.300	7.37	0.58	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.63	0.63	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00
378	6.200	7.37	0.58	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.63	0.63	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00
379	6.100	7.37	0.58	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.64	0.64	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00
380	6.000	7.37	0.58	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.64	0.64	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00
381	5.900	7.37	0.58	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.64	0.64	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00
382	5.800	7.37	0.58	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.64	0.64	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00
383	5.700	7.37	0.58	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.64	0.64	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00
384	5.600	7.37	0.58	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.64	0.64	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.48	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00
*	g/m ² /d		**	mg/L/day																						

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL
373	6.700	30.40	3.25	5870.68	1789.43	5.57	9.73	0.00	10.80	0.00	1.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.
374	6.600	30.40	3.26	5887.25	1795.00	5.60	9.77	0.00	10.84	0.00	1.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.
375	6.500	30.40	3.27	5903.66	1800.50	5.63	9.81	0.00	10.88	0.00	1.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.
376	6.400	30.40	3.28	5919.90	1805.96	5.65	9.85	0.00	10.92	0.00	1.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.
377	6.300	30.40	3.29	5935.99	1811.36	5.68	9.88	0.00	10.95	0.00	1.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.
378	6.200	30.40	3.30	5951.92	1816.70	5.70	9.91	0.00	10.98	0.00	1.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.
379	6.100	30.40	3.31	5967.69	1822.00	5.71	9.94	0.00	11.01	0.00	1.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.
380	6.000	30.40	3.32	5983.32	1827.25	5.73	9.96	0.00	11.03	0.00	1.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.
381	5.900	30.40	3.33	5998.81	1832.45	5.75	9.99	0.00	11.05	0.00	1.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.
382	5.800	30.40	3.33	6014.15	1837.60	5.76	10.01	0.00	11.08	0.00	1.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.
383	5.700	30.40	3.34	6029.35	1842.70	5.78	10.03	0.00	11.10	0.00	1.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.
384	5.600	30.40	3.35	6044.42	1847.76	5.80	10.05	0.00	11.11	0.00	1.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
373	6.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
374	6.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
375	6.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
376	6.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
377	6.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
378	6.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
379	6.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL
385	5.500	30.40	3.36	6060.10	1853.02	5.81	10.06	0.00	11.13	0.00	1.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.
386	5.400	30.40	3.37	6076.44	1858.51	5.83	10.07	0.00	11.14	0.00	1.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.
387	5.300	30.40	3.38	6092.60	1863.93	5.85	10.07	0.00	11.14	0.00	1.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.
388	5.200	30.40	3.39	6108.58	1869.30	5.87	10.07	0.00	11.14	0.00	1.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.
389	5.100	30.40	3.40	6124.38	1874.60	5.88	10.05	0.00	11.12	0.00	1.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.
390	5.000	30.40	3.41	6143.33	1880.95	5.90	10.03	0.00	11.09	0.00	1.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.
391	4.900	30.40	3.42	6162.08	1887.23	5.92	9.99	0.00	11.06	0.00	1.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.
392	4.800	30.40	3.43	6180.65	1893.45	5.95	9.95	0.00	11.01	0.00	1.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.
393	4.700	30.40	3.44	6199.04	1899.61	5.97	9.89	0.00	10.96	0.00	1.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.
394	4.600	30.40	3.45	6217.25	1905.71	5.99	9.84	0.00	10.90	0.00	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.
395	4.500	30.40	3.46	6235.30	1911.75	6.01	9.77	0.00	10.84	0.00	1.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
385	5.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
386	5.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
387	5.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
388	5.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
389	5.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
390	5.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
391	4.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
392	4.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
393	4.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
394	4.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
395	4.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT B VINCENT & BONFOUCA WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 36 BONFOUCA FROM BB05 TO RKM 2.7 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
396	UPR RCH	0.02510	30.40	3.46	6235.30	1911.75	6.01	9.77	0.00	10.84	0.00	1.73	0.00	0.00	0.00	10.00	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
396	4.50	4.40	0.02510	76.3	0.00022	5.16	621.53	1.44	77.70	11188.80	7770.00	111.89	91640.25	0.023	6.240	0.023
397	4.40	4.30	0.02510	76.3	0.00022	5.16	626.69	1.44	77.70	11188.80	7770.00	111.89	92417.25	0.023	6.293	0.023
398	4.30	4.20	0.02510	76.3	0.00022	5.16	631.85	1.44	77.70	11188.80	7770.00	111.89	93194.25	0.023	6.346	0.023
399	4.20	4.10	0.02510	76.3	0.00022	5.16	637.01	1.44	77.70	11188.80	7770.00	111.89	93971.25	0.024	6.399	0.024
400	4.10	4.00	0.02510	76.3	0.00022	5.16	642.17	1.44	77.70	11188.80	7770.00	111.89	94748.25	0.024	6.452	0.024
401	4.00	3.90	0.02510	76.3	0.00022	5.16	647.33	1.44	77.70	11188.80	7770.00	111.89	95525.25	0.024	6.505	0.024
402	3.90	3.80	0.02510	76.3	0.00022	5.16	652.49	1.44	77.70	11188.80	7770.00	111.89	96302.25	0.024	6.558	0.024
403	3.80	3.70	0.02510	76.3	0.00022	5.16	657.65	1.44	77.70	11188.80	7770.00	111.89	97079.25	0.024	6.611	0.024
404	3.70	3.60	0.02510	76.3	0.00022	5.16	662.81	1.44	77.70	11188.80	7770.00	111.89	97856.25	0.025	6.664	0.025
405	3.60	3.50	0.02510	76.3	0.00022	5.16	667.97	1.44	77.70	11188.80	7770.00	111.89	98633.25	0.025	6.717	0.025
406	3.50	3.40	0.02510	76.3	0.00022	5.16	673.13	1.44	77.70	11188.80	7770.00	111.89	99410.25	0.025	6.770	0.025
407	3.40	3.30	0.02510	76.3	0.00022	5.16	678.29	1.44	77.70	11188.80	7770.00	111.89	100187.25	0.025	6.823	0.025
408	3.30	3.20	0.02510	76.3	0.00022	5.16	683.45	1.44	77.70	11188.80	7770.00	111.89	100964.25	0.025	6.876	0.025
409	3.20	3.10	0.02510	76.3	0.00022	5.16	688.61	1.44	77.70	11188.80	7770.00	111.89	101741.25	0.026	6.929	0.026
410	3.10	3.00	0.02510	76.3	0.00022	5.16	693.77	1.44	77.70	11188.80	7770.00	111.89	102518.25	0.026	6.982	0.026
411	3.00	2.90	0.02510	76.3	0.00022	5.16	698.93	1.44	77.70	11188.80	7770.00	111.89	103295.25	0.026	7.034	0.026
412	2.90	2.80	0.02510	76.3	0.00022	5.16	704.10	1.44	77.70	11188.80	7770.00	111.89	104072.25	0.026	7.087	0.026
413	2.80	2.70	0.02510	76.3	0.00022	5.16	709.26	1.44	77.70	11188.80	7770.00	111.89	104849.25	0.026	7.140	0.026
TOT AVG					0.0002	92.88		1.44	77.70	201398.36	139859.98	111.89				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECAT	BOD1 SETT	ABOD1 DECAT	BOD1 HYDR	BOD2 DECAT	BOD2 SETT	ABOD2 DECAT	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECAT	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECAT	NCM DECAT	NCM SETT	
396	4.400	7.37	0.80	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.12	0.74	0.74	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00
397	4.300	7.36	0.80	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.12	0.74	0.74	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00
398	4.200	7.36	0.80	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.12	0.73	0.73	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00
399	4.100	7.36	0.80	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.12	0.72	0.72	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00
400	4.000	7.36	0.80	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.12	0.72	0.72	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00
401	3.900	7.36	0.80	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.12	0.71	0.71	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00
402	3.800	7.36	0.80	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.12	0.70	0.70	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00
403	3.700	7.36	0.80	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.12	0.69	0.69	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00
404	3.600	7.36	0.80	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.12	0.68	0.68	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00
405	3.500	7.36	0.80	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.12	0.67	0.67	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00
406	3.400	7.36	0.80	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.12	0.66	0.66	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00
407	3.300	7.36	0.80	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.12	0.65	0.65	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00
408	3.200	7.36	0.80	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.12	0.64	0.64	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00
409	3.100	7.36	0.80	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.12	0.63	0.63	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00
410	3.000	7.36	0.80	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.12	0.62	0.62	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00
411	2.900	7.36	0.80	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.12	0.61	0.61	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00
412	2.800	7.36	0.80	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.12	0.59	0.59	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00
413	2.700	7.36	0.80	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.12	0.58	0.58	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00
AVG 20	DEG C	RATE	0.66	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.06			0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00
*	g/m ² /d		**	mg/L/day																							

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL
396	4.400	30.40	3.47	6254.31	1918.12	6.04	9.69	0.00	10.76	0.00	1.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

397	4.300	30.40	3.48	6274.47	1924.87	6.07	9.60	0.00	10.67	0.00	1.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0
398	4.200	30.40	3.49	6294.53	1931.59	6.10	9.51	0.00	10.57	0.00	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0
399	4.100	30.40	3.50	6314.50	1938.28	6.13	9.40	0.00	10.47	0.00	1.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0
400	4.000	30.40	3.51	6334.37	1944.93	6.15	9.29	0.00	10.36	0.00	1.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0
401	3.900	30.40	3.52	6354.14	1951.56	6.18	9.18	0.00	10.25	0.00	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0
402	3.800	30.40	3.54	6373.82	1958.15	6.21	9.06	0.00	10.12	0.00	1.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0
403	3.700	30.40	3.55	6393.41	1964.71	6.24	8.93	0.00	10.00	0.00	1.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0
404	3.600	30.40	3.56	6412.91	1971.24	6.27	8.79	0.00	9.86	0.00	1.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0
405	3.500	30.40	3.57	6432.32	1977.74	6.30	8.65	0.00	9.71	0.00	1.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0
406	3.400	30.40	3.58	6451.64	1984.21	6.33	8.49	0.00	9.56	0.00	1.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0
407	3.300	30.40	3.59	6470.88	1990.66	6.36	8.33	0.00	9.40	0.00	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0
408	3.200	30.40	3.60	6490.03	1997.07	6.39	8.16	0.00	9.23	0.00	1.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0
409	3.100	30.40	3.61	6509.09	2003.45	6.42	7.98	0.00	9.05	0.00	1.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0
410	3.000	30.40	3.62	6528.07	2009.81	6.45	7.79	0.00	8.86	0.00	1.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0
411	2.900	30.40	3.63	6546.97	2016.14	6.48	7.59	0.00	8.66	0.00	1.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0
412	2.800	30.40	3.64	6565.78	2022.44	6.50	7.38	0.00	8.45	0.00	1.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0
413	2.700	30.40	3.65	6584.51	2028.72	6.53	7.16	0.00	8.22	0.00	1.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
396	4.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
397	4.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
398	4.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
399	4.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
400	4.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
401	3.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
402	3.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
403	3.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
404	3.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
405	3.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
406	3.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
407	3.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
408	3.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
409	3.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
410	3.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
411	2.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
412	2.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
413	2.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT B VINCENT & BONFOUCA
REACH NO. 37 BONFOUCA FROM RKM 2.7 TO LIBERTY

WATER QUALITY/HYDRAULIC MODEL FOR:
BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
414	UPR RCH	0.02510	30.40	3.65	6584.51	2028.72	6.53	7.16	0.00	8.22	0.00	1.29	0.00	0.00	0.00	10.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
414	2.70	2.60	0.02510	76.3	0.00018	6.49	715.75	1.60	88.00	14080.00	8800.00	140.80	105729.25	0.021	6.247	0.021
415	2.60	2.50	0.02510	76.3	0.00018	6.49	722.24	1.60	88.00	14080.00	8800.00	140.80	106609.25	0.021	6.299	0.021
416	2.50	2.40	0.02510	76.3	0.00018	6.49	728.74	1.60	88.00	14080.00	8800.00	140.80	107489.25	0.021	6.351	0.021
417	2.40	2.30	0.02510	76.3	0.00018	6.49	735.23	1.60	88.00	14080.00	8800.00	140.80	108369.25	0.022	6.403	0.022
418	2.30	2.20	0.02510	76.3	0.00018	6.49	741.72	1.60	88.00	14080.00	8800.00	140.80	109249.25	0.022	6.455	0.022
419	2.20	2.10	0.02510	76.3	0.00018	6.49	748.22	1.60	88.00	14080.00	8800.00	140.80	110129.25	0.022	6.507	0.022
420	2.10	2.00	0.02510	76.3	0.00018	6.49	754.71	1.60	88.00	14080.00	8800.00	140.80	111009.25	0.022	6.559	0.022
421	2.00	1.90	0.02510	76.3	0.00018	6.49	761.20	1.60	88.00	14080.00	8800.00	140.80	111889.25	0.022	6.611	0.022
422	1.90	1.80	0.02510	76.3	0.00018	6.49	767.70	1.60	88.00	14080.00	8800.00	140.80	112769.25	0.023	6.663	0.023
423	1.80	1.70	0.02510	76.3	0.00018	6.49	774.19	1.60	88.00	14080.00	8800.00	140.80	113649.25	0.023	6.715	0.023
424	1.70	1.60	0.02510	76.3	0.00018	6.49	780.68	1.60	88.00	14080.00	8800.00	140.80	114529.25	0.023	6.767	0.023
425	1.60	1.50	0.02510	76.3	0.00018	6.49	787.18	1.60	88.00	14080.00	8800.00	140.80	115409.25	0.023	6.819	0.023
426	1.50	1.40	0.02510	76.3	0.00018	6.49	793.67	1.60	88.00	14080.00	8800.00	140.80	116289.25	0.023	6.871	0.023
427	1.40	1.30	0.02510	76.3	0.00018	6.49	800.16	1.60	88.00	14080.00	8800.00	140.80	117169.25	0.023	6.923	0.023
428	1.30	1.20	0.02510	76.3	0.00018	6.49	806.66	1.60	88.00	14080.00	8800.00	140.80	118049.25	0.024	6.975	0.024
429	1.20	1.10	0.02510	76.3	0.00018	6.49	813.15	1.60	88.00	14080.00	8800.00	140.80	118929.25	0.024	7.027	0.024
430	1.10	1.00	0.02510	76.3	0.00018	6.49	819.65	1.60	88.00	14080.00	8800.00	140.80	119809.25	0.024	7.079	0.024
431	1.00	0.90	0.02510	76.3	0.00018	6.49	826.14	1.60	88.00	14080.00	8800.00	140.80	120689.25	0.024	7.131	0.024
432	0.90	0.80	0.02510	76.3	0.00018	6.49	832.63	1.60	88.00	14080.00	8800.00	140.80	121569.25	0.024	7.183	0.024
TOT						123.38				267520.00	167200.00					
AVG				0.0002				1.60	88.00			140.80				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECAY	BOD1 SETT	ABOD1 DECAY	BOD1 HYDR	BOD2 DECAY	BOD2 SETT	ABOD2 DECAY	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECAY	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECAY	NCM DECAY	NCM SETT
		mg/L	1/da	1/da	1/da	1/da	1/da	1/da	1/da	1/da	*	*	*	1/da	1/da	1/da	*	1/da	1/da	1/da	*	**	**	1/da	1/da	1/da
414	2.600	7.36	0.70	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.44	0.44	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.80	0.00	0.00	0.00	0.00
415	2.500	7.36	0.70	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.43	0.43	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.78	0.00	0.00	0.00	0.00
416	2.400	7.36	0.70	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.42	0.42	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.77	0.00	0.00	0.00	0.00
417	2.300	7.36	0.70	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.41	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.76	0.00	0.00	0.00	0.00
418	2.200	7.36	0.70	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.40	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.00	0.00	0.00	0.00
419	2.100	7.36	0.70	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.40	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.74	0.00	0.00	0.00	0.00
420	2.000	7.35	0.70	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.39	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.73	0.00	0.00	0.00	0.00
421	1.900	7.35	0.70	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.39	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.72	0.00	0.00	0.00	0.00
422	1.800	7.35	0.70	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.38	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.00	0.00	0.00	0.00
423	1.700	7.35	0.70	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.38	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.70	0.00	0.00	0.00	0.00
424	1.600	7.35	0.70	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.38	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.68	0.00	0.00	0.00	0.00
425	1.500	7.35	0.70	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.38	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.67	0.00	0.00	0.00	0.00
426	1.400	7.35	0.70	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.38	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.66	0.00	0.00	0.00	0.00
427	1.300	7.35	0.70	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.38	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.65	0.00	0.00	0.00	0.00
428	1.200	7.35	0.70	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.39	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.64	0.00	0.00	0.00	0.00
429	1.100	7.35	0.70	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.39	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.63	0.00	0.00	0.00	0.00
430	1.000	7.35	0.70	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.40	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.62	0.00	0.00	0.00	0.00
431	0.900	7.35	0.70	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.40	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.61	0.00	0.00	0.00	0.00
432	0.800	7.35	0.70	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.41	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.60	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.58	0.08	0.00	0.00	0.00	0.00	0.00	0.00				0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	
414	2.600	30.40	3.66	6602.34	2034.69	6.56	6.93	0.00	7.99	0.00	1.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.9	0.0	0.
415	2.500	30.40	3.67	6619.32	2040.38	6.58	6.74	0.00	7.78	0.00	1.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.7	0.0	0.
416	2.400	30.40	3.68	6636.22	2046.04	6.60	6.57	0.00	7.60	0.00	1.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.6	0.0	0.
417	2.300	30.40	3.69	6653.03	2051.66	6.61	6.43	0.00	7.43	0.00	1.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.5	0.0	0.
418	2.200	30.40	3.70	6669.74	2057.26	6.63	6.30	0.00	7.29	0.00	1.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.3	0.0	0.
419	2.100	30.40	3.71	6686.37	2062.83	6.64	6.19	0.00	7.17	0.00	1.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.2	0.0	0.
420	2.000	30.40	3.72	6702.92	2068.37	6.65	6.10	0.00	7.07	0.00	1.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.0	0.0	0.
421	1.900	30.40	3.73	6719.37	2073.89	6.66	6.03	0.00	6.98	0.00	1.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.9	0.0	0.
422	1.800	30.40	3.74	6735.75	2079.37	6.67	5.98	0.00	6.91	0.00	1.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.
423	1.700	30.40	3.75	6752.04	2084.83	6.67	5.94	0.00	6.87	0.00	1.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.6	0.0	0.
424	1.600	30.40	3.76	6768.24	2090.25	6.68	5.93	0.00	6.83	0.00	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.5	0.0	0.
425	1.500	30.40	3.77	6784.37	2095.66	6.68	5.93	0.00	6.82	0.00	1.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.4	0.0	0.
426	1.400	30.40	3.77	6800.42	2101.03	6.68	5.94	0.00	6.82	0.00	1.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.2	0.0	0.
427	1.300	30.40	3.78	6816.39	2106.38	6.68	5.98	0.00	6.84	0.00	1.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.1	0.0	0.
428	1.200	30.40	3.79	6832.27	2111.70	6.68	6.03	0.00	6.88	0.00	1.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.9	0.0	0.
429	1.100	30.40	3.80	6848.09	2117.00	6.68	6.10	0.00	6.93	0.00	1.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.8	0.0	0.
430	1.000	30.40	3.81	6863.82	2122.27	6.68	6.18	0.00	7.00	0.00	1.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.7	0.0	0.
431	0.900	30.40	3.82	6879.48	2127.51	6.68	6.28	0.00	7.08	0.00	1.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.5	0.0	0.
432	0.800	30.40	3.83	6895.07	2132.73	6.69	6.40	0.00	7.19	0.00	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.4	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
414	2.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
415	2.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
416	2.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
417	2.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
418	2.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
419	2.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
420	2.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
421	1.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
422	1.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
423	1.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
424	1.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
425	1.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
426	1.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO	BOD1	BOD2	EBOD1	EBOD2	ORG-N	NH3-N	NO3-N	TOT-N	EORG-N	ETOT-N	ORG-P	PO4-P	TOT-P	EORG-P	ETOT-P	CHL A	PERIP	COLI	
						mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	g/m²	#/100mL
899	0.700	30.35	3.83	6906.06	2136.41	6.69	6.49	0.00	7.26	0.00	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.2	0.0	0.
900	0.600	30.30	3.85	6931.51	2144.93	6.70	6.55	0.00	7.29	0.00	1.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.9	0.0	0.
901	0.500	30.24	3.86	6956.91	2153.44	6.71	6.61	0.00	7.33	0.00	1.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.7	0.0	0.
902	0.400	30.19	3.88	6982.28	2161.93	6.73	6.69	0.00	7.39	0.00	1.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.5	0.0	0.
903	0.300	30.14	3.89	7007.61	2170.41	6.74	6.79	0.00	7.45	0.00	1.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.2	0.0	0.
904	0.200	30.08	3.90	7032.90	2178.88	6.76	6.90	0.00	7.54	0.00	1.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.0	0.0	0.
905	0.100	30.03	3.92	7058.16	2187.33	6.77	7.02	0.00	7.63	0.00	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.8	0.0	0.
906	0.000	29.98	3.93	7083.37	2195.77	6.79	7.15	0.00	7.75	0.00	1.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.6	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
899	0.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
900	0.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
901	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
902	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
903	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
904	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
905	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	5.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
906	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	5.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT BROWNS VILL RD (DD2) WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 5 DRAINAGE DITCH 2 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO	BOD1	BOD2	EBOD1	EBOD2	ORG-N	NH3-N	NO3-N	PO4-P	CHL A	COLI #/100mL	NCM
67	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	0.63	0.00	0.63	0.00	0.29	0.00	0.00	0.00	0.00	0.00	0.00
67	WSTLD	0.00105	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	8.60	0.00	0.00	0.00	0.00	0.00	0.00
73	WSTLD	0.00000	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00	0.00	0.00
74	WSTLD	0.00012	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00	0.00	0.00
79	WSTLD	0.00004	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00	0.00	0.00
80	WSTLD	0.00014	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00	0.00	0.00
81	WSTLD	0.00001	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00	0.00	0.00
83	WSTLD	0.00002	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00	0.00	0.00
84	WSTLD	0.00000	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00	0.00	0.00
87	WSTLD	0.00002	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST	ENDING DIST	FLOW	PCT EFF	ADVCTV VELO	TRAVEL TIME	CUM TIME	DEPTH	WIDTH	VOLUME	SURFACE AREA	X-SECT AREA	TIDAL PRISM	TIDAL VELO	DISPRSN	MEAN VELO
----------	------------	-------------	------	---------	-------------	-------------	----------	-------	-------	--------	--------------	-------------	-------------	------------	---------	-----------

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

	km	km	m ³ /s	m/s	days	days	m	m	m ³	m ²	m ²	m ³	m/s	m ² /s	m/s	
67	2.10	2.00	0.00133	78.8	0.00959	0.12	0.12	0.09	1.59	13.91	159.21	0.14	0.00	0.000	0.000	0.010
68	2.00	1.90	0.00133	78.8	0.00959	0.12	0.24	0.09	1.59	13.91	159.21	0.14	0.00	0.000	0.000	0.010
69	1.90	1.80	0.00133	78.8	0.00959	0.12	0.36	0.09	1.59	13.91	159.21	0.14	0.00	0.000	0.000	0.010
70	1.80	1.70	0.00133	78.8	0.00959	0.12	0.48	0.09	1.59	13.91	159.21	0.14	0.00	0.000	0.000	0.010
71	1.70	1.60	0.00133	78.8	0.00959	0.12	0.60	0.09	1.59	13.91	159.21	0.14	0.00	0.000	0.000	0.010
72	1.60	1.50	0.00133	78.8	0.00959	0.12	0.72	0.09	1.59	13.91	159.21	0.14	0.00	0.000	0.000	0.010
73	1.50	1.40	0.00134	78.8	0.00960	0.12	0.84	0.09	1.59	13.93	159.32	0.14	0.00	0.000	0.000	0.010
74	1.40	1.30	0.00145	80.5	0.00987	0.12	0.96	0.09	1.63	14.71	163.31	0.15	0.00	0.000	0.000	0.010
75	1.30	1.20	0.00145	80.5	0.00987	0.12	1.08	0.09	1.63	14.71	163.31	0.15	0.00	0.000	0.000	0.010
76	1.20	1.10	0.00145	80.5	0.00987	0.12	1.20	0.09	1.63	14.71	163.31	0.15	0.00	0.000	0.000	0.010
77	1.10	1.00	0.00145	80.5	0.00987	0.12	1.31	0.09	1.63	14.71	163.31	0.15	0.00	0.000	0.000	0.010
78	1.00	0.90	0.00145	80.5	0.00987	0.12	1.43	0.09	1.63	14.71	163.31	0.15	0.00	0.000	0.000	0.010
79	0.90	0.80	0.00150	81.1	0.00997	0.12	1.55	0.09	1.65	15.00	164.78	0.15	0.00	0.000	0.000	0.010
80	0.80	0.70	0.00163	82.7	0.01028	0.11	1.66	0.09	1.69	15.90	169.16	0.16	0.00	0.000	0.000	0.010
81	0.70	0.60	0.00164	82.7	0.01029	0.11	1.77	0.09	1.69	15.94	169.36	0.16	0.00	0.000	0.000	0.010
82	0.60	0.50	0.00164	82.7	0.01029	0.11	1.88	0.09	1.69	15.94	169.36	0.16	0.00	0.000	0.000	0.010
83	0.50	0.40	0.00166	83.0	0.01034	0.11	2.00	0.09	1.70	16.08	170.07	0.16	0.00	0.000	0.000	0.010
84	0.40	0.30	0.00167	83.0	0.01035	0.11	2.11	0.09	1.70	16.10	170.16	0.16	0.00	0.000	0.000	0.010
85	0.30	0.20	0.00167	83.0	0.01035	0.11	2.22	0.09	1.70	16.10	170.16	0.16	0.00	0.000	0.000	0.010
86	0.20	0.10	0.00167	83.0	0.01035	0.11	2.33	0.09	1.70	16.10	170.16	0.16	0.00	0.000	0.000	0.010
87	0.10	0.00	0.00168	83.2	0.01038	0.11	2.44	0.09	1.71	16.21	170.66	0.16	0.00	0.000	0.000	0.010
TOT						2.44				314.33	3455.04					
AVG					0.0099			0.09	1.65			0.15				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECA	BOD1 SETT	ABOD1 DECA	BOD1 HYDR	BOD2 DECA	BOD2 SETT	ABOD2 DECA	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECA	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECA	NCM DECA	NCM SETT		
		mg/L	1/da	1/da	1/da	1/da	1/da	1/da	1/da	1/da	*	*	*	1/da	1/da	1/da	*	1/da	1/da	1/da	*	**	**	1/da	1/da	1/da		
67	2.000	7.49	11.10	0.13	0.73	0.00	0.00	0.00	0.00	0.00	0.28	1.34	1.34	0.06	0.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
68	1.900	7.49	11.10	0.13	0.73	0.00	0.00	0.00	0.00	0.00	0.28	1.24	1.24	0.06	0.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
69	1.800	7.49	11.10	0.13	0.73	0.00	0.00	0.00	0.00	0.00	0.28	1.15	1.15	0.06	0.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
70	1.700	7.49	11.10	0.13	0.73	0.00	0.00	0.00	0.00	0.00	0.28	1.07	1.07	0.06	0.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
71	1.600	7.49	11.10	0.13	0.73	0.00	0.00	0.00	0.00	0.00	0.28	1.00	1.00	0.06	0.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
72	1.500	7.49	11.10	0.13	0.73	0.00	0.00	0.00	0.00	0.00	0.28	0.93	0.93	0.06	0.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
73	1.400	7.49	11.10	0.13	0.73	0.00	0.00	0.00	0.00	0.00	0.28	0.87	0.87	0.06	0.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
74	1.300	7.49	10.82	0.13	0.71	0.00	0.00	0.00	0.00	0.00	0.28	0.89	0.89	0.06	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
75	1.200	7.49	10.82	0.13	0.71	0.00	0.00	0.00	0.00	0.00	0.28	0.83	0.83	0.06	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
76	1.100	7.49	10.82	0.13	0.71	0.00	0.00	0.00	0.00	0.00	0.28	0.79	0.79	0.06	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
77	1.000	7.49	10.82	0.13	0.71	0.00	0.00	0.00	0.00	0.00	0.28	0.74	0.74	0.06	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
78	0.900	7.49	10.82	0.13	0.71	0.00	0.00	0.00	0.00	0.00	0.28	0.70	0.70	0.06	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
79	0.800	7.49	10.73	0.13	0.70	0.00	0.00	0.00	0.00	0.00	0.28	0.69	0.69	0.06	0.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
80	0.700	7.49	10.45	0.13	0.68	0.00	0.00	0.00	0.00	0.00	0.28	0.74	0.74	0.06	0.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
81	0.600	7.49	10.44	0.13	0.68	0.00	0.00	0.00	0.00	0.00	0.28	0.71	0.71	0.06	0.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
82	0.500	7.49	10.44	0.13	0.68	0.00	0.00	0.00	0.00	0.00	0.28	0.67	0.67	0.06	0.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
83	0.400	7.49	10.39	0.13	0.68	0.00	0.00	0.00	0.00	0.00	0.28	0.66	0.66	0.06	0.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
84	0.300	7.49	10.39	0.13	0.68	0.00	0.00	0.00	0.00	0.00	0.28	0.63	0.63	0.06	0.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
85	0.200	7.49	10.39	0.13	0.68	0.00	0.00	0.00	0.00	0.00	0.28	0.60	0.60	0.06	0.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
86	0.100	7.49	10.39	0.13	0.68	0.00	0.00	0.00	0.00	0.00	0.28	0.58	0.58	0.06	0.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
87	0.000	7.49	10.36	0.13	0.67	0.00	0.00	0.00	0.00	0.00	0.28	0.56	0.56	0.06	0.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
AVG 20	DEG C	RATE	8.88	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.14			0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00		
*	g/m ² /d		**	mg/L/day																								

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO	BOD1	BOD2	EBOD1	EBOD2	ORG-N	NH3-N	NO3-N	TOT-N	EBORG-N	ETOT-N	ORG-P	PO4-P	TOT-P	EBORG-P	ETOT-P	CHL A	PERIP	COLI	
						mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	g/m ²	#/100mL

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

125	1.50	1.40	0.00030	6.0	0.00578	0.20	1.41	0.05	1.02	5.21	101.87	0.05	0.00	0.000	0.000	0.006
126	1.40	1.30	0.00030	6.0	0.00578	0.20	1.61	0.05	1.02	5.21	101.87	0.05	0.00	0.000	0.000	0.006
127	1.30	1.20	0.00030	6.0	0.00578	0.20	1.81	0.05	1.02	5.21	101.87	0.05	0.00	0.000	0.000	0.006
128	1.20	1.10	0.00030	6.0	0.00578	0.20	2.01	0.05	1.02	5.21	101.87	0.05	0.00	0.000	0.000	0.006
129	1.10	1.00	0.00030	6.0	0.00578	0.20	2.21	0.05	1.02	5.21	101.87	0.05	0.00	0.000	0.000	0.006
130	1.00	0.90	0.00030	6.0	0.00578	0.20	2.41	0.05	1.02	5.21	101.87	0.05	0.00	0.000	0.000	0.006
131	0.90	0.80	0.00030	6.0	0.00578	0.20	2.61	0.05	1.02	5.21	101.87	0.05	0.00	0.000	0.000	0.006
132	0.80	0.70	0.00030	6.0	0.00578	0.20	2.81	0.05	1.02	5.21	101.87	0.05	0.00	0.000	0.000	0.006
133	0.70	0.60	0.00030	6.0	0.00578	0.20	3.01	0.05	1.02	5.21	101.87	0.05	0.00	0.000	0.000	0.006
134	0.60	0.50	0.00030	6.0	0.00578	0.20	3.21	0.05	1.02	5.21	101.87	0.05	0.00	0.000	0.000	0.006
135	0.50	0.40	0.00031	7.7	0.00582	0.20	3.41	0.05	1.02	5.27	102.41	0.05	0.00	0.000	0.000	0.006
136	0.40	0.30	0.00035	18.7	0.00608	0.19	3.60	0.05	1.06	5.73	106.39	0.06	0.00	0.000	0.000	0.006
137	0.30	0.20	0.00035	18.7	0.00608	0.19	3.79	0.05	1.06	5.73	106.39	0.06	0.00	0.000	0.000	0.006
138	0.20	0.10	0.00035	18.7	0.00608	0.19	3.98	0.05	1.06	5.73	106.39	0.06	0.00	0.000	0.000	0.006
139	0.10	0.00	0.00035	18.7	0.00608	0.19	4.17	0.05	1.06	5.73	106.39	0.06	0.00	0.000	0.000	0.006
TOT						4.17				110.92	2152.49					
AVG				0.0058				0.05	1.02			0.05				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECAT	BOD1 SETT	ABOD1 DECAT	BOD1 HYDR	BOD2 DECAT	BOD2 SETT	ABOD2 DECAT	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECAT	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECAT	NCM DECAT	NCM SETT	
		mg/L	1/da	1/da	1/da	1/da	1/da	1/da	1/da	1/da	*	*	*	1/da	1/da	1/da	*	1/da	1/da	1/da	*	**	**	1/da	1/da	1/da	
119	2.000	7.50	17.85	0.13	1.26	0.00	0.00	0.00	0.00	0.00	0.28	0.35	0.35	0.06	1.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
120	1.900	7.50	17.85	0.13	1.26	0.00	0.00	0.00	0.00	0.00	0.28	0.34	0.34	0.06	1.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
121	1.800	7.50	17.85	0.13	1.26	0.00	0.00	0.00	0.00	0.00	0.28	0.34	0.34	0.06	1.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
122	1.700	7.50	17.85	0.13	1.26	0.00	0.00	0.00	0.00	0.00	0.28	0.33	0.33	0.06	1.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
123	1.600	7.50	17.85	0.13	1.26	0.00	0.00	0.00	0.00	0.00	0.28	0.33	0.33	0.06	1.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
124	1.500	7.50	17.85	0.13	1.26	0.00	0.00	0.00	0.00	0.00	0.28	0.33	0.33	0.06	1.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
125	1.400	7.50	17.69	0.13	1.25	0.00	0.00	0.00	0.00	0.00	0.28	0.35	0.35	0.06	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
126	1.300	7.50	17.69	0.13	1.25	0.00	0.00	0.00	0.00	0.00	0.28	0.35	0.35	0.06	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
127	1.200	7.50	17.69	0.13	1.25	0.00	0.00	0.00	0.00	0.00	0.28	0.34	0.34	0.06	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
128	1.100	7.50	17.69	0.13	1.25	0.00	0.00	0.00	0.00	0.00	0.28	0.33	0.33	0.06	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
129	1.000	7.50	17.69	0.13	1.25	0.00	0.00	0.00	0.00	0.00	0.28	0.33	0.33	0.06	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
130	0.900	7.50	17.69	0.13	1.25	0.00	0.00	0.00	0.00	0.00	0.28	0.33	0.33	0.06	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
131	0.800	7.50	17.69	0.13	1.25	0.00	0.00	0.00	0.00	0.00	0.28	0.32	0.32	0.06	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
132	0.700	7.50	17.69	0.13	1.25	0.00	0.00	0.00	0.00	0.00	0.28	0.32	0.32	0.06	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
133	0.600	7.50	17.69	0.13	1.25	0.00	0.00	0.00	0.00	0.00	0.28	0.32	0.32	0.06	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
134	0.500	7.50	17.69	0.13	1.25	0.00	0.00	0.00	0.00	0.00	0.28	0.32	0.32	0.06	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
135	0.400	7.50	17.59	0.13	1.24	0.00	0.00	0.00	0.00	0.00	0.28	0.34	0.34	0.06	1.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
136	0.300	7.49	16.88	0.13	1.19	0.00	0.00	0.00	0.00	0.00	0.28	0.47	0.47	0.06	1.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
137	0.200	7.49	16.88	0.13	1.19	0.00	0.00	0.00	0.00	0.00	0.28	0.44	0.44	0.06	1.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
138	0.100	7.49	16.88	0.13	1.19	0.00	0.00	0.00	0.00	0.00	0.28	0.41	0.41	0.06	1.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
139	0.000	7.49	16.88	0.13	1.19	0.00	0.00	0.00	0.00	0.00	0.28	0.39	0.39	0.06	1.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
AVG 20	DEG C	RATE	14.51	0.08	0.05	0.00	0.00	0.00	0.00	0.00	0.14			0.03	0.05	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	
*	g/m ² /d			**	mg/L/day																						

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL
119	2.000	30.40	0.26	528.46	9.05	6.83	1.18	0.00	1.18	0.00	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
120	1.900	30.40	0.26	528.46	9.05	7.04	1.05	0.00	1.05	0.00	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
121	1.800	30.40	0.26	528.46	9.05	7.10	0.95	0.00	0.95	0.00	0.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
122	1.700	30.40	0.26	528.46	9.05	7.11	0.86	0.00	0.86	0.00	0.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

FINAL REPORT UPPER B BONFOUCA
 REACH NO. 13 UB FROM RKM 5.0 TO DD 23

WATER QUALITY/HYDRAULIC MODEL FOR:
 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
159	HDWTR	0.00283	33.80	0.26	520.90	7.23	6.00	0.63	0.00	0.63	0.00	0.29	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRS N m²/s	MEAN VELO m/s
159	5.00	4.90	0.00283	0.0	0.05667	0.02	0.02	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
160	4.90	4.80	0.00283	0.0	0.05667	0.02	0.04	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
161	4.80	4.70	0.00283	0.0	0.05667	0.02	0.06	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
162	4.70	4.60	0.00283	0.0	0.05667	0.02	0.08	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
163	4.60	4.50	0.00283	0.0	0.05667	0.02	0.10	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
164	4.50	4.40	0.00283	0.0	0.05667	0.02	0.12	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
165	4.40	4.30	0.00283	0.0	0.05667	0.02	0.14	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
166	4.30	4.20	0.00283	0.0	0.05667	0.02	0.16	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
167	4.20	4.10	0.00283	0.0	0.05667	0.02	0.18	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
168	4.10	4.00	0.00283	0.0	0.05667	0.02	0.20	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
169	4.00	3.90	0.00283	0.0	0.05667	0.02	0.22	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
170	3.90	3.80	0.00283	0.0	0.05667	0.02	0.25	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
171	3.80	3.70	0.00283	0.0	0.05667	0.02	0.27	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
172	3.70	3.60	0.00283	0.0	0.05667	0.02	0.29	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
173	3.60	3.50	0.00283	0.0	0.05667	0.02	0.31	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
174	3.50	3.40	0.00283	0.0	0.05667	0.02	0.33	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
175	3.40	3.30	0.00283	0.0	0.05667	0.02	0.35	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
176	3.30	3.20	0.00283	0.0	0.05667	0.02	0.37	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
177	3.20	3.10	0.00283	0.0	0.05667	0.02	0.39	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
178	3.10	3.00	0.00283	0.0	0.05667	0.02	0.41	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
179	3.00	2.90	0.00283	0.0	0.05667	0.02	0.43	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
180	2.90	2.80	0.00283	0.0	0.05667	0.02	0.45	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
181	2.80	2.70	0.00283	0.0	0.05667	0.02	0.47	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
182	2.70	2.60	0.00283	0.0	0.05667	0.02	0.49	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
TOT						0.49				119.93	2400.16	0.05				
AVG					0.0567			0.05	1.00							

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR 1/da	BOD2 DECAT 1/da	BOD2 SETT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAT 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da
159	4.900	7.50	30.28	0.13	1.28	0.00	0.00	0.00	0.00	0.00	0.28	0.32	0.32	0.06	1.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
160	4.800	7.50	30.28	0.13	1.28	0.00	0.00	0.00	0.00	0.00	0.28	0.32	0.32	0.06	1.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
161	4.700	7.50	30.28	0.13	1.28	0.00	0.00	0.00	0.00	0.00	0.28	0.32	0.32	0.06	1.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
162	4.600	7.50	30.28	0.13	1.28	0.00	0.00	0.00	0.00	0.00	0.28	0.32	0.32	0.06	1.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
163	4.500	7.50	30.28	0.13	1.28	0.00	0.00	0.00	0.00	0.00	0.28	0.32	0.32	0.06	1.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
164	4.400	7.50	30.28	0.13	1.28	0.00	0.00	0.00	0.00	0.00	0.28	0.32	0.32	0.06	1.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
165	4.300	7.50	30.28	0.13	1.28	0.00	0.00	0.00	0.00	0.00	0.28	0.32	0.32	0.06	1.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
166	4.200	7.50	30.28	0.13	1.28	0.00	0.00	0.00	0.00	0.00	0.28	0.32	0.32	0.06	1.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
167	4.100	7.50	30.28	0.13	1.28	0.00	0.00	0.00	0.00	0.00	0.28	0.32	0.32	0.06	1.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
168	4.000	7.50	30.28	0.13	1.28	0.00	0.00	0.00	0.00	0.00	0.28	0.32	0.32	0.06	1.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
169	3.900	7.50	30.28	0.13	1.28	0.00	0.00	0.00	0.00	0.00	0.28	0.32	0.32	0.06	1.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
170	3.800	7.50	30.28	0.13	1.28	0.00	0.00	0.00	0.00	0.00	0.28	0.32	0.32	0.06	1.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
171	3.700	7.50	30.28	0.13	1.28	0.00	0.00	0.00	0.00	0.00	0.28	0.32	0.32	0.06	1.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
172	3.600	7.50	30.28	0.13	1.28	0.00	0.00	0.00	0.00	0.00	0.28	0.32	0.32	0.06	1.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

201	1.80	1.70	0.00318	1.9	0.05892	0.02	0.67	0.05	1.03	5.39	103.50	0.05	0.00	0.000	0.000	0.059
202	1.70	1.60	0.00318	1.9	0.05892	0.02	0.69	0.05	1.03	5.39	103.50	0.05	0.00	0.000	0.000	0.059
203	1.60	1.50	0.00318	1.9	0.05892	0.02	0.71	0.05	1.03	5.39	103.50	0.05	0.00	0.000	0.000	0.059
204	1.50	1.40	0.00318	1.9	0.05892	0.02	0.73	0.05	1.03	5.39	103.50	0.05	0.00	0.000	0.000	0.059
205	1.40	1.30	0.00318	1.9	0.05892	0.02	0.75	0.05	1.03	5.39	103.50	0.05	0.00	0.000	0.000	0.059
206	1.30	1.20	0.00318	1.9	0.05892	0.02	0.77	0.05	1.03	5.39	103.50	0.05	0.00	0.000	0.000	0.059
207	1.20	1.10	0.00318	1.9	0.05892	0.02	0.78	0.05	1.03	5.39	103.50	0.05	0.00	0.000	0.000	0.059
TOT						0.29				80.84	1552.47					
AVG					0.0589			0.05	1.03				0.05			

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECA	BOD1 SETT	ABOD1 DECA	BOD1 HYDR	BOD2 DECA	BOD2 SETT	ABOD2 DECA	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECA	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECA	NCM DECA	NCM SETT		
		mg/L	1/da	1/da	1/da	1/da	1/da	1/da	1/da	1/da	*	*	*	1/da	1/da	1/da	*	1/da	1/da	1/da	*	**	**	1/da	1/da	1/da		
193	2.500	7.50	30.28	0.13	1.23	0.00	0.00	0.00	0.00	0.00	0.28	0.32	0.32	0.06	1.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
194	2.400	7.50	30.28	0.13	1.23	0.00	0.00	0.00	0.00	0.00	0.28	0.32	0.32	0.06	1.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
195	2.300	7.50	30.28	0.13	1.23	0.00	0.00	0.00	0.00	0.00	0.28	0.32	0.32	0.06	1.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
196	2.200	7.50	30.28	0.13	1.23	0.00	0.00	0.00	0.00	0.00	0.28	0.32	0.32	0.06	1.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
197	2.100	7.50	30.28	0.13	1.23	0.00	0.00	0.00	0.00	0.00	0.28	0.32	0.32	0.06	1.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
198	2.000	7.50	30.28	0.13	1.23	0.00	0.00	0.00	0.00	0.00	0.28	0.32	0.32	0.06	1.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
199	1.900	7.50	30.28	0.13	1.23	0.00	0.00	0.00	0.00	0.00	0.28	0.32	0.32	0.06	1.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
200	1.800	7.50	30.28	0.13	1.23	0.00	0.00	0.00	0.00	0.00	0.28	0.32	0.32	0.06	1.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
201	1.700	7.50	30.28	0.13	1.23	0.00	0.00	0.00	0.00	0.00	0.28	0.32	0.32	0.06	1.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
202	1.600	7.50	30.28	0.13	1.23	0.00	0.00	0.00	0.00	0.00	0.28	0.32	0.32	0.06	1.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
203	1.500	7.50	30.28	0.13	1.23	0.00	0.00	0.00	0.00	0.00	0.28	0.32	0.32	0.06	1.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
204	1.400	7.50	30.28	0.13	1.23	0.00	0.00	0.00	0.00	0.00	0.28	0.32	0.32	0.06	1.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
205	1.300	7.50	30.28	0.13	1.23	0.00	0.00	0.00	0.00	0.00	0.28	0.32	0.32	0.06	1.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
206	1.200	7.50	30.28	0.13	1.23	0.00	0.00	0.00	0.00	0.00	0.28	0.32	0.32	0.06	1.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
207	1.100	7.50	30.28	0.13	1.23	0.00	0.00	0.00	0.00	0.00	0.28	0.32	0.32	0.06	1.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
AVG 20	DEG C	RATE	25.00	0.08	0.06	0.00	0.00	0.00	0.00	0.00	0.14			0.03	0.06	0.00	0.00	0.00	0.00	0.00	0.00				0.00	0.00	0.00	
*	g/m ² /d																											
**			mg/L/day																									

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	
193	2.500	30.40	0.26	525.31	8.29	7.27	0.67	0.00	0.67	0.00	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
194	2.400	30.40	0.26	525.31	8.29	7.28	0.67	0.00	0.67	0.00	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
195	2.300	30.40	0.26	525.31	8.29	7.28	0.67	0.00	0.67	0.00	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
196	2.200	30.40	0.26	525.31	8.29	7.29	0.67	0.00	0.67	0.00	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
197	2.100	30.40	0.26	525.31	8.29	7.29	0.67	0.00	0.67	0.00	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
198	2.000	30.40	0.26	525.31	8.29	7.29	0.67	0.00	0.67	0.00	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
199	1.900	30.40	0.26	525.31	8.29	7.29	0.67	0.00	0.67	0.00	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
200	1.800	30.40	0.26	525.31	8.29	7.29	0.67	0.00	0.67	0.00	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
201	1.700	30.40	0.26	525.31	8.29	7.29	0.67	0.00	0.67	0.00	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
202	1.600	30.40	0.26	525.31	8.29	7.29	0.66	0.00	0.66	0.00	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
203	1.500	30.40	0.26	525.31	8.29	7.29	0.66	0.00	0.66	0.00	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

204	1.400	30.40	0.26	525.31	8.29	7.29	0.66	0.00	0.66	0.00	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																									
205	1.300	30.40	0.26	525.31	8.29	7.29	0.66	0.00	0.66	0.00	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																									
206	1.200	30.40	0.26	525.31	8.29	7.29	0.66	0.00	0.66	0.00	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																									
207	1.100	30.40	0.26	525.31	8.29	7.29	0.66	0.00	0.66	0.00	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																									

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
193	2.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
194	2.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
195	2.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
196	2.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
197	2.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
198	2.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
199	1.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
200	1.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
201	1.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
202	1.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
203	1.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
204	1.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
205	1.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
206	1.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
207	1.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT UPPER B BONFOUCA WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 16 UB FROM BB01 TO BAYOU VINCENT BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
208	UPR RCH	0.00318	30.40	0.26	525.31	8.29	7.29	0.66	0.00	0.66	0.00	0.32	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
208	1.10	1.00	0.00318	1.9	0.02617	0.04	0.83	0.08	1.55	12.13	155.24	0.12	0.00	0.000	0.000	0.026
209	1.00	0.90	0.00318	1.9	0.02617	0.04	0.87	0.08	1.55	12.13	155.24	0.12	0.00	0.000	0.000	0.026
210	0.90	0.80	0.00318	1.9	0.02617	0.04	0.92	0.08	1.55	12.13	155.24	0.12	0.00	0.000	0.000	0.026
211	0.80	0.70	0.00318	1.9	0.02617	0.04	0.96	0.08	1.55	12.13	155.24	0.12	0.00	0.000	0.000	0.026
212	0.70	0.60	0.00318	1.9	0.02617	0.04	1.01	0.08	1.55	12.13	155.24	0.12	0.00	0.000	0.000	0.026
213	0.60	0.50	0.00318	1.9	0.02617	0.04	1.05	0.08	1.55	12.13	155.24	0.12	0.00	0.000	0.000	0.026
214	0.50	0.40	0.00318	1.9	0.02617	0.04	1.09	0.08	1.55	12.13	155.24	0.12	0.00	0.000	0.000	0.026
215	0.40	0.30	0.00318	1.9	0.02617	0.04	1.14	0.08	1.55	12.13	155.24	0.12	0.00	0.000	0.000	0.026
216	0.30	0.20	0.00318	1.9	0.02617	0.04	1.18	0.08	1.55	12.13	155.24	0.12	0.00	0.000	0.000	0.026
217	0.20	0.10	0.00318	1.9	0.02617	0.04	1.23	0.08	1.55	12.13	155.24	0.12	0.00	0.000	0.000	0.026
218	0.10	0.00	0.00318	1.9	0.02617	0.04	1.27	0.08	1.55	12.13	155.24	0.12	0.00	0.000	0.000	0.026

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

TOT 0.49 133.48 1707.62
 AVG 0.0262 0.08 1.55 0.12

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECAY	BOD1 SETT	ABOD1 DECAY	BOD1 HYDR	BOD2 DECAY	BOD2 SETT	ABOD2 DECAY	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECAY	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECAY	NCM DECAY	NCM SETT
		mg/L	1/da	1/da	1/da	1/da	1/da	1/da	1/da	1/da	*	*	*	1/da	1/da	1/da	*	1/da	1/da	1/da	*	**	**	1/da	1/da	1/da
208	1.000	7.50	16.08	0.13	0.82	0.00	0.00	0.00	0.00	0.00	0.28	0.32	0.32	0.06	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00
209	0.900	7.50	16.08	0.13	0.82	0.00	0.00	0.00	0.00	0.00	0.28	0.32	0.32	0.06	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.00	0.00	0.00
210	0.800	7.50	16.08	0.13	0.82	0.00	0.00	0.00	0.00	0.00	0.28	0.32	0.32	0.06	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.00	0.00	0.00	0.00
211	0.700	7.50	16.08	0.13	0.82	0.00	0.00	0.00	0.00	0.00	0.28	0.32	0.32	0.06	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.29	0.00	0.00	0.00	0.00
212	0.600	7.50	16.08	0.13	0.82	0.00	0.00	0.00	0.00	0.00	0.28	0.32	0.32	0.06	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.00	0.00	0.00	0.00
213	0.500	7.50	16.08	0.13	0.82	0.00	0.00	0.00	0.00	0.00	0.28	0.32	0.32	0.06	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.44	0.00	0.00	0.00	0.00
214	0.400	7.50	16.08	0.13	0.82	0.00	0.00	0.00	0.00	0.00	0.28	0.32	0.32	0.06	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.51	0.00	0.00	0.00	0.00
215	0.300	7.50	16.08	0.13	0.82	0.00	0.00	0.00	0.00	0.00	0.28	0.32	0.32	0.06	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.59	0.00	0.00	0.00	0.00
216	0.200	7.50	16.08	0.13	0.82	0.00	0.00	0.00	0.00	0.00	0.28	0.32	0.32	0.06	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.66	0.00	0.00	0.00	0.00
217	0.100	7.50	16.08	0.13	0.82	0.00	0.00	0.00	0.00	0.00	0.28	0.32	0.32	0.06	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.73	0.00	0.00	0.00	0.00
218	0.000	7.50	16.08	0.13	0.82	0.00	0.00	0.00	0.00	0.00	0.28	0.32	0.32	0.06	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00
AVG 20	DEG C RATE	13.28	0.08	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.14			0.03	0.06	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	
208	1.000	30.40	0.26	525.31	8.29	7.27	0.66	0.00	0.76	0.00	0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.9	0.0	0.
209	0.900	30.40	0.26	525.31	8.29	7.26	0.66	0.00	0.86	0.00	0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.8	0.0	0.
210	0.800	30.40	0.26	525.31	8.29	7.25	0.66	0.00	0.95	0.00	0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.7	0.0	0.
211	0.700	30.40	0.26	525.31	8.29	7.25	0.66	0.00	1.05	0.00	0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.6	0.0	0.
212	0.600	30.40	0.26	525.31	8.29	7.26	0.66	0.00	1.14	0.00	0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.5	0.0	0.
213	0.500	30.40	0.26	525.31	8.29	7.26	0.66	0.00	1.24	0.00	0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.5	0.0	0.
214	0.400	30.40	0.26	525.31	8.29	7.26	0.66	0.00	1.34	0.00	0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.4	0.0	0.
215	0.300	30.40	0.26	525.31	8.29	7.27	0.66	0.00	1.43	0.00	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.3	0.0	0.
216	0.200	30.40	0.26	525.31	8.29	7.27	0.66	0.00	1.53	0.00	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.2	0.0	0.
217	0.100	30.40	0.26	525.31	8.29	7.27	0.66	0.00	1.63	0.00	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.1	0.0	0.
218	0.000	30.40	0.26	525.31	8.29	7.28	0.66	0.00	1.72	0.00	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
208	1.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
209	0.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
210	0.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
211	0.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

212	0.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	4.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
213	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	5.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
214	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
215	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
216	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
217	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
218	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT DRAINAGE DITCH 23
REACH NO. 14 DRAINAGE DITCH 23

WATER QUALITY/HYDRAULIC MODEL FOR:
BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
183	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	0.63	0.00	0.63	0.00	0.29	0.00	0.00	0.00	0.00	0.00	0.00
183	WSTLD	0.00006	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
183	1.00	0.90	0.00034	17.5	0.00605	0.19	0.19	0.05	1.06	5.68	105.93	0.06	0.00	0.000	0.000	0.006
184	0.90	0.80	0.00034	17.5	0.00605	0.19	0.38	0.05	1.06	5.68	105.93	0.06	0.00	0.000	0.000	0.006
185	0.80	0.70	0.00034	17.5	0.00605	0.19	0.57	0.05	1.06	5.68	105.93	0.06	0.00	0.000	0.000	0.006
186	0.70	0.60	0.00034	17.5	0.00605	0.19	0.77	0.05	1.06	5.68	105.93	0.06	0.00	0.000	0.000	0.006
187	0.60	0.50	0.00034	17.5	0.00605	0.19	0.96	0.05	1.06	5.68	105.93	0.06	0.00	0.000	0.000	0.006
188	0.50	0.40	0.00034	17.5	0.00605	0.19	1.15	0.05	1.06	5.68	105.93	0.06	0.00	0.000	0.000	0.006
189	0.40	0.30	0.00034	17.5	0.00605	0.19	1.34	0.05	1.06	5.68	105.93	0.06	0.00	0.000	0.000	0.006
190	0.30	0.20	0.00034	17.5	0.00605	0.19	1.53	0.05	1.06	5.68	105.93	0.06	0.00	0.000	0.000	0.006
191	0.20	0.10	0.00034	17.5	0.00605	0.19	1.72	0.05	1.06	5.68	105.93	0.06	0.00	0.000	0.000	0.006
192	0.10	0.00	0.00034	17.5	0.00605	0.19	1.91	0.05	1.06	5.68	105.93	0.06	0.00	0.000	0.000	0.006
TOT						1.91				56.77	1059.34					
AVG				0.0060				0.05	1.06			0.06				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT 1/da	ABOD1 1/da	BOD1 HYDR DECAT 1/da	BOD2 SETT 1/da	ABOD2 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAT 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da
183	0.900	7.49	16.96	0.13	1.19	0.00	0.00	0.00	0.00	0.28	0.52	0.52	0.06	1.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
184	0.800	7.49	16.96	0.13	1.19	0.00	0.00	0.00	0.00	0.28	0.48	0.48	0.06	1.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
185	0.700	7.49	16.96	0.13	1.19	0.00	0.00	0.00	0.00	0.28	0.44	0.44	0.06	1.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
186	0.600	7.49	16.96	0.13	1.19	0.00	0.00	0.00	0.00	0.28	0.42	0.42	0.06	1.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
187	0.500	7.49	16.96	0.13	1.19	0.00	0.00	0.00	0.00	0.28	0.40	0.40	0.06	1.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
188	0.400	7.49	16.96	0.13	1.19	0.00	0.00	0.00	0.00	0.28	0.38	0.38	0.06	1.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
189	0.300	7.49	16.96	0.13	1.19	0.00	0.00	0.00	0.00	0.28	0.37	0.37	0.06	1.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
190	0.200	7.49	16.96	0.13	1.19	0.00	0.00	0.00	0.00	0.28	0.36	0.36	0.06	1.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
191	0.100	7.49	16.96	0.13	1.19	0.00	0.00	0.00	0.00	0.28	0.35	0.35	0.06	1.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
192	0.000	7.49	16.96	0.13	1.19	0.00	0.00	0.00	0.00	0.28	0.34	0.34	0.06	1.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE		14.00	0.08	0.09	0.00	0.00	0.00	0.00	0.00	0.14			0.03	0.09	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00

* g/m²/d ** mg/L/day

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL	
183	0.900	30.40	0.28	561.72	17.07	6.51	3.75	0.00	3.75	0.00	3.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
184	0.800	30.40	0.28	561.72	17.07	6.84	3.11	0.00	3.11	0.00	2.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
185	0.700	30.40	0.28	561.72	17.07	6.95	2.59	0.00	2.59	0.00	2.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
186	0.600	30.40	0.28	561.72	17.07	7.00	2.19	0.00	2.19	0.00	1.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
187	0.500	30.40	0.28	561.72	17.07	7.03	1.86	0.00	1.86	0.00	1.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
188	0.400	30.40	0.28	561.72	17.07	7.05	1.60	0.00	1.60	0.00	1.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
189	0.300	30.40	0.28	561.72	17.07	7.07	1.39	0.00	1.39	0.00	1.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
190	0.200	30.40	0.28	561.72	17.07	7.09	1.23	0.00	1.23	0.00	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
191	0.100	30.40	0.28	561.72	17.07	7.10	1.09	0.00	1.09	0.00	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
192	0.000	30.40	0.28	561.72	17.07	7.11	0.99	0.00	0.99	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
183	0.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
184	0.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
185	0.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
186	0.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
187	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
188	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
189	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
190	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
191	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
192	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT HIGHWAY 190(DD 5) WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 18 HWY 190 (DRAINAGE DITCH 5) BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
221	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	0.63	0.00	0.63	0.00	0.29	0.00	0.00	0.00	0.00	0.00	0.00
221	WSTLD	0.00031	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	8.60	0.00	0.00	0.00	0.00	0.00	0.00
222	WSTLD	0.00051	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	8.60	0.00	0.00	0.00	0.00	0.00	0.00
223	WSTLD	0.00016	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00	0.00	0.00
224	WSTLD	0.00003	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00	0.00	0.00
227	WSTLD	0.00011	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

228	WSTLD	0.00058	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	8.60	0.00	0.00	0.00	0.00	0.00
230	WSTLD	0.00004	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00	0.00
231	WSTLD	0.00000	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00	0.00
232	WSTLD	0.00003	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00	0.00
233	WSTLD	0.00013	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00	0.00
234	WSTLD	0.00002	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00	0.00
235	WSTLD	0.00001	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
221	1.80	1.70	0.00060	52.4	0.00729	0.16	0.16	0.07	1.25	8.16	124.95	0.08	0.00	0.000	0.000	0.007
222	1.70	1.60	0.00110	74.4	0.00900	0.13	0.29	0.08	1.50	12.28	150.42	0.12	0.00	0.000	0.000	0.009
223	1.60	1.50	0.00126	77.6	0.00941	0.12	0.41	0.09	1.57	13.40	156.53	0.13	0.00	0.000	0.000	0.009
224	1.50	1.40	0.00129	78.0	0.00948	0.12	0.53	0.09	1.58	13.59	157.52	0.14	0.00	0.000	0.000	0.009
225	1.40	1.30	0.00129	78.0	0.00948	0.12	0.65	0.09	1.58	13.59	157.52	0.14	0.00	0.000	0.000	0.009
226	1.30	1.20	0.00129	78.0	0.00948	0.12	0.78	0.09	1.58	13.59	157.52	0.14	0.00	0.000	0.000	0.009
227	1.20	1.10	0.00139	79.7	0.00974	0.12	0.90	0.09	1.61	14.32	161.32	0.14	0.00	0.000	0.000	0.010
228	1.10	1.00	0.00197	85.6	0.01095	0.11	1.00	0.10	1.79	17.98	178.93	0.18	0.00	0.000	0.000	0.011
229	1.00	0.90	0.00197	85.6	0.01095	0.11	1.11	0.10	1.79	17.98	178.93	0.18	0.00	0.000	0.000	0.011
230	0.90	0.80	0.00200	85.9	0.01102	0.11	1.21	0.10	1.80	18.20	179.88	0.18	0.00	0.000	0.000	0.011
231	0.80	0.70	0.00201	85.9	0.01102	0.10	1.32	0.10	1.80	18.22	179.99	0.18	0.00	0.000	0.000	0.011
232	0.70	0.60	0.00204	86.1	0.01107	0.10	1.42	0.10	1.81	18.38	180.71	0.18	0.00	0.000	0.000	0.011
233	0.60	0.50	0.00217	86.9	0.01131	0.10	1.52	0.10	1.84	19.15	184.09	0.19	0.00	0.000	0.000	0.011
234	0.50	0.40	0.00218	87.0	0.01134	0.10	1.63	0.10	1.85	19.26	184.59	0.19	0.00	0.000	0.000	0.011
235	0.40	0.30	0.00219	87.1	0.01136	0.10	1.73	0.10	1.85	19.30	184.78	0.19	0.00	0.000	0.000	0.011
236	0.30	0.20	0.00219	87.1	0.01136	0.10	1.83	0.10	1.85	19.30	184.78	0.19	0.00	0.000	0.000	0.011
237	0.20	0.10	0.00219	87.1	0.01136	0.10	1.93	0.10	1.85	19.30	184.78	0.19	0.00	0.000	0.000	0.011
238	0.10	0.00	0.00219	87.1	0.01136	0.10	2.03	0.10	1.85	19.30	184.78	0.19	0.00	0.000	0.000	0.011
TOT						2.03				295.31	3072.01					
AVG					0.0102			0.10	1.71			0.16				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECAT	BOD1 SETT	ABOD1 DECAT	BOD1 HYDR	BOD2 DECAT	BOD2 SETT	ABOD2 DECAT	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECAT	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECAT	NCM DECAT	NCM SETT	
221	1.700	7.49	14.24	0.13	0.98	0.00	0.00	0.00	0.00	0.00	0.28	0.95	0.95	0.06	0.98	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00
222	1.600	7.49	11.76	0.13	0.78	0.00	0.00	0.00	0.00	0.00	0.28	1.21	1.21	0.06	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	
223	1.500	7.49	11.30	0.13	0.75	0.00	0.00	0.00	0.00	0.00	0.28	1.18	1.18	0.06	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00	
224	1.400	7.49	11.22	0.13	0.74	0.00	0.00	0.00	0.00	0.00	0.28	1.11	1.11	0.06	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.00	0.00	0.00	
225	1.300	7.49	11.22	0.13	0.74	0.00	0.00	0.00	0.00	0.00	0.28	1.03	1.03	0.06	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.00	0.00	0.00	0.00	
226	1.200	7.49	11.22	0.13	0.74	0.00	0.00	0.00	0.00	0.00	0.28	0.96	0.96	0.06	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.00	0.00	0.00	0.00	
227	1.100	7.49	10.96	0.13	0.72	0.00	0.00	0.00	0.00	0.00	0.28	0.96	0.96	0.06	0.72	0.00	0.00	0.00	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00	
228	1.000	7.49	9.89	0.13	0.64	0.00	0.00	0.00	0.00	0.00	0.28	1.12	1.12	0.06	0.64	0.00	0.00	0.00	0.00	0.00	0.00	0.36	0.00	0.00	0.00	0.00	
229	0.900	7.49	9.89	0.13	0.64	0.00	0.00	0.00	0.00	0.00	0.28	1.06	1.06	0.06	0.64	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.00	0.00	0.00	0.00	
230	0.800	7.49	9.83	0.13	0.63	0.00	0.00	0.00	0.00	0.00	0.28	1.01	1.01	0.06	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.45	0.00	0.00	0.00	0.00	
231	0.700	7.49	9.83	0.13	0.63	0.00	0.00	0.00	0.00	0.00	0.28	0.96	0.96	0.06	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.49	0.00	0.00	0.00	0.00	
232	0.600	7.49	9.79	0.13	0.63	0.00	0.00	0.00	0.00	0.00	0.28	0.92	0.92	0.06	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.54	0.00	0.00	0.00	0.00	
233	0.500	7.49	9.61	0.13	0.62	0.00	0.00	0.00	0.00	0.00	0.28	0.92	0.92	0.06	0.62	0.00	0.00	0.00	0.00	0.00	0.00	0.58	0.00	0.00	0.00	0.00	
234	0.400	7.49	9.59	0.13	0.61	0.00	0.00	0.00	0.00	0.00	0.28	0.89	0.89	0.06	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.63	0.00	0.00	0.00	0.00	
235	0.300	7.49	9.58	0.13	0.61	0.00	0.00	0.00	0.00	0.00	0.28	0.85	0.85	0.06	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.67	0.00	0.00	0.00	0.00	
236	0.200	7.49	9.58	0.13	0.61	0.00	0.00	0.00	0.00	0.00	0.28	0.81	0.81	0.06	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.72	0.00	0.00	0.00	0.00	
237	0.100	7.49	9.58	0.13	0.61	0.00	0.00	0.00	0.00	0.00	0.28	0.77	0.77	0.06	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.76	0.00	0.00	0.00	0.00	
238	0.000	7.49	9.58	0.13	0.61	0.00	0.00	0.00	0.00	0.00	0.28	0.74	0.74	0.06	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	
AVG 20	DEG C RATE		8.65	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.14			0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	

* g/m²/d ** mg/L/day

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL	
221	1.700	30.40	0.33	642.94	36.64	5.60	10.58	0.00	10.64	0.00	4.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.6	0.0	0.
222	1.600	30.40	0.36	693.97	48.93	5.21	14.63	0.00	14.75	0.00	5.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.1	0.0	0.
223	1.500	30.40	0.36	701.38	50.72	5.55	14.18	0.00	14.36	0.00	6.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.7	0.0	0.
224	1.400	30.40	0.36	702.46	50.98	5.88	13.02	0.00	13.26	0.00	6.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.2	0.0	0.
225	1.300	30.40	0.36	702.46	50.98	6.11	11.80	0.00	12.10	0.00	5.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.8	0.0	0.
226	1.200	30.40	0.36	702.46	50.98	6.26	10.70	0.00	11.06	0.00	5.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.3	0.0	0.
227	1.100	30.40	0.36	706.38	51.92	6.19	10.60	0.00	11.02	0.00	6.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.9	0.0	0.
228	1.000	30.40	0.37	720.16	55.24	5.59	13.18	0.00	13.66	0.00	6.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.4	0.0	0.
229	0.900	30.40	0.37	720.16	55.24	5.94	12.22	0.00	12.75	0.00	5.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.0	0.0	0.
230	0.800	30.40	0.37	720.75	55.38	6.10	11.51	0.00	12.10	0.00	5.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.6	0.0	0.
231	0.700	30.40	0.37	720.82	55.40	6.25	10.70	0.00	11.36	0.00	5.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.1	0.0	0.
232	0.600	30.40	0.37	721.25	55.50	6.33	10.09	0.00	10.80	0.00	5.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.7	0.0	0.
233	0.500	30.40	0.37	723.19	55.97	6.26	10.11	0.00	10.89	0.00	5.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.2	0.0	0.
234	0.400	30.40	0.37	723.46	56.04	6.36	9.53	0.00	10.36	0.00	5.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.8	0.0	0.
235	0.300	30.40	0.37	723.57	56.06	6.45	8.93	0.00	9.82	0.00	5.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.3	0.0	0.
236	0.200	30.40	0.37	723.57	56.06	6.53	8.32	0.00	9.27	0.00	5.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.9	0.0	0.
237	0.100	30.40	0.37	723.57	56.06	6.60	7.75	0.00	8.76	0.00	4.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.4	0.0	0.
238	0.000	30.40	0.37	723.57	56.06	6.65	7.23	0.00	8.30	0.00	4.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.

***** PHYTOPLANKTON AND PERIPLHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
221	1.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
222	1.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
223	1.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
224	1.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
225	1.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
226	1.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
227	1.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
228	1.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	4.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
229	0.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	5.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
230	0.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	5.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
231	0.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
232	0.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
233	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
234	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
235	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
236	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
237	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
238	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT WEST DRAINAGE CANAL WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 21 WEST DRAINAGE CANAL BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
260	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	0.63	0.00	0.63	0.00	0.29	0.00	0.00	0.00	0.00	0.00	0.00
260	WSTLD	0.00063	30.00	0.22	437.30	23.50	2.00	1.33	0.00	1.33	0.00	1.74	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRS m²/s	MEAN VELO m/s
260	0.30	0.20	0.00091	69.0	0.00203	0.57	0.57	0.15	3.00	45.00	300.00	0.45	30.00	0.002	0.094	0.002
261	0.20	0.10	0.00091	69.0	0.00203	0.57	1.14	0.15	3.00	45.00	300.00	0.45	60.00	0.004	0.160	0.004
262	0.10	0.00	0.00091	69.0	0.00203	0.57	1.71	0.15	3.00	45.00	300.00	0.45	90.00	0.006	0.233	0.006
TOT AVG					0.0020	1.71		0.15	3.00	135.00	900.00	0.45				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT mg/L	REAER 1/da	BOD1 RATE 1/da	BOD1 SETT 1/da	ABOD1 1/da	BOD1 HYDR 1/da	BOD2 DECAY 1/da	BOD2 SETT 1/da	ABOD2 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAY 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAY 1/da	NCM DECAY 1/da	NCM SETT 1/da
260	0.200	7.49	5.65	0.13	0.43	0.00	0.00	0.00	0.00	0.00	0.28	0.35	0.35	0.06	0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.00	0.00	0.00	0.00
261	0.100	7.47	5.81	0.13	0.43	0.00	0.00	0.00	0.00	0.00	0.28	0.37	0.37	0.06	0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.47	0.00	0.00	0.00	0.00
262	0.000	7.45	6.01	0.13	0.43	0.00	0.00	0.00	0.00	0.00	0.28	0.41	0.41	0.06	0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			4.81	0.08	0.11	0.00	0.00	0.00	0.00	0.00	0.14			0.03	0.11	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EOG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EOG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL	
260	0.200	30.40	0.46	878.02	149.38	6.24	1.13	0.00	1.44	0.00	0.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.9	0.0	0.
261	0.100	30.40	0.83	1542.67	359.13	6.71	1.40	0.00	2.02	0.00	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.9	0.0	0.
262	0.000	30.40	1.46	2658.19	711.17	6.20	2.09	0.00	3.03	0.00	0.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM	ENDING	BANK SECCHI	PHYT	PERI																					
------	--------	-------------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

NO.	DIST	SHADE frac	DEPTH m	N PREF	LIT LIM	N LIM	P LIM	N&P LIM	TOT LIM	GROW 1/da	RESP 1/da	DEATH 1/da	SETT 1/da	P/R RATIO	PHYTO µg/L	N PREF	LIT LIM	N LIM	P LIM	N&P LIM	SPC LIM	TOT LIM	GROW 1/da	RESP 1/da	DEATH 1/da	P/R RATIO	PERIP g/m²
260	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
261	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	5.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
262	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20 DEG C RATE										0.000	0.000	0.000	0.000														

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT DRAINAGE DITCH 6 WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 23 DRAINAGE DITCH 6 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
284	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	2.75	0.00	2.75	0.00	1.25	0.00	0.00	0.00	0.00	0.00	0.00
284	WSTLD	0.00001	30.00	0.39	753.60	200.00	2.00	69.00	0.00	69.00	0.00	64.50	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
284	0.30	0.20	0.00029	1.9	0.00570	0.20	0.20	0.05	1.01	5.06	100.55	0.05	0.00	0.000	0.000	0.006
285	0.20	0.10	0.00029	1.9	0.00570	0.20	0.41	0.05	1.01	5.06	100.55	0.05	0.00	0.000	0.000	0.006
286	0.10	0.00	0.00029	1.9	0.00570	0.20	0.61	0.05	1.01	5.06	100.55	0.05	0.00	0.000	0.000	0.006
TOT AVG						0.61				15.18	301.64					
				0.0057				0.05	1.01							

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT DECAT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR DECAT 1/da	BOD2 DECAT 1/da	BOD2 SETT DECAT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAT 1/da	NH3-N SRCE 1/da	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da							
284	0.200	7.50	17.94	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.28	0.48	0.48	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.00	0.00	0.00	0.00							
285	0.100	7.50	17.94	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.28	0.45	0.45	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.47	0.00	0.00	0.00	0.00							
286	0.000	7.50	17.94	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.28	0.42	0.42	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.00	0.00	0.00	0.00							
AVG 20 DEG C RATE		14.81	0.08	0.33	0.00	0.00	0.00	0.00	0.00	0.14			0.03	0.33	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00								
*		g/m²/d		**		mg/L/day																											

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL	
284	0.200	30.40	0.26	525.26	10.84	6.72	3.24	0.00	3.56	0.00	1.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.9	0.0	0.
285	0.100	30.40	0.26	525.26	10.84	6.94	2.66	0.00	3.29	0.00	1.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.9	0.0	0.
286	0.000	30.40	0.26	525.26	10.84	7.03	2.21	0.00	3.15	0.00	1.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

***** PHYTOPLANKTON AND PERIPHYTON DATA

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
284	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
285	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	5.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
286	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20 DEG C RATE										0.000	0.000	0.000	0.000									0.000	0.000	0.000			

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT REACH NO. 25 TRIBUTARY 2 DRAINAGE DITCH 7 - UPLAND WATER QUALITY/HYDRAULIC MODEL FOR: BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
295	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	2.75	0.00	2.75	0.00	1.25	0.00	0.00	0.00	0.00	0.00	0.00
295	WSTLD	0.00004	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	64.50	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
295	1.50	1.40	0.00033	13.4	0.00595	0.19	0.19	0.05	1.04	5.50	104.39	0.05	0.00	0.000	0.000	0.006
296	1.40	1.30	0.00033	13.4	0.00595	0.19	0.39	0.05	1.04	5.50	104.39	0.05	0.00	0.000	0.000	0.006
297	1.30	1.20	0.00033	13.4	0.00595	0.19	0.58	0.05	1.04	5.50	104.39	0.05	0.00	0.000	0.000	0.006
298	1.20	1.10	0.00033	13.4	0.00595	0.19	0.78	0.05	1.04	5.50	104.39	0.05	0.00	0.000	0.000	0.006
299	1.10	1.00	0.00033	13.4	0.00595	0.19	0.97	0.05	1.04	5.50	104.39	0.05	0.00	0.000	0.000	0.006
300	1.00	0.90	0.00033	13.4	0.00595	0.19	1.17	0.05	1.04	5.50	104.39	0.05	0.00	0.000	0.000	0.006
301	0.90	0.80	0.00033	13.4	0.00595	0.19	1.36	0.05	1.04	5.50	104.39	0.05	0.00	0.000	0.000	0.006
302	0.80	0.70	0.00033	13.4	0.00595	0.19	1.56	0.05	1.04	5.50	104.39	0.05	0.00	0.000	0.000	0.006
303	0.70	0.60	0.00033	13.4	0.00595	0.19	1.75	0.05	1.04	5.50	104.39	0.05	0.00	0.000	0.000	0.006
304	0.60	0.50	0.00033	13.4	0.00595	0.19	1.95	0.05	1.04	5.50	104.39	0.05	0.00	0.000	0.000	0.006
TOT AVG					0.0059	1.95		0.05	1.04	54.96	1043.89	0.05				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR 1/da	BOD2 DECAT 1/da	BOD2 SETT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAT 1/da	NH3-N SRCE 1/da	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da	
295	1.400	7.49	17.23	0.13	1.22	0.00	0.00	0.00	0.00	0.00	1.20	1.83	1.83	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
296	1.300	7.49	17.23	0.13	1.22	0.00	0.00	0.00	0.00	0.00	1.20	1.73	1.73	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
297	1.200	7.49	17.23	0.13	1.22	0.00	0.00	0.00	0.00	0.00	1.20	1.65	1.65	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
298	1.100	7.49	17.23	0.13	1.22	0.00	0.00	0.00	0.00	0.00	1.20	1.59	1.59	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
299	1.000	7.49	17.23	0.13	1.22	0.00	0.00	0.00	0.00	0.00	1.20	1.55	1.55	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300	0.900	7.49	17.23	0.13	1.22	0.00	0.00	0.00	0.00	0.00	1.20	1.51	1.51	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
301	0.800	7.49	17.23	0.13	1.22	0.00	0.00	0.00	0.00	0.00	1.20	1.48	1.48	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
302	0.700	7.49	17.23	0.13	1.22	0.00	0.00	0.00	0.00	0.00	1.20	1.45	1.45	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
303	0.600	7.49	17.23	0.13	1.22	0.00	0.00	0.00	0.00	0.00	1.20	1.44	1.44	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

304 0.500 7.41 17.21 0.13 1.22 0.00 0.00 0.00 0.00 0.00 1.20 1.49 1.49 0.06 1.22 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
 AVG 20 DEG C RATE 14.23 0.08 0.09 0.00 0.00 0.00 0.00 0.00 0.62 0.03 0.09 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	
295	1.400	30.40	0.28	552.09	14.74	5.40	9.74	0.00	9.74	0.00	8.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
296	1.300	30.40	0.28	552.09	14.74	5.48	8.24	0.00	8.24	0.00	6.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
297	1.200	30.40	0.28	552.09	14.74	5.57	7.05	0.00	7.05	0.00	5.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
298	1.100	30.40	0.28	552.09	14.74	5.65	6.11	0.00	6.11	0.00	4.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
299	1.000	30.40	0.28	552.09	14.74	5.72	5.36	0.00	5.36	0.00	3.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
300	0.900	30.40	0.28	552.09	14.74	5.77	4.77	0.00	4.77	0.00	3.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
301	0.800	30.40	0.28	552.09	14.74	5.81	4.30	0.00	4.30	0.00	2.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
302	0.700	30.40	0.28	552.09	14.74	5.84	3.93	0.00	3.93	0.00	2.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
303	0.600	30.40	0.28	552.09	14.74	5.87	3.63	0.00	3.63	0.00	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
304	0.500	30.40	2.29	4140.38	1210.99	5.45	4.50	0.00	4.50	0.00	1.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
295	1.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
296	1.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
297	1.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
298	1.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
299	1.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
300	0.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
301	0.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
302	0.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
303	0.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
304	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT TRIBUTARY 2 WATER QUALITY/HYDRAULIC MODEL FOR: BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
305	UPR RCH	0.00033	30.40	2.29	4140.38	1210.99	5.45	4.50	0.00	4.50	0.00	1.64	0.00	0.00	0.00	0.00	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
305	0.50	0.40	0.00033	13.4	0.00005	25.50	27.45	0.60	12.00	720.00	1200.00	7.20	120.00	0.000	0.061	0.000
306	0.40	0.30	0.00033	13.4	0.00005	25.50	52.95	0.60	12.00	720.00	1200.00	7.20	240.00	0.001	0.122	0.001
307	0.30	0.20	0.00033	13.4	0.00005	25.50	78.45	0.60	12.00	720.00	1200.00	7.20	360.00	0.001	0.183	0.001
308	0.20	0.10	0.00033	13.4	0.00005	25.50	103.95	0.60	12.00	720.00	1200.00	7.20	480.00	0.002	0.245	0.002
309	0.10	0.00	0.00033	13.4	0.00005	25.50	129.45	0.60	12.00	720.00	1200.00	7.20	600.00	0.002	0.306	0.002
TOT						127.50				3600.00	6000.00					
AVG					0.0000			0.60	12.00			7.20				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECAT	BOD1 SETT	ABOD1 DECAT	BOD1 HYDR	BOD2 DECAT	BOD2 SETT	ABOD2 DECAT	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECAT	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECAT	NCM DECAT	NCM SETT
		mg/L	1/da	1/da	1/da	1/da	1/da	1/da	1/da	1/da	*	*	*	1/da	1/da	1/da	*	1/da	1/da	1/da	*	**	**	1/da	1/da	1/da
305	0.400	7.40	1.41	0.13	0.11	0.00	0.00	0.00	0.00	0.00	1.20	1.50	1.50	0.06	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.00
306	0.300	7.40	1.41	0.13	0.11	0.00	0.00	0.00	0.00	0.00	1.20	1.55	1.55	0.06	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.00	0.00	0.00	0.00
307	0.200	7.39	1.41	0.13	0.11	0.00	0.00	0.00	0.00	0.00	1.20	1.60	1.60	0.06	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.43	0.00	0.00	0.00	0.00
308	0.100	7.39	1.41	0.13	0.11	0.00	0.00	0.00	0.00	0.00	1.20	1.68	1.68	0.06	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.57	0.00	0.00	0.00	0.00
309	0.000	7.39	1.41	0.13	0.11	0.00	0.00	0.00	0.00	0.00	1.20	1.76	1.76	0.06	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.00	0.00	0.00	0.00
AVG	20 DEG C	RATE	1.17	0.08	0.02	0.00	0.00	0.00	0.00	0.00	0.62			0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00
*	g/m ² /d		**		mg/L/day																					

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO	BOD1	BOD2	EBOD1	EBOD2	ORG-N	NH3-N	NO3-N	TOT-N	EORG-N	ETOT-N	ORG-P	PO4-P	TOT-P	EORG-P	ETOT-P	CHL A	PERIP	COLI
						mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	g/m ²	#/100mL
305	0.400	30.40	2.58	4674.09	1388.92	5.24	4.71	0.00	4.90	0.00	1.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.8	0.0	0.
306	0.300	30.40	2.70	4878.26	1456.98	5.18	5.38	0.00	5.75	0.00	1.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.5	0.0	0.
307	0.200	30.40	2.77	5006.70	1499.80	5.12	6.27	0.00	6.83	0.00	1.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.3	0.0	0.
308	0.100	30.40	2.82	5101.13	1531.28	5.03	7.38	0.00	8.13	0.00	1.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.0	0.0	0.
309	0.000	30.40	2.87	5176.10	1556.28	4.94	8.72	0.00	9.66	0.00	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
305	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
306	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
307	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	5.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
308	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
309	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20 DEG C	RATE									0.000	0.000	0.000	0.000										0.000	0.000	0.000		

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

NOTE ON NITR PEF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT CANAL 26 WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 29 CANAL 26 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
324	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	2.75	0.00	2.75	0.00	1.25	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
324	2.00	1.90	0.00028	0.0	0.00000	466.23	466.23	1.00	114.00	11400.00	11400.00	114.00	1140.00	0.000	0.056	0.000
325	1.90	1.80	0.00028	0.0	0.00000	466.23	932.47	1.00	114.00	11400.00	11400.00	114.00	2280.00	0.001	0.113	0.001
326	1.80	1.70	0.00028	0.0	0.00000	466.23	1398.70	1.00	114.00	11400.00	11400.00	114.00	3420.00	0.001	0.169	0.001
327	1.70	1.60	0.00028	0.0	0.00000	466.23	1864.94	1.00	114.00	11400.00	11400.00	114.00	4560.00	0.001	0.225	0.001
328	1.60	1.50	0.00028	0.0	0.00000	466.23	2331.17	1.00	114.00	11400.00	11400.00	114.00	5700.00	0.001	0.281	0.001
329	1.50	1.40	0.00028	0.0	0.00000	466.23	2797.41	1.00	114.00	11400.00	11400.00	114.00	6840.00	0.002	0.338	0.002
330	1.40	1.30	0.00028	0.0	0.00000	466.23	3263.64	1.00	114.00	11400.00	11400.00	114.00	7980.00	0.002	0.394	0.002
331	1.30	1.20	0.00028	0.0	0.00000	466.23	3729.88	1.00	114.00	11400.00	11400.00	114.00	9120.00	0.002	0.450	0.002
332	1.20	1.10	0.00028	0.0	0.00000	466.23	4196.11	1.00	114.00	11400.00	11400.00	114.00	10260.00	0.003	0.506	0.003
333	1.10	1.00	0.00028	0.0	0.00000	466.23	4662.35	1.00	114.00	11400.00	11400.00	114.00	11400.00	0.003	0.563	0.003
334	1.00	0.90	0.00028	0.0	0.00000	466.23	5128.58	1.00	114.00	11400.00	11400.00	114.00	12540.00	0.003	0.619	0.003
335	0.90	0.80	0.00028	0.0	0.00000	466.23	5594.82	1.00	114.00	11400.00	11400.00	114.00	13680.00	0.003	0.675	0.003
336	0.80	0.70	0.00028	0.0	0.00000	466.23	6061.05	1.00	114.00	11400.00	11400.00	114.00	14820.00	0.004	0.731	0.004
337	0.70	0.60	0.00028	0.0	0.00000	466.23	6527.29	1.00	114.00	11400.00	11400.00	114.00	15960.00	0.004	0.788	0.004
338	0.60	0.50	0.00028	0.0	0.00000	466.23	6993.52	1.00	114.00	11400.00	11400.00	114.00	17100.00	0.004	0.844	0.004
339	0.50	0.40	0.00028	0.0	0.00000	466.23	7459.76	1.00	114.00	11400.00	11400.00	114.00	18240.00	0.005	0.900	0.005
340	0.40	0.30	0.00028	0.0	0.00000	466.23	7925.99	1.00	114.00	11400.00	11400.00	114.00	19380.00	0.005	0.956	0.005
341	0.30	0.20	0.00028	0.0	0.00000	466.23	8392.23	1.00	114.00	11400.00	11400.00	114.00	20520.00	0.005	1.013	0.005
342	0.20	0.10	0.00028	0.0	0.00000	466.23	8858.46	1.00	114.00	11400.00	11400.00	114.00	21660.00	0.005	1.069	0.005
343	0.10	0.00	0.00028	0.0	0.00000	466.23	9324.70	1.00	114.00	11400.00	11400.00	114.00	22800.00	0.006	1.125	0.006
TOT							9324.70			228000.00	228000.00					
AVG					0.0000			1.00	114.00			114.00				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR DECAT 1/da	BOD2 DECAT 1/da	BOD2 SETT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAT 1/da	NH3-N SRCE *	DENIT 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da
324	1.900	7.38	0.85	0.13	0.06	0.00	0.00	0.00	0.00	0.00	1.20	1.39	1.39	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00
325	1.800	7.38	0.85	0.13	0.06	0.00	0.00	0.00	0.00	0.00	1.20	1.40	1.40	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
326	1.700	7.38	0.85	0.13	0.06	0.00	0.00	0.00	0.00	0.00	1.20	1.40	1.40	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.00	0.00	0.00
327	1.600	7.38	0.85	0.13	0.06	0.00	0.00	0.00	0.00	0.00	1.20	1.41	1.41	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.00	0.00
328	1.500	7.38	0.85	0.13	0.06	0.00	0.00	0.00	0.00	0.00	1.20	1.41	1.41	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00
329	1.400	7.38	0.85	0.13	0.06	0.00	0.00	0.00	0.00	0.00	1.20	1.42	1.42	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.00	0.00	0.00	0.00
330	1.300	7.38	0.85	0.13	0.06	0.00	0.00	0.00	0.00	0.00	1.20	1.43	1.43	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.00	0.00	0.00	0.00
331	1.200	7.38	0.85	0.13	0.06	0.00	0.00	0.00	0.00	0.00	1.20	1.44	1.44	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.00	0.00	0.00	0.00
332	1.100	7.38	0.85	0.13	0.06	0.00	0.00	0.00	0.00	0.00	1.20	1.45	1.45	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.36	0.00	0.00	0.00	0.00
333	1.000	7.38	0.85	0.13	0.06	0.00	0.00	0.00	0.00	0.00	1.20	1.47	1.47	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.00	0.00	0.00	0.00
334	0.900	7.38	0.85	0.13	0.06	0.00	0.00	0.00	0.00	0.00	1.20	1.48	1.48	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.44	0.00	0.00	0.00	0.00
335	0.800	7.38	0.85	0.13	0.06	0.00	0.00	0.00	0.00	0.00	1.20	1.50	1.50	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.48	0.00	0.00	0.00	0.00
336	0.700	7.38	0.85	0.13	0.06	0.00	0.00	0.00	0.00	0.00	1.20	1.52	1.52	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00
337	0.600	7.38	0.85	0.13	0.06	0.00	0.00	0.00	0.00	0.00	1.20	1.55	1.55	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.56	0.00	0.00	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

338	0.500	7.38	0.85	0.13	0.06	0.00	0.00	0.00	0.00	0.00	1.20	1.57	1.57	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.60	0.00	0.00	0.00	0.00
339	0.400	7.38	0.85	0.13	0.06	0.00	0.00	0.00	0.00	0.00	1.20	1.60	1.60	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.64	0.00	0.00	0.00	0.00
340	0.300	7.38	0.85	0.13	0.06	0.00	0.00	0.00	0.00	0.00	1.20	1.64	1.64	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.69	0.00	0.00	0.00	0.00	
341	0.200	7.38	0.85	0.13	0.06	0.00	0.00	0.00	0.00	0.00	1.20	1.67	1.67	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.73	0.00	0.00	0.00	0.00	
342	0.100	7.38	0.85	0.13	0.06	0.00	0.00	0.00	0.00	0.00	1.20	1.71	1.71	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.77	0.00	0.00	0.00	0.00	
343	0.000	7.38	0.85	0.13	0.06	0.00	0.00	0.00	0.00	0.00	1.20	1.76	1.76	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	

AVG 20 DEG C RATE 0.70 0.08 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.62 0.03 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	
324	1.900	30.40	3.12	5628.99	1708.48	5.26	2.98	0.00	3.04	0.00	1.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.5	0.0	0.
325	1.800	30.40	3.13	5644.02	1713.48	5.28	3.04	0.00	3.14	0.00	1.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.0	0.
326	1.700	30.40	3.13	5653.07	1716.49	5.31	3.11	0.00	3.27	0.00	1.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.5	0.0	0.
327	1.600	30.40	3.14	5659.54	1718.65	5.33	3.20	0.00	3.41	0.00	1.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.0	0.0	0.
328	1.500	30.40	3.14	5664.58	1720.33	5.34	3.30	0.00	3.57	0.00	1.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.5	0.0	0.
329	1.400	30.40	3.14	5668.70	1721.70	5.36	3.43	0.00	3.75	0.00	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.0	0.0	0.
330	1.300	30.40	3.14	5672.20	1722.87	5.36	3.57	0.00	3.94	0.00	1.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.5	0.0	0.
331	1.200	30.40	3.14	5675.23	1723.88	5.36	3.74	0.00	4.16	0.00	1.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.0	0.0	0.
332	1.100	30.40	3.15	5677.90	1724.77	5.36	3.93	0.00	4.41	0.00	1.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.5	0.0	0.
333	1.000	30.40	3.15	5680.30	1725.56	5.35	4.15	0.00	4.68	0.00	1.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.0	0.0	0.
334	0.900	30.40	3.15	5682.47	1726.29	5.33	4.40	0.00	4.99	0.00	1.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.5	0.0	0.
335	0.800	30.40	3.15	5684.45	1726.95	5.31	4.68	0.00	5.32	0.00	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.0	0.0	0.
336	0.700	30.40	3.15	5686.27	1727.55	5.29	5.00	0.00	5.70	0.00	1.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.5	0.0	0.
337	0.600	30.40	3.15	5687.96	1728.11	5.26	5.37	0.00	6.12	0.00	1.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.0	0.0	0.
338	0.500	30.40	3.15	5689.53	1728.64	5.23	5.78	0.00	6.58	0.00	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.5	0.0	0.
339	0.400	30.40	3.15	5691.00	1729.13	5.20	6.24	0.00	7.09	0.00	1.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.0	0.0	0.
340	0.300	30.40	3.15	5692.38	1729.59	5.18	6.75	0.00	7.66	0.00	1.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.5	0.0	0.
341	0.200	30.40	3.16	5693.68	1730.02	5.16	7.33	0.00	8.29	0.00	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.0	0.0	0.
342	0.100	30.40	3.16	5694.92	1730.43	5.15	7.97	0.00	8.98	0.00	1.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.5	0.0	0.
343	0.000	30.40	3.16	5696.09	1730.82	5.17	8.68	0.00	9.75	0.00	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
324	1.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
325	1.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

326	1.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
327	1.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
328	1.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
329	1.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
330	1.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
331	1.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	4.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
332	1.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	4.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
333	1.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	5.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
334	0.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	5.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
335	0.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
336	0.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
337	0.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
338	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
339	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
340	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
341	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
342	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
343	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	

20 DEG C RATE 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT TRIBUTARY 4 WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 31 TRIBUTARY 10 - UPLAND BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
346	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	2.75	0.00	2.75	0.00	1.25	0.00	0.00	0.00	0.00	0.00	0.00
346	WSTLD	0.00041	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	64.50	0.00	0.00	0.00	0.00	0.00	0.00
351	WSTLD	0.00068	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
346	1.90	1.80	0.00069	59.2	0.00768	0.15	0.15	0.07	1.31	9.03	130.83	0.09	0.00	0.000	0.000	0.008
347	1.80	1.70	0.00069	59.2	0.00768	0.15	0.30	0.07	1.31	9.03	130.83	0.09	0.00	0.000	0.000	0.008
348	1.70	1.60	0.00069	59.2	0.00768	0.15	0.45	0.07	1.31	9.03	130.83	0.09	0.00	0.000	0.000	0.008
349	1.60	1.50	0.00069	59.2	0.00768	0.15	0.60	0.07	1.31	9.03	130.83	0.09	0.00	0.000	0.000	0.008
350	1.50	1.40	0.00069	59.2	0.00768	0.15	0.75	0.07	1.31	9.03	130.83	0.09	0.00	0.000	0.000	0.008
351	1.40	1.30	0.00137	79.4	0.00969	0.12	0.87	0.09	1.61	14.17	160.56	0.14	0.00	0.000	0.000	0.010
352	1.30	1.20	0.00137	79.4	0.00969	0.12	0.99	0.09	1.61	14.17	160.56	0.14	0.00	0.000	0.000	0.010
353	1.20	1.10	0.00137	79.4	0.00969	0.12	1.11	0.09	1.61	14.17	160.56	0.14	0.00	0.000	0.000	0.010
354	1.10	1.00	0.00137	79.4	0.00969	0.12	1.23	0.09	1.61	14.17	160.56	0.14	0.00	0.000	0.000	0.010
355	1.00	0.90	0.00137	79.4	0.00969	0.12	1.35	0.09	1.61	14.17	160.56	0.14	0.00	0.000	0.000	0.010
356	0.90	0.80	0.00137	79.4	0.00969	0.12	1.47	0.09	1.61	14.17	160.56	0.14	0.00	0.000	0.000	0.010
TOT						1.47				130.19	1617.55					
AVG					0.0087			0.08	1.47			0.12				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE mg/L	BOD1 DECAT 1/da	BOD1 SETT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR DECAT 1/da	BOD2 DECAT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAT 1/da	NH3-N SRCE 1/da	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da	
346	1.800	7.49	13.57	0.13	0.93	0.00	0.00	0.00	0.00	1.20	3.54	3.54	0.05	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

FINAL REPORT TRIBUTARY 4
 REACH NO. 32 TRIBUTARY 4 - TIDAL

WATER QUALITY/HYDRAULIC MODEL FOR:
 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
357	UPR RCH	0.00137	30.40	1.97	3584.90	1020.48	5.45	7.07	0.00	8.14	0.00	7.66	0.00	0.00	0.00	10.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
357	0.80	0.70	0.00137	79.4	0.00008	13.66	15.13	0.90	18.00	1620.00	1800.00	16.20	180.00	0.000	0.057	0.000
358	0.70	0.60	0.00137	79.4	0.00008	13.66	28.79	0.90	18.00	1620.00	1800.00	16.20	360.00	0.001	0.114	0.001
359	0.60	0.50	0.00137	79.4	0.00008	13.66	42.45	0.90	18.00	1620.00	1800.00	16.20	540.00	0.001	0.171	0.001
360	0.50	0.40	0.00137	79.4	0.00008	13.66	56.11	0.90	18.00	1620.00	1800.00	16.20	720.00	0.001	0.228	0.001
361	0.40	0.30	0.00137	79.4	0.00008	13.66	69.77	0.90	18.00	1620.00	1800.00	16.20	900.00	0.002	0.286	0.002
362	0.30	0.20	0.00137	79.4	0.00008	13.66	83.43	0.90	18.00	1620.00	1800.00	16.20	1080.00	0.002	0.343	0.002
363	0.20	0.10	0.00137	79.4	0.00008	13.66	97.08	0.90	18.00	1620.00	1800.00	16.20	1260.00	0.002	0.400	0.002
364	0.10	0.00	0.00137	79.4	0.00008	13.66	110.74	0.90	18.00	1620.00	1800.00	16.20	1440.00	0.003	0.457	0.002
TOT AVG					0.0001	109.27		0.90	18.00	12960.00	14400.00	16.20				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECAT	BOD1 SETT	ABOD1 DECAT	BOD1 HYDR	BOD2 DECAT	BOD2 SETT	ABOD2 DECAT	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECAT	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECAT	NCM DECAT	NCM SETT	
357	0.700	7.41	0.94	0.13	0.07	0.00	0.00	0.00	0.00	0.00	1.20	1.53	1.53	0.06	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00
358	0.600	7.40	0.94	0.13	0.07	0.00	0.00	0.00	0.00	0.00	1.20	1.52	1.52	0.06	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00
359	0.500	7.39	0.94	0.13	0.07	0.00	0.00	0.00	0.00	0.00	1.20	1.53	1.53	0.06	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00
360	0.400	7.39	0.94	0.13	0.07	0.00	0.00	0.00	0.00	0.00	1.20	1.56	1.56	0.06	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00
361	0.300	7.38	0.94	0.13	0.07	0.00	0.00	0.00	0.00	0.00	1.20	1.60	1.60	0.06	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00
362	0.200	7.38	0.94	0.13	0.07	0.00	0.00	0.00	0.00	0.00	1.20	1.66	1.66	0.06	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00
363	0.100	7.38	0.94	0.13	0.07	0.00	0.00	0.00	0.00	0.00	1.20	1.72	1.72	0.06	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00
364	0.000	7.38	0.94	0.13	0.07	0.00	0.00	0.00	0.00	0.00	1.20	1.79	1.79	0.06	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00
AVG 20	DEG C	RATE	0.78	0.08	0.01	0.00	0.00	0.00	0.00	0.00	0.62			0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	
*	g/m²/d		**	mg/L/day																							

***** WATER QUALITY CONSTITUENT VALUES

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL
357	0.700	30.40	2.45	4437.22	1307.24	5.50	5.14	0.00	6.21	0.00	4.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.
358	0.600	30.40	2.66	4806.44	1431.47	5.53	4.95	0.00	6.02	0.00	3.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.
359	0.500	30.40	2.79	5050.15	1513.46	5.49	5.18	0.00	6.25	0.00	2.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.
360	0.400	30.40	2.90	5234.46	1575.48	5.42	5.64	0.00	6.71	0.00	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

361	0.300	30.40	2.98	5383.82	1625.73	5.34	6.27	0.00	7.34	0.00	2.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0
362	0.200	30.40	3.05	5510.01	1668.19	5.27	7.06	0.00	8.13	0.00	2.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0
363	0.100	30.40	3.11	5619.62	1705.07	5.23	8.02	0.00	9.09	0.00	1.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0
364	0.000	30.40	3.17	5716.76	1737.75	5.26	9.16	0.00	10.23	0.00	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
357	0.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
358	0.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
359	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
360	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
361	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
362	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
363	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
364	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000 0.000

FINAL REPORT BAYOU LIBERTY WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 38 LIBERTY FROM RKM 15.0 TO TRIB 1 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
433	HDWTR	0.00283	33.80	0.26	520.90	7.23	6.00	0.55	0.00	0.55	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
433	15.00	14.90	0.00283	0.0	0.02517	0.05	0.05	0.08	1.50	11.25	150.02	0.11	0.00	0.000	0.000	0.025
434	14.90	14.80	0.00283	0.0	0.02517	0.05	0.09	0.08	1.50	11.25	150.02	0.11	0.00	0.000	0.000	0.025
435	14.80	14.70	0.00283	0.0	0.02517	0.05	0.14	0.08	1.50	11.25	150.02	0.11	0.00	0.000	0.000	0.025
436	14.70	14.60	0.00283	0.0	0.02517	0.05	0.18	0.08	1.50	11.25	150.02	0.11	0.00	0.000	0.000	0.025
437	14.60	14.50	0.00283	0.0	0.02517	0.05	0.23	0.08	1.50	11.25	150.02	0.11	0.00	0.000	0.000	0.025
438	14.50	14.40	0.00283	0.0	0.02517	0.05	0.28	0.08	1.50	11.25	150.02	0.11	0.00	0.000	0.000	0.025
TOT AVG					0.0252	0.28		0.08	1.50	67.52	900.11	0.11				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE mg/L	BOD1 DECAT 1/da	BOD1 SETT DECAT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR DECAT 1/da	BOD2 DECAT 1/da	BOD2 SETT DECAT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAT 1/da	NH3-N SRCE 1/da	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da	
433	14.900	7.50	16.53	0.13	0.85	0.00	0.00	0.00	0.00	0.00	0.96	1.02	1.02	0.06	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

	km	km	m ³ /s	m/s	days	days	m	m	m ³	m ²	m ²	m ³	m/s	m ² /s	m/s	
463	14.40	14.30	0.00312	0.1	0.02600	0.04	0.32	0.08	1.54	11.99	154.42	0.12	0.00	0.000	0.000	0.026
464	14.30	14.20	0.00312	0.1	0.02600	0.04	0.36	0.08	1.54	11.99	154.42	0.12	0.00	0.000	0.000	0.026
465	14.20	14.10	0.00312	0.1	0.02600	0.04	0.41	0.08	1.54	11.99	154.42	0.12	0.00	0.000	0.000	0.026
466	14.10	14.00	0.00312	0.1	0.02600	0.04	0.45	0.08	1.54	11.99	154.42	0.12	0.00	0.000	0.000	0.026
467	14.00	13.90	0.00312	0.1	0.02600	0.04	0.50	0.08	1.54	11.99	154.42	0.12	0.00	0.000	0.000	0.026
468	13.90	13.80	0.00312	0.1	0.02600	0.04	0.54	0.08	1.54	11.99	154.42	0.12	0.00	0.000	0.000	0.026
469	13.80	13.70	0.00312	0.1	0.02600	0.04	0.59	0.08	1.54	11.99	154.42	0.12	0.00	0.000	0.000	0.026
TOT						0.31					83.95	1080.92				
AVG					0.0260			0.08	1.54					0.12		

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECA	BOD1 SETT	ABOD1 DECA	BOD1 HYDR	BOD2 DECA	BOD2 SETT	ABOD2 DECA	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECA	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECA	NCM DECA	NCM SETT	
		mg/L	1/da	1/da	1/da	1/da	1/da	1/da	1/da	1/da	*	*	*	1/da	*	**	**	1/da	1/da	1/da							
463	14.300	7.50	16.15	0.13	0.82	0.00	0.00	0.00	0.00	0.00	1.20	1.34	1.34	0.06	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
464	14.200	7.50	16.15	0.13	0.82	0.00	0.00	0.00	0.00	0.00	1.20	1.35	1.35	0.06	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
465	14.100	7.50	16.15	0.13	0.82	0.00	0.00	0.00	0.00	0.00	1.20	1.36	1.36	0.06	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
466	14.000	7.50	16.15	0.13	0.82	0.00	0.00	0.00	0.00	0.00	1.20	1.37	1.37	0.06	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
467	13.900	7.50	16.15	0.13	0.82	0.00	0.00	0.00	0.00	0.00	1.20	1.38	1.38	0.06	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
468	13.800	7.50	16.15	0.13	0.82	0.00	0.00	0.00	0.00	0.00	1.20	1.39	1.39	0.06	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
469	13.700	7.50	16.15	0.13	0.82	0.00	0.00	0.00	0.00	0.00	1.20	1.40	1.40	0.06	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20	DEG C	RATE	13.33	0.08	0.09	0.00	0.00	0.00	0.00	0.00	0.62			0.03	0.09	0.00	0.00	0.10	0.00	0.00	0.00			0.00	0.00	0.00	
*	g/m ² /d		**	mg/L/day																							

***** WATER QUALITY CONSTITUENT VALUES

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A ug/L	PERIP g/m ²	COLI #/100mL
463	14.300	30.40	0.26	521.15	7.29	6.54	2.20	0.00	2.20	0.00	1.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0
464	14.200	30.40	0.26	521.15	7.29	6.48	2.36	0.00	2.36	0.00	1.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0
465	14.100	30.40	0.26	521.15	7.29	6.44	2.52	0.00	2.52	0.00	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0
466	14.000	30.40	0.26	521.15	7.29	6.41	2.67	0.00	2.67	0.00	2.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0
467	13.900	30.40	0.26	521.15	7.29	6.39	2.82	0.00	2.82	0.00	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0
468	13.800	30.40	0.26	521.15	7.29	6.37	2.96	0.00	2.96	0.00	2.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0
469	13.700	30.40	0.26	521.15	7.29	6.36	3.09	0.00	3.09	0.00	2.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0

***** PHYTOPLANKTON AND PERIPHYTON DATA

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO ug/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
463	14.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
464	14.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
465	14.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
466	14.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
467	13.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
468	13.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

473	13.600	30.40	0.50	955.30	123.78	4.89	9.21	0.00	9.33	0.00	7.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.1	0.0	0.
0.00																									
474	13.500	30.40	0.50	955.30	123.78	5.03	9.12	0.00	9.35	0.00	7.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.2	0.0	0.
0.00																									
475	13.400	30.40	0.50	955.30	123.78	5.13	9.02	0.00	9.38	0.00	7.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.3	0.0	0.
0.00																									
476	13.300	30.40	0.50	955.30	123.78	5.21	8.93	0.00	9.41	0.00	7.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.4	0.0	0.
0.00																									
477	13.200	30.40	0.50	955.30	123.78	5.28	8.84	0.00	9.44	0.00	7.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.6	0.0	0.
0.00																									
478	13.100	30.40	0.50	955.30	123.78	5.34	8.76	0.00	9.47	0.00	7.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.7	0.0	0.
0.00																									
479	13.000	30.40	0.50	955.30	123.78	5.39	8.68	0.00	9.51	0.00	7.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.8	0.0	0.
0.00																									
480	12.900	30.40	0.50	955.30	123.78	5.44	8.60	0.00	9.55	0.00	7.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.9	0.0	0.
0.00																									
481	12.800	30.40	0.49	938.81	119.88	5.50	8.34	0.00	9.40	0.00	7.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.
0.00																									

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
473	13.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
474	13.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
475	13.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
476	13.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	4.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
477	13.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	5.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
478	13.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
479	13.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
480	12.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
481	12.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT BAYOU LIBERTY WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 44 LIBERTY FROM DD20 TO BL03 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
509	UPR RCH	0.01852	30.40	0.49	938.81	119.88	5.50	8.34	0.00	9.40	0.00	7.17	0.00	0.00	0.00	10.00	0.00	0.00
509	TRIB	0.00466	30.40	0.32	628.12	46.36	6.77	6.40	0.00	7.46	0.00	5.16	0.00	0.00	0.00	10.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
509	12.80	12.70	0.02317	84.1	0.00555	0.21	1.50	0.47	8.84	417.25	884.00	4.17	88.40	0.001	0.297	0.006
510	12.70	12.60	0.02317	84.1	0.00555	0.21	1.70	0.47	8.84	417.25	884.00	4.17	176.80	0.001	0.297	0.006
TOT AVG				0.0056		0.42		0.47	8.84	834.50	1768.00	4.17				

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECA 1/da	BOD1 SETT 1/da	ABOD1 DECA 1/da	BOD1 HYDR 1/da	BOD2 DECA 1/da	BOD2 SETT 1/da	ABOD2 DECA 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECA 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECA 1/da	NCM DECA 1/da	NCM SETT 1/da				
509	12.700	7.49	1.91	0.13	0.14	0.00	0.00	0.00	0.00	0.00	1.20	1.70	1.70	0.06	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00			
510	12.600	7.49	1.91	0.13	0.14	0.00	0.00	0.00	0.00	0.00	1.20	1.69	1.69	0.06	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00			
AVG 20 DEG C RATE			1.57	0.08	0.05	0.00	0.00	0.00	0.00	0.00	0.62			0.03	0.05	0.00	0.00	0.10	0.00	0.00	0.00			0.00	0.00	0.00				
* g/m ² /d			** mg/L/day																											

***** WATER QUALITY CONSTITUENT VALUES

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL		
509	12.700	30.40	0.46	889.55	108.23	5.59	7.77	0.00	8.84	0.00	6.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0
510	12.600	30.40	0.46	889.55	108.23	5.55	7.57	0.00	8.64	0.00	6.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0

***** PHYTOPLANKTON AND PERIPHYTON DATA

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
509	12.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
510	12.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20 DEG C RATE										0.000	0.000	0.000	0.000									0.000	0.000	0.000			

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT BAYOU LIBERTY
 REACH NO. 45 LIBERTY FROM BL03 TO HWY 190

WATER QUALITY/HYDRAULIC MODEL FOR:
 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
511	UPR RCH	0.02317	30.40	0.46	889.55	108.23	5.55	7.57	0.00	8.64	0.00	6.69	0.00	0.00	0.00	10.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
511	12.60	12.50	0.02317	84.1	0.00555	0.21	1.91	0.47	8.84	417.25	884.00	4.17	265.20	0.002	0.297	0.006
512	12.50	12.40	0.02317	84.1	0.00555	0.21	2.12	0.47	8.84	417.25	884.00	4.17	353.60	0.002	0.297	0.006
513	12.40	12.30	0.02317	84.1	0.00555	0.21	2.33	0.47	8.84	417.25	884.00	4.17	442.00	0.003	0.297	0.006
514	12.30	12.20	0.02317	84.1	0.00555	0.21	2.54	0.47	8.84	417.25	884.00	4.17	530.40	0.004	0.297	0.006
515	12.20	12.10	0.02317	84.1	0.00555	0.21	2.75	0.47	8.84	417.25	884.00	4.17	618.80	0.004	0.304	0.006
516	12.10	12.00	0.02317	84.1	0.00555	0.21	2.95	0.47	8.84	417.25	884.00	4.17	707.20	0.005	0.321	0.006

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

517	12.00	11.90	0.02317	84.1	0.00555	0.21	3.16	0.47	8.84	417.25	884.00	4.17	795.60	0.005	0.342	0.006
518	11.90	11.80	0.02317	84.1	0.00555	0.21	3.37	0.47	8.84	417.25	884.00	4.17	884.00	0.006	0.366	0.007
519	11.80	11.70	0.02317	84.1	0.00555	0.21	3.58	0.47	8.84	417.25	884.00	4.17	972.40	0.007	0.391	0.007
520	11.70	11.60	0.02317	84.1	0.00555	0.21	3.79	0.47	8.84	417.25	884.00	4.17	1060.80	0.007	0.418	0.008
521	11.60	11.50	0.02317	84.1	0.00555	0.21	4.00	0.47	8.84	417.25	884.00	4.17	1149.20	0.008	0.446	0.008
522	11.50	11.40	0.02317	84.1	0.00555	0.21	4.20	0.47	8.84	417.25	884.00	4.17	1237.60	0.008	0.474	0.009
523	11.40	11.30	0.02317	84.1	0.00555	0.21	4.41	0.47	8.84	417.25	884.00	4.17	1326.00	0.009	0.503	0.009
524	11.30	11.20	0.02317	84.1	0.00555	0.21	4.62	0.47	8.84	417.25	884.00	4.17	1414.40	0.010	0.532	0.010
525	11.20	11.10	0.02317	84.1	0.00555	0.21	4.83	0.47	8.84	417.25	884.00	4.17	1502.80	0.010	0.561	0.010
526	11.10	11.00	0.02317	84.1	0.00555	0.21	5.04	0.47	8.84	417.25	884.00	4.17	1591.20	0.011	0.591	0.011
527	11.00	10.90	0.02317	84.1	0.00555	0.21	5.25	0.47	8.84	417.25	884.00	4.17	1679.60	0.011	0.621	0.012
528	10.90	10.80	0.02317	84.1	0.00555	0.21	5.45	0.47	8.84	417.25	884.00	4.17	1768.00	0.012	0.651	0.012
529	10.80	10.70	0.02317	84.1	0.00555	0.21	5.66	0.47	8.84	417.25	884.00	4.17	1856.40	0.013	0.681	0.013
530	10.70	10.60	0.02317	84.1	0.00555	0.21	5.87	0.47	8.84	417.25	884.00	4.17	1944.80	0.013	0.712	0.013
531	10.60	10.50	0.02317	84.1	0.00555	0.21	6.08	0.47	8.84	417.25	884.00	4.17	2033.20	0.014	0.742	0.014
532	10.50	10.40	0.02317	84.1	0.00555	0.21	6.29	0.47	8.84	417.25	884.00	4.17	2121.60	0.014	0.773	0.014
533	10.40	10.30	0.02317	84.1	0.00555	0.21	6.50	0.47	8.84	417.25	884.00	4.17	2210.00	0.015	0.804	0.015
534	10.30	10.20	0.02317	84.1	0.00555	0.21	6.71	0.47	8.84	417.25	884.00	4.17	2298.40	0.015	0.835	0.016
535	10.20	10.10	0.02317	84.1	0.00555	0.21	6.91	0.47	8.84	417.25	884.00	4.17	2386.80	0.016	0.866	0.016
TOT							5.21			10431.20	22100.00					
AVG					0.0056			0.47	8.84			4.17				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR 1/da	BOD2 DECAT 1/da	BOD2 SETT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAT 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI 1/da	NCM DECAT 1/da	NCM SETT 1/da		
511	12.500	7.49	1.91	0.13	0.14	0.00	0.00	0.00	0.00	0.00	0.82	1.29	1.29	0.06	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00		
512	12.400	7.49	1.91	0.13	0.14	0.00	0.00	0.00	0.00	0.00	0.82	1.28	1.28	0.06	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00		
513	12.300	7.49	1.91	0.13	0.14	0.00	0.00	0.00	0.00	0.00	0.82	1.27	1.27	0.06	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00		
514	12.200	7.49	1.91	0.13	0.14	0.00	0.00	0.00	0.00	0.00	0.82	1.25	1.25	0.06	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00		
515	12.100	7.49	1.91	0.13	0.14	0.00	0.00	0.00	0.00	0.00	0.82	1.24	1.24	0.06	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00		
516	12.000	7.49	1.92	0.13	0.14	0.00	0.00	0.00	0.00	0.00	0.82	1.23	1.23	0.06	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00		
517	11.900	7.49	1.94	0.13	0.14	0.00	0.00	0.00	0.00	0.00	0.82	1.22	1.22	0.06	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00		
518	11.800	7.49	1.95	0.13	0.14	0.00	0.00	0.00	0.00	0.00	0.82	1.21	1.21	0.06	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00		
519	11.700	7.49	1.97	0.13	0.14	0.00	0.00	0.00	0.00	0.00	0.82	1.21	1.21	0.06	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00		
520	11.600	7.49	1.99	0.13	0.14	0.00	0.00	0.00	0.00	0.00	0.82	1.20	1.20	0.06	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00		
521	11.500	7.49	2.01	0.13	0.14	0.00	0.00	0.00	0.00	0.00	0.82	1.19	1.19	0.06	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00		
522	11.400	7.49	2.03	0.13	0.14	0.00	0.00	0.00	0.00	0.00	0.82	1.18	1.18	0.06	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00		
523	11.300	7.49	2.05	0.13	0.14	0.00	0.00	0.00	0.00	0.00	0.82	1.18	1.18	0.06	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00		
524	11.200	7.49	2.07	0.13	0.14	0.00	0.00	0.00	0.00	0.00	0.82	1.17	1.17	0.06	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00		
525	11.100	7.49	2.09	0.13	0.14	0.00	0.00	0.00	0.00	0.00	0.82	1.16	1.16	0.06	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00		
526	11.000	7.49	2.11	0.13	0.14	0.00	0.00	0.00	0.00	0.00	0.82	1.16	1.16	0.06	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00		
527	10.900	7.49	2.13	0.13	0.14	0.00	0.00	0.00	0.00	0.00	0.82	1.15	1.15	0.06	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00		
528	10.800	7.49	2.15	0.13	0.14	0.00	0.00	0.00	0.00	0.00	0.82	1.15	1.15	0.06	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00		
529	10.700	7.49	2.17	0.13	0.14	0.00	0.00	0.00	0.00	0.00	0.82	1.14	1.14	0.06	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00		
530	10.600	7.49	2.19	0.13	0.14	0.00	0.00	0.00	0.00	0.00	0.82	1.14	1.14	0.06	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00		
531	10.500	7.49	2.21	0.13	0.14	0.00	0.00	0.00	0.00	0.00	0.82	1.14	1.14	0.06	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00		
532	10.400	7.49	2.23	0.13	0.14	0.00	0.00	0.00	0.00	0.00	0.82	1.14	1.14	0.06	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00		
533	10.300	7.49	2.25	0.13	0.14	0.00	0.00	0.00	0.00	0.00	0.82	1.14	1.14	0.06	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00		
534	10.200	7.49	2.28	0.13	0.14	0.00	0.00	0.00	0.00	0.00	0.82	1.16	1.16	0.06	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00		
535	10.100	7.49	2.30	0.13	0.14	0.00	0.00	0.00	0.00	0.00	0.82	1.18	1.18	0.06	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00		
AVG 20 DEG C RATE			1.70	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.43			0.03	0.00	0.00	0.00	0.10	0.00	0.00	0.00		0.00	0.00	0.00			
*	g/m ² /d		**	mg/L/day																								

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL
--------------	-------------	------------	----------	------	----	---------	-----------	-----------	------------	------------	------------	------------	------------	------------	-------------	-------------	------------	------------	------------	-------------	-------------	------------	------------------------	--------------

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

511	12.500	30.40	0.46	889.55	108.23	5.62	7.37	0.00	8.44	0.00	6.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	
0.00																								
512	12.400	30.40	0.46	889.55	108.23	5.67	7.18	0.00	8.25	0.00	6.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	
0.00																								
513	12.300	30.40	0.46	889.55	108.23	5.72	7.00	0.00	8.06	0.00	6.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	
0.00																								
514	12.200	30.40	0.46	889.55	108.23	5.76	6.82	0.00	7.89	0.00	5.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	
0.00																								
515	12.100	30.40	0.46	889.55	108.23	5.81	6.66	0.00	7.72	0.00	5.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	
0.00																								
516	12.000	30.40	0.46	889.55	108.23	5.85	6.50	0.00	7.56	0.00	5.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	
0.00																								
517	11.900	30.40	0.46	889.55	108.23	5.89	6.35	0.00	7.41	0.00	5.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	
0.00																								
518	11.800	30.40	0.46	889.55	108.23	5.93	6.20	0.00	7.27	0.00	4.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	
0.00																								
519	11.700	30.40	0.46	889.55	108.23	5.97	6.07	0.00	7.13	0.00	4.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	
0.00																								
520	11.600	30.40	0.46	889.56	108.23	6.01	5.94	0.00	7.01	0.00	4.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	
0.00																								
521	11.500	30.40	0.46	889.56	108.23	6.04	5.82	0.00	6.88	0.00	4.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	
0.00																								
522	11.400	30.40	0.46	889.57	108.23	6.08	5.70	0.00	6.77	0.00	4.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	
0.00																								
523	11.300	30.40	0.46	889.60	108.24	6.11	5.59	0.00	6.66	0.00	4.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	
0.00																								
524	11.200	30.40	0.46	889.66	108.26	6.15	5.49	0.00	6.56	0.00	4.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	
0.00																								
525	11.100	30.40	0.46	889.77	108.30	6.18	5.39	0.00	6.46	0.00	3.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	
0.00																								
526	11.000	30.40	0.46	889.98	108.37	6.21	5.30	0.00	6.37	0.00	3.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	
0.00																								
527	10.900	30.40	0.46	890.37	108.51	6.24	5.22	0.00	6.29	0.00	3.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	
0.00																								
528	10.800	30.40	0.46	891.09	108.76	6.26	5.15	0.00	6.21	0.00	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	
0.00																								
529	10.700	30.40	0.46	892.37	109.20	6.29	5.08	0.00	6.15	0.00	3.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	
0.00																								
530	10.600	30.40	0.46	894.62	109.98	6.31	5.03	0.00	6.10	0.00	3.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	
0.00																								
531	10.500	30.40	0.47	898.49	111.32	6.33	5.01	0.00	6.08	0.00	3.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	
0.00																								
532	10.400	30.40	0.47	905.05	113.58	6.34	5.02	0.00	6.09	0.00	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	
0.00																								
533	10.300	30.40	0.48	915.96	117.35	6.34	5.10	0.00	6.17	0.00	2.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	
0.00																								
534	10.200	30.40	0.49	933.86	123.54	6.32	5.29	0.00	6.35	0.00	2.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	
0.00																								
535	10.100	30.40	0.50	962.80	133.54	6.27	5.65	0.00	6.71	0.00	2.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	
0.00																								

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
511	12.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
512	12.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
513	12.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
514	12.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
515	12.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
516	12.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
517	11.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
518	11.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
519	11.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
520	11.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
521	11.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

522	11.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
523	11.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
524	11.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
525	11.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
526	11.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
527	10.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
528	10.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
529	10.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
530	10.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
531	10.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
532	10.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
533	10.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
534	10.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
535	10.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT BAYOU LIBERTY WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 47 LIBERTY FROM HWY 190 TO BL04 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
559	UPR RCH	0.02317	30.40	0.50	962.80	133.54	6.27	5.65	0.00	6.71	0.00	2.77	0.00	0.00	0.00	10.00	0.00	0.00
559	TRIB	0.00110	30.40	0.36	693.81	48.89	6.86	4.41	0.00	5.48	0.00	6.89	0.00	0.00	0.00	10.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
559	10.10	10.00	0.02428	83.7	0.00093	1.24	8.16	1.40	18.60	2604.00	1860.00	26.04	2572.80	0.003	0.370	0.003
TOT AVG					0.0009	1.24		1.40	18.60	2604.00	1860.00	26.04				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT DECAT 1/da	ABOD1 1/da	BOD1 HYDR DECAT 1/da	BOD2 DECAT 1/da	ABOD2 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT DECAT 1/da	NH3-N SRCE *	NH3-N RATE 1/da	DENIT HYDR 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da
559	10.000	7.49	0.61	0.13	0.05	0.00	0.00	0.00	0.00	0.60	0.98	0.98	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.50	0.08	0.04	0.00	0.00	0.00	0.00	0.31			0.03	0.04	0.00	0.00	0.10	0.00	0.00	0.00			0.00	0.00	0.00

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL		
559	10.000	30.40	0.52	988.44	142.40	6.21	6.00	0.00	7.07	0.00	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

***** PHYTOPLANKTON AND PERIPHYTON DATA

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
559	10.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20 DEG C RATE										0.000	0.000	0.000	0.000									0.000	0.000	0.000			

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT BAYOU LIBERTY WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 48 LIBERTY FROM BL04 TO DD18 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
560	UPR RCH	0.02428	30.40	0.52	988.44	142.40	6.21	6.00	0.00	7.07	0.00	2.73	0.00	0.00	0.00	10.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
560	10.00	9.90	0.02428	83.7	0.00093	1.24	9.40	1.40	18.60	2604.00	1860.00	26.04	2758.80	0.003	0.396	0.003
561	9.90	9.80	0.02428	83.7	0.00093	1.24	10.64	1.40	18.60	2604.00	1860.00	26.04	2944.80	0.003	0.422	0.003
562	9.80	9.70	0.02428	83.7	0.00093	1.24	11.88	1.40	18.60	2604.00	1860.00	26.04	3130.80	0.003	0.448	0.003
563	9.70	9.60	0.02428	83.7	0.00093	1.24	13.12	1.40	18.60	2604.00	1860.00	26.04	3316.80	0.004	0.474	0.004
564	9.60	9.50	0.02428	83.7	0.00093	1.24	14.36	1.40	18.60	2604.00	1860.00	26.04	3502.80	0.004	0.500	0.004
565	9.50	9.40	0.02428	83.7	0.00093	1.24	15.60	1.40	18.60	2604.00	1860.00	26.04	3688.80	0.004	0.526	0.004
566	9.40	9.30	0.02428	83.7	0.00093	1.24	16.85	1.40	18.60	2604.00	1860.00	26.04	3874.80	0.004	0.553	0.004
567	9.30	9.20	0.02428	83.7	0.00093	1.24	18.09	1.40	18.60	2604.00	1860.00	26.04	4060.80	0.004	0.579	0.004
568	9.20	9.10	0.02428	83.7	0.00093	1.24	19.33	1.40	18.60	2604.00	1860.00	26.04	4246.80	0.005	0.605	0.005
569	9.10	9.00	0.02428	83.7	0.00093	1.24	20.57	1.40	18.60	2604.00	1860.00	26.04	4432.80	0.005	0.632	0.005
570	9.00	8.90	0.02428	83.7	0.00093	1.24	21.81	1.40	18.60	2604.00	1860.00	26.04	4618.80	0.005	0.658	0.005
571	8.90	8.80	0.02428	83.7	0.00093	1.24	23.05	1.40	18.60	2604.00	1860.00	26.04	4804.80	0.005	0.684	0.005
572	8.80	8.70	0.02428	83.7	0.00093	1.24	24.30	1.40	18.60	2604.00	1860.00	26.04	4990.80	0.005	0.711	0.005
573	8.70	8.60	0.02428	83.7	0.00093	1.24	25.54	1.40	18.60	2604.00	1860.00	26.04	5176.80	0.006	0.737	0.006
574	8.60	8.50	0.02428	83.7	0.00093	1.24	26.78	1.40	18.60	2604.00	1860.00	26.04	5362.80	0.006	0.764	0.006
575	8.50	8.40	0.02428	83.7	0.00093	1.24	28.02	1.40	18.60	2604.00	1860.00	26.04	5548.80	0.006	0.790	0.006
TOT						19.86				41664.00	29760.00					
AVG				0.0009				1.40	18.60			26.04				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE 1/da	BOD1 DECAY 1/da	BOD1 SETT 1/da	ABOD1 DECAY 1/da	BOD1 HYDR 1/da	BOD2 DECAY 1/da	BOD2 SETT 1/da	ABOD2 DECAY 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAY 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAY 1/da	NCM DECAY 1/da	NCM SETT 1/da
560	9.900	7.48	0.61	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.49	0.88	0.88	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.77	0.00	0.00	0.00	0.00
561	9.800	7.48	0.61	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.49	0.89	0.89	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.74	0.00	0.00	0.00	0.00
562	9.700	7.48	0.61	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.49	0.90	0.90	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.70	0.00	0.00	0.00	0.00
563	9.600	7.48	0.61	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.49	0.90	0.90	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.67	0.00	0.00	0.00	0.00
564	9.500	7.48	0.61	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.49	0.91	0.91	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.63	0.00	0.00	0.00	0.00
565	9.400	7.48	0.61	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.49	0.91	0.91	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.60	0.00	0.00	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

566	9.300	7.48	0.61	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.49	0.91	0.91	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57	0.00	0.00	0.00	0.00
567	9.200	7.48	0.61	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.49	0.92	0.92	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.53	0.00	0.00	0.00	0.00
568	9.100	7.48	0.61	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.49	0.92	0.92	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.00	0.00	0.00	0.00	
569	9.000	7.47	0.61	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.49	0.92	0.92	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46	0.00	0.00	0.00	0.00	
570	8.900	7.47	0.61	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.49	0.93	0.93	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43	0.00	0.00	0.00	0.00	
571	8.800	7.47	0.61	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.49	0.93	0.93	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.00	0.00	0.00	0.00	
572	8.700	7.47	0.61	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.49	0.94	0.94	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36	0.00	0.00	0.00	0.00	
573	8.600	7.46	0.61	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.49	0.94	0.94	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.00	0.00	0.00	0.00	
574	8.500	7.46	0.61	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.49	0.95	0.95	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29	0.00	0.00	0.00	0.00	
575	8.400	7.46	0.61	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.49	0.96	0.96	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00	

AVG 20 DEG C RATE 0.50 0.08 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.26 0.03 0.00 0.00 0.00 0.10 0.00 0.00 0.00 0.00 0.00 0.00 0.00

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL
560	9.900	30.40	0.53	1014.70	151.38	6.17	6.12	0.00	7.14	0.00	2.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.6	0.0	0.
561	9.800	30.40	0.55	1045.29	161.84	6.11	6.22	0.00	7.19	0.00	2.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.1	0.0	0.
562	9.700	30.40	0.57	1080.60	173.92	6.06	6.30	0.00	7.23	0.00	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.7	0.0	0.
563	9.600	30.40	0.59	1121.05	187.76	6.00	6.38	0.00	7.26	0.00	2.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.3	0.0	0.
564	9.500	30.40	0.62	1167.07	203.50	5.94	6.45	0.00	7.29	0.00	2.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.9	0.0	0.
565	9.400	30.40	0.65	1219.09	221.30	5.88	6.51	0.00	7.30	0.00	1.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.4	0.0	0.
566	9.300	30.40	0.68	1277.58	241.31	5.81	6.57	0.00	7.32	0.00	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.0	0.0	0.
567	9.200	30.40	0.72	1342.99	263.68	5.75	6.62	0.00	7.33	0.00	1.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.6	0.0	0.
568	9.100	30.40	0.76	1415.79	288.58	5.68	6.68	0.00	7.34	0.00	1.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.2	0.0	0.
569	9.000	30.40	0.80	1496.46	316.18	5.62	6.74	0.00	7.35	0.00	1.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.8	0.0	0.
570	8.900	30.40	0.85	1585.50	346.64	5.55	6.80	0.00	7.37	0.00	1.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.3	0.0	0.
571	8.800	30.40	0.91	1683.40	380.13	5.49	6.87	0.00	7.39	0.00	1.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.9	0.0	0.
572	8.700	30.40	0.97	1790.69	416.83	5.42	6.95	0.00	7.43	0.00	1.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.5	0.0	0.
573	8.600	30.40	1.03	1907.87	456.91	5.37	7.03	0.00	7.47	0.00	1.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.0	0.0	0.
574	8.500	30.40	1.11	2035.49	500.57	5.31	7.14	0.00	7.52	0.00	1.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.6	0.0	0.
575	8.400	30.40	1.18	2174.08	547.98	5.27	7.25	0.00	7.60	0.00	1.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
560	9.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
561	9.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
562	9.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
563	9.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
564	9.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
565	9.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

566	9.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
567	9.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
568	9.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
569	9.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	5.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
570	8.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	5.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
571	8.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	4.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
572	8.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	4.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
573	8.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	4.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
574	8.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
575	8.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	

20 DEG C RATE 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT BAYOU LIBERTY WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 50 LIBERTY FROM DD18 TO DD19 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL mg/L	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
579	UPR RCH	0.02428	30.40	1.18	2174.08	547.98	5.27	7.25	0.00	7.60	0.00	1.56	0.00	0.00	0.00	3.20	0.00	0.00
579	TRIB	0.00037	30.40	0.29	575.90	20.48	6.30	4.23	0.00	4.57	0.00	6.13	0.00	0.00	0.00	3.20	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
579	8.40	8.30	0.02465	82.8	0.00095	1.22	29.24	1.40	18.60	2604.00	1860.00	26.04	5734.80	0.006	1.225	0.006
580	8.30	8.20	0.02465	82.8	0.00095	1.22	30.47	1.40	18.60	2604.00	1860.00	26.04	5920.80	0.006	1.264	0.006
581	8.20	8.10	0.02465	82.8	0.00095	1.22	31.69	1.40	18.60	2604.00	1860.00	26.04	6106.80	0.007	1.304	0.007
582	8.10	8.00	0.02465	82.8	0.00095	1.22	32.91	1.40	18.60	2604.00	1860.00	26.04	6292.80	0.007	1.344	0.007
583	8.00	7.90	0.02465	82.8	0.00095	1.22	34.13	1.40	18.60	2604.00	1860.00	26.04	6478.80	0.007	1.384	0.007
584	7.90	7.80	0.02465	82.8	0.00095	1.22	35.36	1.40	18.60	2604.00	1860.00	26.04	6664.80	0.007	1.423	0.007
TOT						7.34				15624.00	11160.00					
AVG				0.0009				1.40	18.60			26.04				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECAT	BOD1 SETT	ABOD1 DECAT	BOD1 HYDR	BOD2 DECAT	ABOD2 SETT	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECAT	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECAT	NCM DECAT	NCM SETT
579	8.300	7.46	0.61	0.13	0.05	0.00	0.00	0.00	0.00	0.15	0.62	0.62	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00
580	8.200	7.45	0.61	0.13	0.05	0.00	0.00	0.00	0.00	0.15	0.63	0.63	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00
581	8.100	7.45	0.61	0.13	0.05	0.00	0.00	0.00	0.00	0.15	0.64	0.64	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00
582	8.000	7.45	0.61	0.13	0.05	0.00	0.00	0.00	0.00	0.15	0.64	0.64	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00
583	7.900	7.44	0.61	0.13	0.05	0.00	0.00	0.00	0.00	0.15	0.65	0.65	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00
584	7.800	7.44	0.61	0.13	0.05	0.00	0.00	0.00	0.00	0.15	0.66	0.66	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00
AVG	20 DEG C RATE	0.50	0.08	0.01	0.00	0.00	0.00	0.00	0.00	0.08				0.03	0.01	0.00	0.00	0.10	0.00	0.00			0.00	0.00	0.00

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO	BOD1	BOD2	EBOD1	EBOD2	ORG-N	NH3-N	NO3-N	TOT-N	EORG-N	ETOT-N	ORG-P	PO4-P	TOT-P	EORG-P	ETOT-P	CHL A	PERIP	COLI		
579	8.300	30.40	1.25	2293.77	588.92	5.25	7.36	0.00	7.71	0.00	1.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.	
580	8.200	30.40	1.31	2401.59	625.78	5.22	7.47	0.00	7.81	0.00	1.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.
581	8.100	30.40	1.37	2514.01	664.21	5.18	7.59	0.00	7.93	0.00	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.
582	8.000	30.40	1.44	2631.10	704.24	5.12	7.72	0.00	8.06	0.00	1.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.
583	7.900	30.40	1.51	2752.91	745.88	5.06	7.86	0.00	8.20	0.00	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.
584	7.800	30.40	1.58	2879.48	789.16	4.98	8.02	0.00	8.36	0.00	1.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
579	8.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
580	8.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
581	8.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
582	8.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
583	7.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
584	7.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT BAYOU LIBERTY WATER QUALITY/HYDRAULIC MODEL FOR:
REACH NO. 52 LIBERTY FROM DD19 TO DD04 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO	BOD1	BOD2	EBOD1	EBOD2	ORG-N	NH3-N	NO3-N	PO4-P	CHL A	COLI	NCM
599	UPR RCH	0.02465	30.40	1.58	2879.48	789.16	4.98	8.02	0.00	8.36	0.00	1.62	0.00	0.00	0.00	3.20	0.00	0.00
599	TRIB	0.00076	30.40	0.34	666.88	42.40	6.45	3.15	0.00	3.49	0.00	2.68	0.00	0.00	0.00	3.20	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
599	7.80	7.70	0.02541	82.2	0.00026	4.43	39.79	2.28	42.67	9728.76	4267.00	97.29	7091.50	0.002	0.811	0.002
600	7.70	7.60	0.02541	82.2	0.00026	4.43	44.22	2.28	42.67	9728.76	4267.00	97.29	7518.20	0.002	0.860	0.002
TOT AVG					0.0003	8.86		2.28	42.67	19457.52	8534.00	97.29				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECA	BOD1 SETT	ABOD1 DECA	BOD1 HYDR	BOD2 DECA	BOD2 SETT	ABOD2 DECA	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N SRCE	NH3-N RATE	DENIT HYDR	ORG-P SETT	ORG-P SRCE	PO4 PROD	PHYTO PROD	PERIP PROD	COLI DECA	NCM DECA	NCM SETT
----------	-------------	----------	------------	-----------	-----------	------------	-----------	-----------	-----------	------------	----------	----------	----------	------------	------------	------------	------------	------------	------------	------------	----------	------------	------------	-----------	----------	----------

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

	mg/L	1/da	*	*	*	1/da	1/da	1/da	*	1/da	1/da	1/da	*	**	**	1/da	1/da	1/da									
599	7.700	7.44	0.37	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.52	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00	
600	7.600	7.44	0.37	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.52	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00	
AVG 20 DEG C RATE		0.31	0.08	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.03	0.01	0.00	0.00	0.10	0.00	0.00	0.00				0.00	0.00	0.00

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO	BOD1	BOD2	EBOD1	EBOD2	ORG-N	NH3-N	NO3-N	TOT-N	EORG-N	ETOT-N	ORG-P	PO4-P	TOT-P	EORG-P	ETOT-P	CHL A	PERIP	COLI	
						mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	g/m ²	#/100mL	
599	7.700	30.40	1.63	2964.62	818.26	4.92	8.13	0.00	8.47	0.00	1.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.
600	7.600	30.40	1.66	3030.07	840.63	4.89	8.19	0.00	8.53	0.00	1.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P N&P LIM	PERI SPC TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP
599	7.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
600	7.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20 DEG C RATE									0.000	0.000	0.000	0.000								0.000	0.000	0.000		

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT BAYOU LIBERTY WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 54 LIBERTY FROM DD04 TO BL05 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO	BOD1	BOD2	EBOD1	EBOD2	ORG-N	NH3-N	NO3-N	PO4-P	CHL A	COLI	NCM
643	UPR RCH	0.02541	30.40	1.66	3030.07	840.63	4.89	8.19	0.00	8.53	0.00	1.64	0.00	0.00	0.00	3.20	0.00	0.00
643	TRIB	0.01683	30.40	0.31	594.74	52.59	5.18	17.28	0.00	17.62	0.00	7.13	0.00	0.00	0.00	3.20	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
643	7.60	7.50	0.04224	88.6	0.00043	2.67	46.89	2.28	42.67	9728.76	4267.00	97.29	7944.90	0.002	1.137	0.002
644	7.50	7.40	0.04224	88.6	0.00043	2.67	49.55	2.28	42.67	9728.76	4267.00	97.29	8371.60	0.002	1.198	0.002
645	7.40	7.30	0.04224	88.6	0.00043	2.67	52.22	2.28	42.67	9728.76	4267.00	97.29	8798.30	0.003	1.259	0.003
646	7.30	7.20	0.04224	88.6	0.00043	2.67	54.89	2.28	42.67	9728.76	4267.00	97.29	9225.00	0.003	1.319	0.003
647	7.20	7.10	0.04224	88.6	0.00043	2.67	57.55	2.28	42.67	9728.76	4267.00	97.29	9651.70	0.003	1.380	0.003
648	7.10	7.00	0.04224	88.6	0.00043	2.67	60.22	2.28	42.67	9728.76	4267.00	97.29	10078.40	0.003	1.441	0.003
649	7.00	6.90	0.04224	88.6	0.00043	2.67	62.88	2.28	42.67	9728.76	4267.00	97.29	10505.10	0.003	1.502	0.003
TOT						18.66				68101.31	29869.00					
AVG				0.0004				2.28	42.67			97.29				

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
650	UPR RCH	0.04224	30.40	1.98	3588.63	1027.71	4.98	7.85	0.00	8.19	0.00	1.42	0.00	0.00	0.00	3.20	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
650	6.90	6.80	0.04224	88.6	0.00043	2.67	65.55	2.28	42.67	9728.76	4267.00	97.29	10931.80	0.003	1.876	0.003
651	6.80	6.70	0.04224	88.6	0.00043	2.67	68.22	2.28	42.67	9728.76	4267.00	97.29	11358.50	0.003	1.949	0.003
652	6.70	6.60	0.04224	88.6	0.00043	2.67	70.88	2.28	42.67	9728.76	4267.00	97.29	11785.20	0.003	2.022	0.003
653	6.60	6.50	0.04224	88.6	0.00043	2.67	73.55	2.28	42.67	9728.76	4267.00	97.29	12211.90	0.004	2.096	0.004
654	6.50	6.40	0.04224	88.6	0.00043	2.67	76.21	2.28	42.67	9728.76	4267.00	97.29	12638.60	0.004	2.169	0.004
655	6.40	6.30	0.04224	88.6	0.00043	2.67	78.88	2.28	42.67	9728.76	4267.00	97.29	13065.30	0.004	2.242	0.004
TOT AVG					0.0004	16.00		2.28	42.67	58372.55	25602.00	97.29				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECAT	BOD1 SETT	ABOD1 DECAT	BOD1 HYDR	BOD2 DECAT	BOD2 SETT	ABOD2 DECAT	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECAT	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECAT	NCM DECAT	NCM SETT	
650	6.800	7.42	0.43	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.15	0.35	0.35	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00	0.00
651	6.700	7.42	0.43	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.15	0.35	0.35	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00	0.00
652	6.600	7.42	0.43	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.15	0.35	0.35	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00	0.00
653	6.500	7.42	0.43	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.15	0.35	0.35	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00	0.00
654	6.400	7.42	0.43	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.15	0.35	0.35	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00	0.00
655	6.300	7.42	0.43	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.15	0.35	0.35	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00	0.00
AVG 20	DEG C	RATE	0.35	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.08			0.03	0.00	0.00	0.00	0.10	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EOG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EOG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL	
650	6.800	30.40	2.02	3661.32	1052.00	5.00	7.83	0.00	8.17	0.00	1.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.
651	6.700	30.40	2.05	3727.17	1074.00	5.02	7.82	0.00	8.16	0.00	1.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.
652	6.600	30.40	2.09	3792.03	1095.68	5.03	7.83	0.00	8.17	0.00	1.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.
653	6.500	30.40	2.13	3855.96	1117.04	5.04	7.85	0.00	8.19	0.00	1.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.
654	6.400	30.40	2.16	3918.98	1138.10	5.05	7.89	0.00	8.23	0.00	1.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.
655	6.300	30.40	2.20	3981.15	1158.87	5.06	7.93	0.00	8.28	0.00	1.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE	SECCHI DEPTH	PHYT N	PHYT LIT	PHYT N	PHYT P	PHYT N&P	PHYT TOT	PHYT GROW	PHYT RESP	PHYT DEATH	PHYT SETT	PHYT P/R	PHYTO	PERI N	PERI LIT	PERI N	PERI P	PERI N&P	PERI SPC	PERI TOT	PERI GROW	PERI RESP	PERI DEATH	PERI P/R	PERIP
----------	-------------	------------	--------------	--------	----------	--------	--------	----------	----------	-----------	-----------	------------	-----------	----------	-------	--------	----------	--------	--------	----------	----------	----------	-----------	-----------	------------	----------	-------

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

	frac	m	PREF	LIM	LIM	LIM	LIM	LIM	LIM	1/da	1/da	1/da	1/da	RATIO	µg/L	PREF	LIM	LIM	LIM	LIM	LIM	LIM	LIM	1/da	1/da	1/da	RATIO	g/m²
650	6.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
651	6.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
652	6.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
653	6.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
654	6.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
655	6.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
20 DEG C RATE										0.000	0.000	0.000	0.000									0.000	0.000	0.000				

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT BAYOU LIBERTY WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 56 LIBERTY FROM RKM 6.3 TO RKM 6.0 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
656	UPR RCH	0.04224	30.40	2.20	3981.15	1158.87	5.06	7.93	0.00	8.28	0.00	1.44	0.00	0.00	0.00	3.20	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
656	6.30	6.20	0.04224	88.6	0.00063	1.85	80.73	1.70	39.69	6747.30	3969.00	67.47	13462.20	0.006	2.609	0.006
657	6.20	6.10	0.04224	88.6	0.00063	1.85	82.58	1.70	39.69	6747.30	3969.00	67.47	13859.10	0.006	2.686	0.006
658	6.10	6.00	0.04224	88.6	0.00063	1.85	84.43	1.70	39.69	6747.30	3969.00	67.47	14256.00	0.006	2.763	0.006
TOT AVG					0.0006	5.55		1.70	39.69	20241.90	11907.00	67.47				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE mg/L	BOD1 DECAT 1/da	BOD1 SETT DECAT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR DECAT 1/da	BOD2 DECAT 1/da	BOD2 SETT DECAT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT DECAT 1/da	NH3-N SRCE RATE *	NH3-N HYDR 1/da	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da
656	6.200	7.41	0.57	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.06	0.57	0.57	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00
657	6.100	7.41	0.57	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.06	0.58	0.58	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00
658	6.000	7.41	0.57	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.06	0.58	0.58	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.47	0.08	0.01	0.00	0.00	0.00	0.00	0.00	0.03				0.03	0.01	0.00	0.00	0.10	0.00	0.00			0.00	0.00	0.00

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL	
656	6.200	30.40	2.24	4050.18	1181.94	5.07	8.00	0.00	8.34	0.00	1.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.
657	6.100	30.40	2.28	4127.97	1207.93	5.07	8.07	0.00	8.41	0.00	1.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

658 6.000 30.40 2.32 4205.35 1233.79 5.07 8.12 0.00 8.47 0.00 1.51 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 3.2 0.0 0.0

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
656	6.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
657	6.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
658	6.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT BAYOU LIBERTY WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 57 LIBERTY FROM RKM 6.0 TO TRIB 9 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
659	UPR RCH	0.04224	30.40	2.32	4205.35	1233.79	5.07	8.12	0.00	8.47	0.00	1.51	0.00	0.00	0.00	3.20	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
659	6.00	5.90	0.04224	88.6	0.00043	2.71	87.14	2.08	47.55	9890.40	4755.00	98.90	14731.50	0.004	2.304	0.004
660	5.90	5.80	0.04224	88.6	0.00043	2.71	89.85	2.08	47.55	9890.40	4755.00	98.90	15207.00	0.004	2.379	0.004
661	5.80	5.70	0.04224	88.6	0.00043	2.71	92.56	2.08	47.55	9890.40	4755.00	98.90	15682.50	0.004	2.453	0.004
662	5.70	5.60	0.04224	88.6	0.00043	2.71	95.27	2.08	47.55	9890.40	4755.00	98.90	16158.00	0.005	2.528	0.005
663	5.60	5.50	0.04224	88.6	0.00043	2.71	97.98	2.08	47.55	9890.40	4755.00	98.90	16633.50	0.005	2.602	0.005
664	5.50	5.40	0.04224	88.6	0.00043	2.71	100.69	2.08	47.55	9890.40	4755.00	98.90	17109.00	0.005	2.677	0.005
665	5.40	5.30	0.04224	88.6	0.00043	2.71	103.40	2.08	47.55	9890.40	4755.00	98.90	17584.50	0.005	2.752	0.005
666	5.30	5.20	0.04224	88.6	0.00043	2.71	106.11	2.08	47.55	9890.40	4755.00	98.90	18060.00	0.005	2.826	0.005
TOT AVG					0.0004	21.68		2.08	47.55	79123.20	38040.00	98.90				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE 1/da	BOD1 DECA 1/da	BOD1 SETT 1/da	ABOD1 DECA 1/da	BOD1 HYDR 1/da	BOD2 DECA 1/da	BOD2 SETT 1/da	ABOD2 DECA 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECA 1/da	NCM DECA 1/da	NCM SETT 1/da	
659	5.900	7.41	0.47	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.52	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00	0.00
660	5.800	7.41	0.47	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.53	0.53	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00	0.00
661	5.700	7.41	0.47	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.53	0.53	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00	0.00
662	5.600	7.41	0.47	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.53	0.53	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00	0.00
663	5.500	7.40	0.47	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.54	0.54	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00	0.00
664	5.400	7.40	0.47	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.54	0.54	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00	0.00
665	5.300	7.40	0.47	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.55	0.55	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00	0.00
666	5.200	7.40	0.47	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.55	0.55	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.39	0.08	0.00	0.00	0.00	0.00	0.00	0.00				0.03	0.00	0.00	0.00	0.10	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

672	5.20	5.10	0.04253	88.0	0.00043	2.69	108.80	2.08	47.55	9890.40	4755.00	98.90	19015.50	0.005	2.976	0.005
673	5.10	5.00	0.04253	88.0	0.00043	2.69	111.49	2.08	47.55	9890.40	4755.00	98.90	19491.00	0.006	3.050	0.006
674	5.00	4.90	0.04253	88.0	0.00043	2.69	114.18	2.08	47.55	9890.40	4755.00	98.90	19966.50	0.006	3.125	0.006
675	4.90	4.80	0.04253	88.0	0.00043	2.69	116.88	2.08	47.55	9890.40	4755.00	98.90	20442.00	0.006	3.200	0.006
676	4.80	4.70	0.04253	88.0	0.00043	2.69	119.57	2.08	47.55	9890.40	4755.00	98.90	20917.50	0.006	3.274	0.006
677	4.70	4.60	0.04253	88.0	0.00043	2.69	122.26	2.08	47.55	9890.40	4755.00	98.90	21393.00	0.006	3.349	0.006
678	4.60	4.50	0.04253	88.0	0.00043	2.69	124.95	2.08	47.55	9890.40	4755.00	98.90	21868.50	0.006	3.423	0.006
679	4.50	4.40	0.04253	88.0	0.00043	2.69	127.64	2.08	47.55	9890.40	4755.00	98.90	22344.00	0.006	3.498	0.006
TOT						21.53				79123.20	38040.00	98.90				
AVG					0.0004				2.08	47.55						

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECA	BOD1 SETT	ABOD1 DECA	BOD1 HYDR	BOD2 DECA	BOD2 SETT	ABOD2 DECA	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECA	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECA	NCM DECA	NCM SETT
		mg/L	1/da	1/da	1/da	1/da	1/da	1/da	1/da	1/da	*	*	*		1/da	1/da	1/da	1/da	1/da	1/da	*	**	**	1/da	1/da	1/da
672	5.100	7.40	0.53	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.56	0.56	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00
673	5.000	7.40	0.53	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.56	0.56	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00
674	4.900	7.40	0.53	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.57	0.57	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00
675	4.800	7.39	0.53	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.57	0.57	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00
676	4.700	7.39	0.53	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.57	0.57	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00
677	4.600	7.39	0.53	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.57	0.57	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00
678	4.500	7.39	0.53	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.56	0.56	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00
679	4.400	7.39	0.53	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.56	0.56	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00
AVG 20	DEG C	RATE	0.44	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.03	0.00	0.00	0.10	0.00	0.00				0.00	0.00	0.00

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO	BOD1	BOD2	EBOD1	EBOD2	ORG-N	NH3-N	NO3-N	TOT-N	EORG-N	ETOT-N	ORG-P	PO4-P	TOT-P	EORG-P	ETOT-P	CHL A	PERIP	COLI	
						mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	g/m ²	#/100mL	
672	5.100	30.40	2.64	4765.94	1421.12	5.11	8.73	0.00	9.08	0.00	1.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.
673	5.000	30.40	2.67	4823.13	1440.23	5.13	8.81	0.00	9.15	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.
674	4.900	30.40	2.70	4879.74	1459.14	5.15	8.86	0.00	9.20	0.00	2.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.
675	4.800	30.40	2.73	4935.78	1477.87	5.17	8.89	0.00	9.23	0.00	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.
676	4.700	30.40	2.76	4991.28	1496.41	5.20	8.88	0.00	9.22	0.00	2.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.
677	4.600	30.40	2.79	5046.24	1514.78	5.24	8.85	0.00	9.19	0.00	2.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.
678	4.500	30.40	2.82	5100.70	1532.98	5.27	8.80	0.00	9.14	0.00	2.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.
679	4.400	30.40	2.85	5154.66	1551.01	5.32	8.72	0.00	9.06	0.00	2.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
672	5.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
673	5.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
674	4.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
696	4.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
697	4.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT BAYOU LIBERTY WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 66 LIBERTY FROM TRIB 10 TO BL07 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
705	UPR RCH	0.04286	30.40	2.91	5258.55	1585.72	5.41	8.53	0.00	8.87	0.00	2.26	0.00	0.00	0.00	3.20	0.00	0.00
705	TRIB	0.00031	30.40	2.93	5296.74	1598.49	5.44	8.22	0.00	8.57	0.00	2.23	0.00	0.00	0.00	3.20	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
705	4.20	4.10	0.04317	86.9	0.00039	2.99	136.59	2.14	52.12	11153.68	5212.00	111.54	24899.80	0.006	3.540	0.006
706	4.10	4.00	0.04317	86.9	0.00039	2.99	139.58	2.14	52.12	11153.68	5212.00	111.54	25421.00	0.006	3.615	0.006
707	4.00	3.90	0.04317	86.9	0.00039	2.99	142.57	2.14	52.12	11153.68	5212.00	111.54	25942.20	0.007	3.689	0.007
708	3.90	3.80	0.04317	86.9	0.00039	2.99	145.56	2.14	52.12	11153.68	5212.00	111.54	26463.40	0.007	3.763	0.007
709	3.80	3.70	0.04317	86.9	0.00039	2.99	148.55	2.14	52.12	11153.68	5212.00	111.54	26984.60	0.007	3.837	0.007
710	3.70	3.60	0.04317	86.9	0.00039	2.99	151.54	2.14	52.12	11153.68	5212.00	111.54	27505.80	0.007	3.912	0.007
711	3.60	3.50	0.04317	86.9	0.00039	2.99	154.53	2.14	52.12	11153.68	5212.00	111.54	28027.00	0.007	3.986	0.007
712	3.50	3.40	0.04317	86.9	0.00039	2.99	157.52	2.14	52.12	11153.68	5212.00	111.54	28548.20	0.007	4.060	0.007
713	3.40	3.30	0.04317	86.9	0.00039	2.99	160.51	2.14	52.12	11153.68	5212.00	111.54	29069.40	0.007	4.134	0.007
TOT AVG					0.0004	26.91		2.14	52.12	100383.12	46908.00	111.54				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECATY 1/da	BOD1 SETT 1/da	ABOD1 DECATY 1/da	BOD1 HYDR DECATY 1/da	BOD2 DECATY 1/da	BOD2 SETT 1/da	ABOD2 DECATY 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECATY 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECATY 1/da	NCM DECATY 1/da	NCM SETT 1/da
705	4.100	7.39	0.52	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.31	0.53	0.53	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.00	0.00	0.00	0.00
706	4.000	7.39	0.52	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.31	0.53	0.53	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.00	0.00	0.00	0.00
707	3.900	7.38	0.52	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.31	0.53	0.53	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.44	0.00	0.00	0.00	0.00
708	3.800	7.38	0.52	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.31	0.52	0.52	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.00	0.00	0.00	0.00
709	3.700	7.38	0.52	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.31	0.52	0.52	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.56	0.00	0.00	0.00	0.00
710	3.600	7.38	0.52	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.31	0.52	0.52	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.62	0.00	0.00	0.00	0.00
711	3.500	7.38	0.52	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.31	0.51	0.51	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.68	0.00	0.00	0.00	0.00
712	3.400	7.38	0.52	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.31	0.51	0.51	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.00	0.00	0.00	0.00
713	3.300	7.38	0.52	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.31	0.50	0.50	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.43	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.16			0.03	0.00	0.00	0.00	0.10	0.00	0.00	0.00		0.00	0.00	0.00	

* g/m²/d ** mg/L/day

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

***** WATER QUALITY CONSTITUENT VALUES

ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO	BOD1	BOD2	EBOD1	EBOD2	ORG-N	NH3-N	NO3-N	TOT-N	EORG-N	ETOT-N	ORG-P	PO4-P	TOT-P	EORG-P	ETOT-P	CHL A	PERIP	COLI	
						mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	g/m ²	#/100mL	
705	4.100	30.40	2.94	5308.67	1602.47	5.47	8.44	0.00	8.86	0.00	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.0	0.0	0.
706	4.000	30.40	2.97	5357.94	1618.94	5.53	8.35	0.00	8.86	0.00	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.7	0.0	0.
707	3.900	30.40	2.99	5406.73	1635.24	5.60	8.25	0.00	8.84	0.00	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.5	0.0	0.
708	3.800	30.40	3.02	5455.06	1651.39	5.67	8.14	0.00	8.81	0.00	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.2	0.0	0.
709	3.700	30.40	3.05	5502.93	1667.38	5.74	8.02	0.00	8.77	0.00	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.0	0.0	0.
710	3.600	30.40	3.07	5550.36	1683.23	5.80	7.89	0.00	8.71	0.00	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.7	0.0	0.
711	3.500	30.40	3.10	5597.37	1698.94	5.87	7.74	0.00	8.65	0.00	2.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.5	0.0	0.
712	3.400	30.40	3.13	5643.96	1714.51	5.93	7.58	0.00	8.57	0.00	2.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.2	0.0	0.
713	3.300	30.40	3.15	5690.15	1729.94	5.99	7.41	0.00	8.48	0.00	2.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R	PERIP g/m ²
705	4.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	4.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
706	4.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	4.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
707	3.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	5.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
708	3.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
709	3.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
710	3.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
711	3.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
712	3.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
713	3.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT BAYOU LIBERTY WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 67 LIBERTY FROM BL07 TO TRIB 8 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO	BOD1	BOD2	EBOD1	EBOD2	ORG-N	NH3-N	NO3-N	PO4-P	CHL A	COLI	NCM
							mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	#/100mL	
714	UPR RCH	0.04317	30.40	3.15	5690.15	1729.94	5.99	7.41	0.00	8.48	0.00	2.23	0.00	0.00	0.00	10.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
714	3.30	3.20	0.04317	86.9	0.00039	2.99	163.50	2.14	52.12	11153.68	5212.00	111.54	29590.60	0.007	4.209	0.007

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

TOT
 AVG 0.0004 2.99 2.14 52.12 11153.68 5212.00 111.54

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR 1/da	BOD2 DECAT 1/da	BOD2 SETT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAT 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da				
714	3.200	7.38	0.52	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.33	0.33	0.33	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00			
AVG 20 DEG C RATE			0.43	0.08	0.02	0.00	0.00	0.00	0.00	0.00	0.17				0.03	0.02	0.00	0.00	0.10	0.00	0.00				0.00	0.00	0.00			
* g/m ² /d			** mg/L/day																											

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL		
714	3.200	30.40	3.18	5735.95	1745.24	6.04	7.23	0.00	8.30	0.00	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0
0.00																										

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT P/R 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
714	3.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20 DEG C RATE										0.000	0.000	0.000	0.000														

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT BAYOU LIBERTY WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 70 LIBERTY FROM TRIB 8 TO M1 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
721	UPR RCH	0.04317	30.40	3.18	5735.95	1745.24	6.04	7.23	0.00	8.30	0.00	2.22	0.00	0.00	0.00	10.00	0.00	0.00
721	TRIB	0.00029	30.40	3.19	5757.04	1752.31	6.06	6.93	0.00	8.00	0.00	2.15	0.00	0.00	0.00	10.00	0.00	0.00
723	WSTLD	0.00016	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
721	3.20	3.10	0.04346	86.3	0.00039	2.97	166.47	2.14	52.12	11153.68	5212.00	111.54	30211.80	0.008	4.297	0.008
722	3.10	3.00	0.04346	86.3	0.00039	2.97	169.44	2.14	52.12	11153.68	5212.00	111.54	30733.00	0.008	4.371	0.008
723	3.00	2.90	0.04363	86.4	0.00039	2.96	172.40	2.14	52.12	11153.68	5212.00	111.54	31254.20	0.008	4.446	0.008
724	2.90	2.80	0.04363	86.4	0.00039	2.96	175.36	2.14	52.12	11153.68	5212.00	111.54	31775.39	0.008	4.520	0.008

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

725	2.80	2.70	0.04363	86.4	0.00039	2.96	178.32	2.14	52.12	11153.68	5212.00	111.54	32296.59	0.008	4.594	0.008
726	2.70	2.60	0.04363	86.4	0.00039	2.96	181.27	2.14	52.12	11153.68	5212.00	111.54	32817.79	0.008	4.669	0.008
TOT						17.78					66922.09	31272.00				
AVG				0.0004				2.14	52.12			111.54				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECAT	BOD1 SETT	ABOD1 DECAT	BOD1 HYDR	BOD2 DECAT	BOD2 SETT	ABOD2 DECAT	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECAT	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECAT	NCM DECAT	NCM SETT
		mg/L	1/da	1/da	1/da	1/da	1/da	1/da	1/da	1/da	*	*	*	1/da	1/da	1/da	*	1/da	1/da	1/da	*	**	**	1/da	1/da	1/da
721	3.100	7.38	0.52	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.30	0.30	0.30	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.76	0.00	0.00	0.00	0.00
722	3.000	7.37	0.52	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.30	0.30	0.30	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.72	0.00	0.00	0.00	0.00
723	2.900	7.37	0.52	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.30	0.30	0.30	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.68	0.00	0.00	0.00	0.00
724	2.800	7.37	0.52	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.30	0.30	0.30	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.63	0.00	0.00	0.00	0.00
725	2.700	7.37	0.52	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.30	0.30	0.30	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.59	0.00	0.00	0.00	0.00
726	2.600	7.37	0.52	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.30	0.30	0.30	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.55	0.00	0.00	0.00	0.00
AVG 20	DEG C	RATE	0.43	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.16			0.03	0.00	0.00	0.00	0.10	0.00	0.00	0.00			0.00	0.00	0.00
*	g/m ² /d		**		mg/L/day																					

***** WATER QUALITY CONSTITUENT VALUES

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	
721	3.100	30.40	3.20	5781.28	1760.39	6.09	7.08	0.00	8.09	0.00	2.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.5	0.0	0.
722	3.000	30.40	3.23	5826.49	1775.50	6.13	6.96	0.00	7.91	0.00	2.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.9	0.0	0.
723	2.900	30.40	3.25	5871.34	1790.48	6.16	6.86	0.00	7.75	0.00	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.4	0.0	0.
724	2.800	30.40	3.28	5916.00	1805.40	6.19	6.77	0.00	7.61	0.00	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.9	0.0	0.
725	2.700	30.40	3.30	5960.31	1820.21	6.21	6.71	0.00	7.50	0.00	2.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.3	0.0	0.
726	2.600	30.40	3.33	6004.29	1834.91	6.23	6.67	0.00	7.40	0.00	1.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.8	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
721	3.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
722	3.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
723	2.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
724	2.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
725	2.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
726	2.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20	DEG C	RATE								0.000	0.000	0.000	0.000										0.000	0.000	0.000		

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT BAYOU LIBERTY
REACH NO. 72 LIBERTY FROM M1 TO M2

WATER QUALITY/HYDRAULIC MODEL FOR:
BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

***** REACH INPUTS

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
729	UPR RCH	0.04363	30.40	3.33	6004.29	1834.91	6.23	6.67	0.00	7.40	0.00	1.99	0.00	0.00	0.00	6.80	0.00	0.00
729	TRIB	0.00028	30.40	3.35	6036.46	1845.67	6.06	6.20	0.00	6.93	0.00	1.88	0.00	0.00	0.00	6.80	0.00	0.00

***** HYDRAULIC PARAMETER VALUES

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
729	2.60	2.50	0.04391	85.8	0.00036	3.19	184.46	2.14	56.54	12099.56	5654.00	121.00	34023.19	0.008	4.462	0.008
TOT AVG					0.0004	3.19		2.14	56.54	12099.56	5654.00	121.00				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECA	BOD1 SETT	ABOD1 DECA	BOD1 HYDR	BOD2 DECA	BOD2 SETT	ABOD2 DECA	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECA	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECA	NCM DECA	NCM SETT	
729	2.500	7.37	0.52	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.55	0.00	0.00	0.00	0.00	0.00
AVG 20	DEG C RATE	0.43	0.08	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.02	0.00	0.00	0.10	0.00	0.00	0.00			0.00	0.00	0.00	

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL	
729	2.500	30.40	3.35	6047.50	1849.34	6.26	6.65	0.00	7.38	0.00	1.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.8	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
729	2.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20	DEG C RATE									0.000	0.000	0.000	0.000										0.000	0.000	0.000		

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT BAYOU LIBERTY
REACH NO. 74 LIBERTY FROM M2 TO B PAQUET

WATER QUALITY/HYDRAULIC MODEL FOR:
BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS

ELEM	TYPE	FLOW	TEMP	SALN	COND	CL	DO	BOD1	BOD2	EBOD1	EBOD2	ORG-N	NH3-N	NO3-N	PO4-P	CHL A	COLI	NCM
------	------	------	------	------	------	----	----	------	------	-------	-------	-------	-------	-------	-------	-------	------	-----

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

NO.			deg C	ppt		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	#/100mL	
748	UPR RCH	0.04391	30.40	3.35	6047.50	1849.34	6.26	6.65	0.00	7.38	0.00	1.95	0.00	0.00	6.80	0.00	0.00
748	TRIB	0.00033	30.40	3.37	6085.53	1862.05	6.22	6.40	0.00	7.12	0.00	1.88	0.00	0.00	6.80	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
748	2.50	2.40	0.04424	85.3	0.00034	3.40	187.86	2.13	60.96	12984.48	6096.00	129.84	40392.79	0.009	4.919	0.009
749	2.40	2.30	0.04424	85.3	0.00034	3.40	191.26	2.13	60.96	12984.48	6096.00	129.84	41002.39	0.009	4.993	0.009
750	2.30	2.20	0.04424	85.3	0.00034	3.40	194.65	2.13	60.96	12984.48	6096.00	129.84	41612.00	0.009	5.067	0.009
751	2.20	2.10	0.04424	85.3	0.00034	3.40	198.05	2.13	60.96	12984.48	6096.00	129.84	42221.60	0.009	5.142	0.009
752	2.10	2.00	0.04424	85.3	0.00034	3.40	201.45	2.13	60.96	12984.48	6096.00	129.84	42831.20	0.009	5.216	0.009
753	2.00	1.90	0.04424	85.3	0.00034	3.40	204.84	2.13	60.96	12984.48	6096.00	129.84	43440.80	0.009	5.290	0.009
754	1.90	1.80	0.04424	85.3	0.00034	3.40	208.24	2.13	60.96	12984.48	6096.00	129.84	44050.40	0.010	5.365	0.010
755	1.80	1.70	0.04424	85.3	0.00034	3.40	211.64	2.13	60.96	12984.48	6096.00	129.84	44660.00	0.010	5.439	0.010
756	1.70	1.60	0.04424	85.3	0.00034	3.40	215.04	2.13	60.96	12984.48	6096.00	129.84	45269.61	0.010	5.513	0.010
757	1.60	1.50	0.04424	85.3	0.00034	3.40	218.43	2.13	60.96	12984.48	6096.00	129.84	45879.21	0.010	5.588	0.010
758	1.50	1.40	0.04424	85.3	0.00034	3.40	221.83	2.13	60.96	12984.48	6096.00	129.84	46488.81	0.010	5.662	0.010
759	1.40	1.30	0.04424	85.3	0.00034	3.40	225.23	2.13	60.96	12984.48	6096.00	129.84	47098.41	0.010	5.737	0.010
760	1.30	1.20	0.04424	85.3	0.00034	3.40	228.62	2.13	60.96	12984.48	6096.00	129.84	47708.01	0.010	5.811	0.010
761	1.20	1.10	0.04424	85.3	0.00034	3.40	232.02	2.13	60.96	12984.48	6096.00	129.84	48317.61	0.010	5.885	0.010
TOT						47.56				181782.75	85344.00					
AVG					0.0003			2.13	60.96			129.84				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECAT	BOD1 SETT	ABOD1 DECAT	BOD1 HYDR	BOD2 DECAT	BOD2 SETT	ABOD2 DECAT	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECAT	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECAT	NCM DECAT	NCM SETT		
748	2.400	7.37	0.52	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.55	0.00	0.00	0.00	0.00	0.00	
749	2.300	7.37	0.52	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.55	0.00	0.00	0.00	0.00	0.00	
750	2.200	7.37	0.52	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.55	0.00	0.00	0.00	0.00	0.00	
751	2.100	7.37	0.52	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.55	0.00	0.00	0.00	0.00	0.00	
752	2.000	7.37	0.52	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.55	0.00	0.00	0.00	0.00	0.00	
753	1.900	7.36	0.52	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.55	0.00	0.00	0.00	0.00	0.00	
754	1.800	7.36	0.52	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.55	0.00	0.00	0.00	0.00	0.00	
755	1.700	7.36	0.52	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.55	0.00	0.00	0.00	0.00	0.00	
756	1.600	7.36	0.52	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.55	0.00	0.00	0.00	0.00	0.00	
757	1.500	7.36	0.52	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.55	0.00	0.00	0.00	0.00	0.00	
758	1.400	7.36	0.52	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.55	0.00	0.00	0.00	0.00	0.00	
759	1.300	7.36	0.52	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.55	0.00	0.00	0.00	0.00	0.00	
760	1.200	7.36	0.52	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.55	0.00	0.00	0.00	0.00	0.00	
761	1.100	7.36	0.52	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.55	0.00	0.00	0.00	0.00	0.00	
AVG	20 DEG C	RATE	0.43	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.03	0.00	0.00	0.00	0.10	0.00	0.00	0.00			0.00	0.00	0.00	0.00	
*	g/m ² /d		**	mg/L/day																								

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	
748	2.400	30.40	3.38	6086.96	1862.53	6.28	6.59	0.00	7.32	0.00	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.8	0.0	0.	
749	2.300	30.40	3.40	6123.66	1874.79	6.30	6.59	0.00	7.31	0.00	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.8	0.0	0.	
0.00																									

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

750	2.200	30.40	3.42	6160.06	1886.96	6.33	6.59	0.00	7.32	0.00	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.8	0.0	0.	
751	2.100	30.40	3.44	6196.17	1899.02	6.35	6.60	0.00	7.33	0.00	1.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.8	0.0	0.
752	2.000	30.40	3.46	6232.00	1911.00	6.36	6.62	0.00	7.35	0.00	1.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.8	0.0	0.
753	1.900	30.40	3.48	6267.56	1922.88	6.38	6.65	0.00	7.38	0.00	1.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.8	0.0	0.
754	1.800	30.40	3.50	6302.85	1934.67	6.39	6.69	0.00	7.42	0.00	1.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.8	0.0	0.
755	1.700	30.40	3.52	6337.88	1946.37	6.40	6.74	0.00	7.47	0.00	1.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.8	0.0	0.
756	1.600	30.40	3.54	6372.64	1957.99	6.41	6.80	0.00	7.52	0.00	1.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.8	0.0	0.
757	1.500	30.40	3.55	6407.16	1969.52	6.42	6.86	0.00	7.59	0.00	1.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.8	0.0	0.
758	1.400	30.40	3.57	6441.43	1980.97	6.43	6.94	0.00	7.67	0.00	1.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.8	0.0	0.
759	1.300	30.40	3.59	6475.45	1992.34	6.44	7.02	0.00	7.75	0.00	1.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.8	0.0	0.
760	1.200	30.40	3.61	6509.24	2003.63	6.44	7.11	0.00	7.84	0.00	1.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.8	0.0	0.
761	1.100	30.40	3.63	6542.80	2014.84	6.45	7.22	0.00	7.94	0.00	1.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.8	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
748	2.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
749	2.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
750	2.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
751	2.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
752	2.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
753	1.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
754	1.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
755	1.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
756	1.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
757	1.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
758	1.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
759	1.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
760	1.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
761	1.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT BAYOU LIBERTY WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 90 LIBERTY FROM PAQUET TO BONFOUCA BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
888	UPR RCH	0.04424	30.40	3.63	6542.80	2014.84	6.45	7.22	0.00	7.94	0.00	1.81	0.00	0.00	0.00	6.80	0.00	0.00
888	TRIB	0.00684	30.40	3.64	6556.51	2019.36	6.40	8.05	0.00	8.78	0.00	2.00	0.00	0.00	0.00	6.80	0.00	0.00

***** HYDRAULIC PARAMETER VALUES

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
888	1.10	1.00	0.05109	84.5	0.00039	2.94	234.96	2.13	60.96	12984.48	6096.00	129.84	59525.01	0.013	7.251	0.013
889	1.00	0.90	0.05109	84.5	0.00039	2.94	237.90	2.13	60.96	12984.48	6096.00	129.84	60134.61	0.013	7.326	0.013
890	0.90	0.80	0.05109	84.5	0.00039	2.94	240.84	2.13	60.96	12984.48	6096.00	129.84	60744.21	0.013	7.400	0.013
891	0.80	0.70	0.05109	84.5	0.00039	2.94	243.79	2.13	60.96	12984.48	6096.00	129.84	61353.82	0.013	7.474	0.013
892	0.70	0.60	0.05109	84.5	0.00039	2.94	246.73	2.13	60.96	12984.48	6096.00	129.84	61963.42	0.013	7.549	0.013
893	0.60	0.50	0.05109	84.5	0.00039	2.94	249.67	2.13	60.96	12984.48	6096.00	129.84	62573.02	0.014	7.623	0.014
894	0.50	0.40	0.05109	84.5	0.00039	2.94	252.61	2.13	60.96	12984.48	6096.00	129.84	63182.62	0.014	7.697	0.014
895	0.40	0.30	0.05109	84.5	0.00039	2.94	255.55	2.13	60.96	12984.48	6096.00	129.84	63792.22	0.014	7.772	0.014
896	0.30	0.20	0.05109	84.5	0.00039	2.94	258.50	2.13	60.96	12984.48	6096.00	129.84	64401.82	0.014	7.846	0.014
897	0.20	0.10	0.05109	84.5	0.00039	2.94	261.44	2.13	60.96	12984.48	6096.00	129.84	65011.43	0.014	7.921	0.014
898	0.10	0.00	0.05109	84.5	0.00039	2.94	264.38	2.13	60.96	12984.48	6096.00	129.84	65621.02	0.014	7.995	0.014
TOT																
AVG					0.0004		32.36			142829.30	67056.00					
								2.13	60.96			129.84				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECA	BOD1 SETT	ABOD1 DECA	BOD1 HYDR	BOD2 DECA	BOD2 SETT	ABOD2 DECA	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECA	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECA	NCM DECA	NCM SETT		
888	1.000	7.36	0.52	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.55	0.00	0.00	0.00	0.00		
889	0.900	7.36	0.52	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.56	0.00	0.00	0.00	0.00		
890	0.800	7.36	0.52	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.56	0.00	0.00	0.00	0.00		
891	0.700	7.36	0.52	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.57	0.00	0.00	0.00	0.00		
892	0.600	7.36	0.52	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.57	0.00	0.00	0.00	0.00		
893	0.500	7.35	0.52	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.57	0.00	0.00	0.00	0.00		
894	0.400	7.35	0.52	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.58	0.00	0.00	0.00	0.00		
895	0.300	7.35	0.52	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.58	0.00	0.00	0.00	0.00		
896	0.200	7.35	0.52	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.59	0.00	0.00	0.00	0.00		
897	0.100	7.35	0.52	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.59	0.00	0.00	0.00	0.00		
898	0.000	7.35	0.52	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.60	0.00	0.00	0.00	0.00		
AVG 20 DEG C RATE			0.43	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.03	0.00	0.00	0.00	0.10	0.00	0.00	0.00			0.00	0.00	0.00		
*	g/m ² /d				**		mg/L/day																					

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO	BOD1	BOD2	EBOD1	EBOD2	ORG-N	NH3-N	NO3-N	TOT-N	EORG-N	ETOT-N	ORG-P	PO4-P	TOT-P	EORG-P	ETOT-P	CHL A	PERIP	COLI
888	1.000	30.40	3.65	6572.85	2024.89	6.46	7.32	0.00	8.05	0.00	1.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.9	0.0	0.
889	0.900	30.40	3.66	6604.35	2035.43	6.48	7.22	0.00	7.96	0.00	1.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.9	0.0	0.
890	0.800	30.40	3.68	6635.71	2045.93	6.50	7.13	0.00	7.87	0.00	1.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.0	0.0	0.
891	0.700	30.40	3.70	6666.92	2056.37	6.52	7.04	0.00	7.79	0.00	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.0	0.0	0.
892	0.600	30.40	3.72	6697.99	2066.77	6.54	6.96	0.00	7.71	0.00	1.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.1	0.0	0.
893	0.500	30.40	3.73	6728.90	2077.12	6.56	6.88	0.00	7.64	0.00	1.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.1	0.0	0.
894	0.400	30.40	3.75	6759.68	2087.42	6.59	6.80	0.00	7.57	0.00	1.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.2	0.0	0.
895	0.300	30.40	3.77	6790.32	2097.68	6.61	6.73	0.00	7.50	0.00	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.2	0.0	0.
896	0.200	30.40	3.79	6820.83	2107.88	6.63	6.66	0.00	7.44	0.00	1.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.3	0.0	0.

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

897	0.100	30.40	3.80	6851.19	2118.05	6.65	6.60	0.00	7.38	0.00	1.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.3	0.0	0.
898	0.000	30.40	3.82	6881.42	2128.17	6.67	6.54	0.00	7.33	0.00	1.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.4	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
888	1.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
889	0.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.9	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
890	0.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
891	0.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
892	0.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.1	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
893	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.1	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
894	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.2	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
895	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.2	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
896	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.3	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
897	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.3	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
898	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.4	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT TRIBUTARY 1 WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 39 TRIBUTARY 1 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
439	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	0.55	0.00	0.55	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.00
439	WSTLD	0.00000	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00	0.00	0.00
442	WSTLD	0.00000	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
439	2.40	2.30	0.00028	0.5	0.00567	0.20	0.20	0.05	1.00	5.01	100.12	0.05	0.00	0.000	0.000	0.006
440	2.30	2.20	0.00028	0.5	0.00567	0.20	0.41	0.05	1.00	5.01	100.12	0.05	0.00	0.000	0.000	0.006
441	2.20	2.10	0.00028	0.5	0.00567	0.20	0.61	0.05	1.00	5.01	100.12	0.05	0.00	0.000	0.000	0.006
442	2.10	2.00	0.00029	1.2	0.00569	0.20	0.82	0.05	1.00	5.04	100.34	0.05	0.00	0.000	0.000	0.006
443	2.00	1.90	0.00029	1.2	0.00569	0.20	1.02	0.05	1.00	5.04	100.34	0.05	0.00	0.000	0.000	0.006
444	1.90	1.80	0.00029	1.2	0.00569	0.20	1.22	0.05	1.00	5.04	100.34	0.05	0.00	0.000	0.000	0.006
445	1.80	1.70	0.00029	1.2	0.00569	0.20	1.43	0.05	1.00	5.04	100.34	0.05	0.00	0.000	0.000	0.006
446	1.70	1.60	0.00029	1.2	0.00569	0.20	1.63	0.05	1.00	5.04	100.34	0.05	0.00	0.000	0.000	0.006
447	1.60	1.50	0.00029	1.2	0.00569	0.20	1.83	0.05	1.00	5.04	100.34	0.05	0.00	0.000	0.000	0.006
448	1.50	1.40	0.00029	1.2	0.00569	0.20	2.04	0.05	1.00	5.04	100.34	0.05	0.00	0.000	0.000	0.006
449	1.40	1.30	0.00029	1.2	0.00569	0.20	2.24	0.05	1.00	5.04	100.34	0.05	0.00	0.000	0.000	0.006
450	1.30	1.20	0.00029	1.2	0.00569	0.20	2.44	0.05	1.00	5.04	100.34	0.05	0.00	0.000	0.000	0.006
451	1.20	1.10	0.00029	1.2	0.00569	0.20	2.65	0.05	1.00	5.04	100.34	0.05	0.00	0.000	0.000	0.006
452	1.10	1.00	0.00029	1.2	0.00569	0.20	2.85	0.05	1.00	5.04	100.34	0.05	0.00	0.000	0.000	0.006
453	1.00	0.90	0.00029	1.2	0.00569	0.20	3.06	0.05	1.00	5.04	100.34	0.05	0.00	0.000	0.000	0.006
454	0.90	0.80	0.00029	1.2	0.00569	0.20	3.26	0.05	1.00	5.04	100.34	0.05	0.00	0.000	0.000	0.006
455	0.80	0.70	0.00029	1.2	0.00569	0.20	3.46	0.05	1.00	5.04	100.34	0.05	0.00	0.000	0.000	0.006
456	0.70	0.60	0.00029	1.2	0.00569	0.20	3.67	0.05	1.00	5.04	100.34	0.05	0.00	0.000	0.000	0.006

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

457	0.60	0.50	0.00029	1.2	0.00569	0.20	3.87	0.05	1.00	5.04	100.34	0.05	0.00	0.000	0.000	0.006
458	0.50	0.40	0.00029	1.2	0.00569	0.20	4.07	0.05	1.00	5.04	100.34	0.05	0.00	0.000	0.000	0.006
459	0.40	0.30	0.00029	1.2	0.00569	0.20	4.28	0.05	1.00	5.04	100.34	0.05	0.00	0.000	0.000	0.006
460	0.30	0.20	0.00029	1.2	0.00569	0.20	4.48	0.05	1.00	5.04	100.34	0.05	0.00	0.000	0.000	0.006
461	0.20	0.10	0.00029	1.2	0.00569	0.20	4.68	0.05	1.00	5.04	100.34	0.05	0.00	0.000	0.000	0.006
462	0.10	0.00	0.00029	1.2	0.00569	0.20	4.89	0.05	1.00	5.04	100.34	0.05	0.00	0.000	0.000	0.006
TOT						4.89				120.83	2407.44					
AVG			0.0057					0.05	1.00							0.05

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECAT	BOD1 SETT	ABOD1 DECAT	BOD1 HYDR	BOD2 DECAT	BOD2 SETT	ABOD2 DECAT	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECAT	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECAT	NCM DECAT	NCM SETT
		mg/L	1/da	1/da	1/da	1/da	1/da	1/da	1/da	1/da	*	*	*	1/da	1/da	1/da	*	1/da	1/da	1/da	*	**	**	1/da	1/da	1/da
439	2.300	7.50	18.02	0.13	1.28	0.00	0.00	0.00	0.00	0.00	0.24	0.28	0.28	0.06	1.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
440	2.200	7.50	18.02	0.13	1.28	0.00	0.00	0.00	0.00	0.00	0.24	0.28	0.28	0.06	1.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
441	2.100	7.50	18.02	0.13	1.28	0.00	0.00	0.00	0.00	0.00	0.24	0.28	0.28	0.06	1.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
442	2.000	7.50	17.98	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.24	0.29	0.29	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
443	1.900	7.50	17.98	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.24	0.28	0.28	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
444	1.800	7.50	17.98	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.24	0.28	0.28	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
445	1.700	7.50	17.98	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.24	0.28	0.28	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
446	1.600	7.50	17.98	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.24	0.28	0.28	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
447	1.500	7.50	17.98	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.24	0.28	0.28	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
448	1.400	7.50	17.98	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.24	0.28	0.28	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
449	1.300	7.50	17.98	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.24	0.28	0.28	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
450	1.200	7.50	17.98	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.24	0.28	0.28	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
451	1.100	7.50	17.98	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.24	0.27	0.27	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
452	1.000	7.50	17.98	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.24	0.27	0.27	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
453	0.900	7.50	17.98	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.24	0.27	0.27	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
454	0.800	7.50	17.98	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.24	0.27	0.27	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
455	0.700	7.50	17.98	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.24	0.27	0.27	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
456	0.600	7.50	17.98	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.24	0.27	0.27	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
457	0.500	7.50	17.98	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.24	0.27	0.27	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
458	0.400	7.50	17.98	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.24	0.27	0.27	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
459	0.300	7.50	17.98	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.24	0.27	0.27	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
460	0.200	7.50	17.98	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.24	0.27	0.27	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
461	0.100	7.50	17.98	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.24	0.27	0.27	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
462	0.000	7.50	17.98	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.24	0.27	0.27	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			14.85	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.12			0.03	0.04	0.00	0.00	0.10	0.00	0.00	0.00			0.00	0.00	0.00
* g/m ² /d			** mg/L/day																							

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	
439	2.300	30.40	0.26	521.96	7.49	6.92	0.62	0.00	0.62	0.00	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
440	2.200	30.40	0.26	521.96	7.49	7.13	0.60	0.00	0.60	0.00	0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
441	2.100	30.40	0.26	521.96	7.49	7.17	0.58	0.00	0.58	0.00	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
442	2.000	30.40	0.26	523.66	7.90	7.16	0.70	0.00	0.70	0.00	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
443	1.900	30.40	0.26	523.66	7.90	7.17	0.66	0.00	0.66	0.00	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
444	1.800	30.40	0.26	523.66	7.90	7.18	0.63	0.00	0.63	0.00	0.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
445	1.700	30.40	0.26	523.66	7.90	7.18	0.60	0.00	0.60	0.00	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT DRAINAGE DITCH 22
REACH NO. 41 DD22

WATER QUALITY/HYDRAULIC MODEL FOR:
BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
470	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	0.55	0.00	0.55	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.00
470	WSTLD	0.01512	30.00	0.55	1053.00	150.00	2.00	11.50	0.00	11.50	0.00	8.60	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
470	0.30	0.20	0.01540	98.2	0.02203	0.05	0.05	0.21	3.32	69.88	331.60	0.70	0.00	0.000	0.000	0.022
471	0.20	0.10	0.01540	98.2	0.02203	0.05	0.11	0.21	3.32	69.88	331.60	0.70	0.00	0.000	0.000	0.022
472	0.10	0.00	0.01540	98.2	0.02203	0.05	0.16	0.21	3.32	69.88	331.60	0.70	0.00	0.000	0.000	0.022
TOT AVG					0.0220	0.16		0.21	3.32	209.64	994.80	0.70				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT DECAT 1/da	ABOD1 1/da	BOD1 HYDR DECAT 1/da	BOD2 DECAT 1/da	ABOD2 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT DECAT 1/da	NH3-N DECAT 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da	
470	0.200	7.48	5.62	0.13	0.30	0.00	0.00	0.00	0.00	0.24	0.95	0.95	0.05	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
471	0.100	7.48	5.62	0.13	0.30	0.00	0.00	0.00	0.00	0.24	0.93	0.93	0.05	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
472	0.000	7.48	5.62	0.13	0.30	0.00	0.00	0.00	0.00	0.24	0.92	0.92	0.06	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20	DEG C RATE	4.64	0.08	0.08	0.00	0.00	0.00	0.00	0.00	0.12			0.03	0.08	0.00	0.00	0.10	0.00	0.00	0.00			0.00	0.00	0.00	
*	g/m²/d	**	mg/L/day																							

***** WATER QUALITY CONSTITUENT VALUES

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL
470	0.200	30.40	0.54	1043.22	147.38	3.05	11.05	0.00	11.05	0.00	8.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
471	0.100	30.40	0.54	1043.22	147.38	3.81	10.81	0.00	10.81	0.00	8.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
472	0.000	30.40	0.54	1043.22	147.38	4.40	10.57	0.00	10.57	0.00	7.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

	mg/L	1/da	1/da	1/da	1/da	1/da	1/da	1/da	1/da	*	*	*	1/da	1/da	1/da	*	1/da	1/da	1/da	*	**	**	1/da	1/da	1/da
482	2.600	7.49	14.85	0.13	1.03	0.00	0.00	0.00	0.00	0.24	0.82	0.82	0.06	1.03	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00
483	2.500	7.49	14.85	0.13	1.03	0.00	0.00	0.00	0.00	0.24	0.73	0.73	0.06	1.03	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00
484	2.400	7.49	14.85	0.13	1.03	0.00	0.00	0.00	0.00	0.24	0.66	0.66	0.06	1.03	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
485	2.300	7.49	14.85	0.13	1.03	0.00	0.00	0.00	0.00	0.24	0.60	0.60	0.06	1.03	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.00	0.00	0.00
486	2.200	7.49	14.85	0.13	1.03	0.00	0.00	0.00	0.00	0.24	0.54	0.54	0.06	1.03	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.00	0.00	0.00
487	2.100	7.49	14.85	0.13	1.03	0.00	0.00	0.00	0.00	0.24	0.50	0.50	0.06	1.03	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.00	0.00	0.00
488	2.000	7.49	14.85	0.13	1.03	0.00	0.00	0.00	0.00	0.24	0.46	0.46	0.06	1.03	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.00	0.00	0.00	0.00
489	1.900	7.49	14.85	0.13	1.03	0.00	0.00	0.00	0.00	0.24	0.43	0.43	0.06	1.03	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.00	0.00	0.00	0.00
490	1.800	7.49	14.85	0.13	1.03	0.00	0.00	0.00	0.00	0.24	0.40	0.40	0.06	1.03	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.00	0.00	0.00	0.00
491	1.700	7.49	14.85	0.13	1.03	0.00	0.00	0.00	0.00	0.24	0.38	0.38	0.06	1.03	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.00	0.00	0.00	0.00
492	1.600	7.49	14.85	0.13	1.03	0.00	0.00	0.00	0.00	0.24	0.36	0.36	0.06	1.03	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.00	0.00	0.00	0.00
493	1.500	7.49	14.85	0.13	1.03	0.00	0.00	0.00	0.00	0.24	0.35	0.35	0.06	1.03	0.00	0.00	0.00	0.00	0.00	0.00	0.36	0.00	0.00	0.00	0.00
494	1.400	7.49	13.31	0.13	0.91	0.00	0.00	0.00	0.00	0.24	0.69	0.69	0.06	0.91	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.00	0.00	0.00	0.00
495	1.300	7.49	13.03	0.13	0.88	0.00	0.00	0.00	0.00	0.24	0.69	0.69	0.06	0.88	0.00	0.00	0.00	0.00	0.00	0.00	0.42	0.00	0.00	0.00	0.00
496	1.200	7.49	13.03	0.13	0.88	0.00	0.00	0.00	0.00	0.24	0.64	0.64	0.06	0.88	0.00	0.00	0.00	0.00	0.00	0.00	0.45	0.00	0.00	0.00	0.00
497	1.100	7.49	13.03	0.13	0.88	0.00	0.00	0.00	0.00	0.24	0.59	0.59	0.06	0.88	0.00	0.00	0.00	0.00	0.00	0.00	0.48	0.00	0.00	0.00	0.00
498	1.000	7.49	7.72	0.13	0.47	0.00	0.00	0.00	0.00	0.24	0.88	0.88	0.06	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.51	0.00	0.00	0.00	0.00
499	0.900	7.49	7.72	0.13	0.47	0.00	0.00	0.00	0.00	0.24	0.85	0.85	0.06	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.54	0.00	0.00	0.00	0.00
500	0.800	7.49	7.72	0.13	0.47	0.00	0.00	0.00	0.00	0.24	0.83	0.83	0.06	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.57	0.00	0.00	0.00	0.00
501	0.700	7.49	7.72	0.13	0.47	0.00	0.00	0.00	0.00	0.24	0.80	0.80	0.06	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.60	0.00	0.00	0.00	0.00
502	0.600	7.49	7.72	0.13	0.47	0.00	0.00	0.00	0.00	0.24	0.78	0.78	0.06	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.63	0.00	0.00	0.00	0.00
503	0.500	7.49	7.72	0.13	0.47	0.00	0.00	0.00	0.00	0.24	0.75	0.75	0.06	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.66	0.00	0.00	0.00	0.00
504	0.400	7.49	7.72	0.13	0.47	0.00	0.00	0.00	0.00	0.24	0.73	0.73	0.06	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.69	0.00	0.00	0.00	0.00
505	0.300	7.49	7.72	0.13	0.47	0.00	0.00	0.00	0.00	0.24	0.71	0.71	0.06	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.72	0.00	0.00	0.00	0.00
506	0.200	7.49	7.72	0.13	0.47	0.00	0.00	0.00	0.00	0.24	0.69	0.69	0.06	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.00	0.00	0.00	0.00
507	0.100	7.49	7.72	0.13	0.47	0.00	0.00	0.00	0.00	0.24	0.67	0.67	0.06	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.78	0.00	0.00	0.00	0.00
508	0.000	7.49	7.72	0.13	0.47	0.00	0.00	0.00	0.00	0.24	0.65	0.65	0.06	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE	9.65	0.08	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.12				0.03	0.02	0.00	0.00	0.10	0.00	0.00		0.00	0.00	0.00	0.00

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL
482	2.600	30.40	0.32	627.10	32.82	5.82	9.12	0.00	9.16	0.00	8.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.4	0.0	0.
483	2.500	30.40	0.32	627.10	32.82	6.38	7.72	0.00	7.80	0.00	7.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.7	0.0	0.
484	2.400	30.40	0.32	627.10	32.82	6.61	6.55	0.00	6.66	0.00	6.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.1	0.0	0.
485	2.300	30.40	0.32	627.10	32.82	6.74	5.56	0.00	5.72	0.00	5.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.5	0.0	0.
486	2.200	30.40	0.32	627.10	32.82	6.82	4.73	0.00	4.93	0.00	4.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.9	0.0	0.
487	2.100	30.40	0.32	627.10	32.82	6.89	4.04	0.00	4.27	0.00	3.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.2	0.0	0.
488	2.000	30.40	0.32	627.10	32.82	6.94	3.45	0.00	3.73	0.00	3.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.6	0.0	0.
489	1.900	30.40	0.32	627.10	32.82	6.99	2.97	0.00	3.28	0.00	2.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.0	0.0	0.
490	1.800	30.40	0.32	627.10	32.82	7.03	2.56	0.00	2.91	0.00	2.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.3	0.0	0.
491	1.700	30.40	0.32	627.10	32.82	7.06	2.21	0.00	2.61	0.00	2.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.7	0.0	0.
492	1.600	30.40	0.32	627.10	32.82	7.09	1.92	0.00	2.36	0.00	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.1	0.0	0.
493	1.500	30.40	0.32	627.10	32.82	7.11	1.68	0.00	2.16	0.00	1.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.4	0.0	0.
494	1.400	30.40	0.34	664.56	41.85	6.32	6.99	0.00	7.50	0.00	6.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.8	0.0	0.
495	1.300	30.40	0.34	670.29	43.23	6.47	7.04	0.00	7.60	0.00	6.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.2	0.0	0.

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
536	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	0.55	0.00	0.55	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.00
536	WSTLD	0.00016	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00	0.00	0.00
544	WSTLD	0.00043	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00	0.00	0.00
546	WSTLD	0.00000	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00	0.00	0.00
548	WSTLD	0.00008	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00	0.00	0.00
550	WSTLD	0.00002	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00	0.00	0.00
551	WSTLD	0.00001	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00	0.00	0.00
552	WSTLD	0.00000	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00	0.00	0.00
553	WSTLD	0.00001	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00	0.00	0.00
555	WSTLD	0.00003	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00	0.00	0.00
556	WSTLD	0.00001	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00	0.00	0.00
557	WSTLD	0.00008	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
536	2.30	2.20	0.00044	35.9	0.00659	0.18	0.18	0.06	1.14	6.71	114.27	0.07	0.00	0.000	0.000	0.007
537	2.20	2.10	0.00044	35.9	0.00659	0.18	0.35	0.06	1.14	6.71	114.27	0.07	0.00	0.000	0.000	0.007
538	2.10	2.00	0.00044	35.9	0.00659	0.18	0.53	0.06	1.14	6.71	114.27	0.07	0.00	0.000	0.000	0.007
539	2.00	1.90	0.00044	35.9	0.00659	0.18	0.70	0.06	1.14	6.71	114.27	0.07	0.00	0.000	0.000	0.007
540	1.90	1.80	0.00044	35.9	0.00659	0.18	0.88	0.06	1.14	6.71	114.27	0.07	0.00	0.000	0.000	0.007
541	1.80	1.70	0.00044	35.9	0.00659	0.18	1.05	0.06	1.14	6.71	114.27	0.07	0.00	0.000	0.000	0.007
542	1.70	1.60	0.00044	35.9	0.00659	0.18	1.23	0.06	1.14	6.71	114.27	0.07	0.00	0.000	0.000	0.007
543	1.60	1.50	0.00044	35.9	0.00659	0.18	1.41	0.06	1.14	6.71	114.27	0.07	0.00	0.000	0.000	0.007
544	1.50	1.40	0.00087	67.6	0.00830	0.14	1.54	0.07	1.40	10.51	140.18	0.11	0.00	0.000	0.000	0.008
545	1.40	1.30	0.00087	67.6	0.00830	0.14	1.68	0.07	1.40	10.51	140.18	0.11	0.00	0.000	0.000	0.008
546	1.30	1.20	0.00088	67.7	0.00831	0.14	1.82	0.08	1.40	10.53	140.28	0.11	0.00	0.000	0.000	0.008
547	1.20	1.10	0.00088	67.7	0.00831	0.14	1.96	0.08	1.40	10.53	140.28	0.11	0.00	0.000	0.000	0.008
548	1.10	1.00	0.00095	70.2	0.00855	0.14	2.10	0.08	1.44	11.12	143.78	0.11	0.00	0.000	0.000	0.009
549	1.00	0.90	0.00095	70.2	0.00855	0.14	2.23	0.08	1.44	11.12	143.78	0.11	0.00	0.000	0.000	0.009
550	0.90	0.80	0.00097	70.7	0.00860	0.13	2.37	0.08	1.45	11.24	144.52	0.11	0.00	0.000	0.000	0.009
551	0.80	0.70	0.00097	70.9	0.00862	0.13	2.50	0.08	1.45	11.30	144.86	0.11	0.00	0.000	0.000	0.009
552	0.70	0.60	0.00098	71.0	0.00863	0.13	2.64	0.08	1.45	11.32	144.96	0.11	0.00	0.000	0.000	0.009
553	0.60	0.50	0.00099	71.4	0.00866	0.13	2.77	0.08	1.45	11.41	145.49	0.11	0.00	0.000	0.000	0.009
554	0.50	0.40	0.00099	71.4	0.00866	0.13	2.90	0.08	1.45	11.41	145.49	0.11	0.00	0.000	0.000	0.009
555	0.40	0.30	0.00102	72.2	0.00875	0.13	3.04	0.08	1.47	11.64	146.85	0.12	0.00	0.000	0.000	0.009
556	0.30	0.20	0.00102	72.4	0.00877	0.13	3.17	0.08	1.47	11.69	147.08	0.12	0.00	0.000	0.000	0.009
557	0.20	0.10	0.00110	74.3	0.00899	0.13	3.30	0.08	1.50	12.26	150.30	0.12	0.00	0.000	0.000	0.009
558	0.10	0.00	0.00110	74.3	0.00899	0.13	3.43	0.08	1.50	12.26	150.30	0.12	0.00	0.000	0.000	0.009
TOT						3.43				222.48	3082.49					
AVG					0.0078			0.07	1.34			0.10				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECAY	BOD1 SETT	ABOD1 DECAY	BOD1 HYDR	BOD2 DECAY	BOD2 SETT	ABOD2 DECAY	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECAY	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECAY	NCM DECAY	NCM SETT
536	2.200	7.49	15.65	0.13	1.09	0.00	0.00	0.00	0.00	0.00	0.24	0.70	0.70	0.06	1.09	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00
537	2.100	7.49	15.65	0.13	1.09	0.00	0.00	0.00	0.00	0.00	0.24	0.62	0.62	0.06	1.09	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00
538	2.000	7.49	15.65	0.13	1.09	0.00	0.00	0.00	0.00	0.00	0.24	0.56	0.56	0.06	1.09	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.00
539	1.900	7.49	15.65	0.13	1.09	0.00	0.00	0.00	0.00	0.00	0.24	0.51	0.51	0.06	1.09	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.00
540	1.800	7.49	15.65	0.13	1.09	0.00	0.00	0.00	0.00	0.00	0.24	0.47	0.47	0.06	1.09	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.00	0.00	0.00
541	1.700	7.49	15.65	0.13	1.09	0.00	0.00	0.00	0.00	0.00	0.24	0.43	0.43	0.06	1.09	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.00	0.00	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

542	1.600	7.49	15.65	0.13	1.09	0.00	0.00	0.00	0.00	0.00	0.24	0.40	0.40	0.06	1.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.00
543	1.500	7.49	15.65	0.13	1.09	0.00	0.00	0.00	0.00	0.00	0.24	0.38	0.38	0.06	1.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.00	0.00	0.00	0.00
544	1.400	7.49	12.64	0.13	0.85	0.00	0.00	0.00	0.00	0.00	0.24	0.94	0.94	0.06	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.00	0.00	0.00	0.00
545	1.300	7.49	12.64	0.13	0.85	0.00	0.00	0.00	0.00	0.00	0.24	0.86	0.86	0.06	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35	0.00	0.00	0.00	0.00
546	1.200	7.49	12.63	0.13	0.85	0.00	0.00	0.00	0.00	0.00	0.24	0.79	0.79	0.06	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.00	0.00	0.00	0.00
547	1.100	7.49	12.63	0.13	0.85	0.00	0.00	0.00	0.00	0.00	0.24	0.73	0.73	0.06	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42	0.00	0.00	0.00	0.00
548	1.000	7.49	12.31	0.13	0.83	0.00	0.00	0.00	0.00	0.00	0.24	0.74	0.74	0.06	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46	0.00	0.00	0.00	0.00
549	0.900	7.49	12.31	0.13	0.83	0.00	0.00	0.00	0.00	0.00	0.24	0.69	0.69	0.06	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.49	0.00	0.00	0.00	0.00
550	0.800	7.49	12.25	0.13	0.82	0.00	0.00	0.00	0.00	0.00	0.24	0.66	0.66	0.06	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.53	0.00	0.00	0.00	0.00
551	0.700	7.49	12.22	0.13	0.82	0.00	0.00	0.00	0.00	0.00	0.24	0.62	0.62	0.06	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56	0.00	0.00	0.00	0.00
552	0.600	7.49	12.21	0.13	0.82	0.00	0.00	0.00	0.00	0.00	0.24	0.58	0.58	0.06	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.60	0.00	0.00	0.00	0.00
553	0.500	7.49	12.17	0.13	0.82	0.00	0.00	0.00	0.00	0.00	0.24	0.56	0.56	0.06	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.63	0.00	0.00	0.00	0.00
554	0.400	7.49	12.17	0.13	0.82	0.00	0.00	0.00	0.00	0.00	0.24	0.52	0.52	0.06	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67	0.00	0.00	0.00	0.00
555	0.300	7.49	12.05	0.13	0.81	0.00	0.00	0.00	0.00	0.00	0.24	0.53	0.53	0.06	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.70	0.00	0.00	0.00	0.00
556	0.200	7.49	12.03	0.13	0.81	0.00	0.00	0.00	0.00	0.00	0.24	0.50	0.50	0.06	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.74	0.00	0.00	0.00	0.00
557	0.100	7.49	11.77	0.13	0.78	0.00	0.00	0.00	0.00	0.00	0.24	0.55	0.55	0.06	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.77	0.00	0.00	0.00	0.00
558	0.000	7.49	11.77	0.13	0.78	0.00	0.00	0.00	0.00	0.00	0.24	0.52	0.52	0.06	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00

AVG 20 DEG C RATE 11.09 0.08 0.03 0.00 0.00 0.00 0.00 0.00 0.00 0.12 0.03 0.03 0.00 0.00 0.10 0.00 0.00 0.00 0.00 0.00 0.00 0.00

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL
536	2.200	30.40	0.31	604.54	27.38	6.08	7.18	0.00	7.22	0.00	13.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.4	0.0	0.
537	2.100	30.40	0.31	604.54	27.38	6.55	5.99	0.00	6.08	0.00	10.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.9	0.0	0.
538	2.000	30.40	0.31	604.54	27.38	6.74	5.01	0.00	5.15	0.00	9.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.3	0.0	0.
539	1.900	30.40	0.31	604.54	27.38	6.85	4.21	0.00	4.40	0.00	7.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.7	0.0	0.
540	1.800	30.40	0.31	604.54	27.38	6.92	3.55	0.00	3.78	0.00	6.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.2	0.0	0.
541	1.700	30.40	0.31	604.54	27.38	6.97	3.00	0.00	3.28	0.00	5.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.6	0.0	0.
542	1.600	30.40	0.31	604.54	27.38	7.02	2.55	0.00	2.88	0.00	4.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.0	0.0	0.
543	1.500	30.40	0.31	604.54	27.38	7.05	2.18	0.00	2.55	0.00	3.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.5	0.0	0.
544	1.400	30.40	0.35	678.17	45.12	5.70	11.01	0.00	11.42	0.00	11.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.9	0.0	0.
545	1.300	30.40	0.35	678.17	45.12	6.19	9.72	0.00	10.19	0.00	9.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.3	0.0	0.
546	1.200	30.40	0.35	678.35	45.17	6.42	8.63	0.00	9.14	0.00	8.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.8	0.0	0.
547	1.100	30.40	0.35	678.35	45.17	6.56	7.63	0.00	8.19	0.00	7.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.2	0.0	0.
548	1.000	30.40	0.35	684.29	46.60	6.46	7.87	0.00	8.47	0.00	9.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.7	0.0	0.
549	0.900	30.40	0.35	684.29	46.60	6.61	7.01	0.00	7.66	0.00	8.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.1	0.0	0.
550	0.800	30.40	0.35	685.46	46.88	6.66	6.49	0.00	7.19	0.00	8.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.5	0.0	0.
551	0.700	30.40	0.35	685.99	47.01	6.73	5.91	0.00	6.65	0.00	7.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.0	0.0	0.
552	0.600	30.40	0.35	686.14	47.05	6.79	5.32	0.00	6.10	0.00	6.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.4	0.0	0.
553	0.500	30.40	0.35	686.96	47.24	6.82	4.95	0.00	5.78	0.00	6.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.8	0.0	0.
554	0.400	30.40	0.35	686.96	47.24	6.88	4.43	0.00	5.31	0.00	5.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.3	0.0	0.
555	0.300	30.40	0.35	689.00	47.73	6.85	4.49	0.00	5.42	0.00	6.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.7	0.0	0.

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

556	0.200	30.40	0.35	689.34	47.82	6.90	4.12	0.00	5.09	0.00	5.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.1	0.0	0.0
557	0.100	30.40	0.36	693.81	48.89	6.76	4.89	0.00	5.92	0.00	7.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.6	0.0	0.0
558	0.000	30.40	0.36	693.81	48.89	6.86	4.41	0.00	5.48	0.00	6.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
536	2.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
537	2.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
538	2.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
539	1.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
540	1.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
541	1.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
542	1.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
543	1.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
544	1.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
545	1.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	4.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
546	1.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	4.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
547	1.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	5.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
548	1.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	5.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
549	0.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
550	0.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
551	0.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
552	0.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
553	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
554	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
555	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
556	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
557	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
558	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT DRAINAGE DITCH 18
REACH NO. 49 DD18

WATER QUALITY/HYDRAULIC MODEL FOR:
BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
576	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	1.71	0.00	1.71	0.00	0.78	0.00	0.00	0.00	0.00	0.00	0.00
576	WSTLD	0.00009	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
576	0.30	0.20	0.00037	23.6	0.00621	0.19	0.19	0.06	1.08	5.97	108.40	0.06	0.00	0.000	0.000	0.006
577	0.20	0.10	0.00037	23.6	0.00621	0.19	0.37	0.06	1.08	5.97	108.40	0.06	0.00	0.000	0.000	0.006
578	0.10	0.00	0.00037	23.6	0.00621	0.19	0.56	0.06	1.08	5.97	108.40	0.06	0.00	0.000	0.000	0.006
TOT						0.56				17.92	325.21					

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

AVG 0.0062 0.06 1.08 0.06

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECAT	BOD1 SETT	ABOD1 DECAT	BOD1 HYDR	BOD2 DECAT	BOD2 SETT	ABOD2 DECAT	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECAT	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECAT	NCM DECAT	NCM SETT	
		mg/L	1/da	1/da	1/da	1/da	1/da	1/da	1/da	1/da	*	*	*	1/da	1/da	1/da	*	1/da	1/da	1/da	*	**	**	1/da	1/da	1/da	
576	0.200	7.49	16.55	0.13	1.16	0.00	0.00	0.00	0.00	0.00	0.75	1.11	1.11	0.06	1.16	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	
577	0.100	7.49	16.55	0.13	1.16	0.00	0.00	0.00	0.00	0.00	0.75	1.06	1.06	0.06	1.16	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00	
578	0.000	7.49	16.55	0.13	1.16	0.00	0.00	0.00	0.00	0.00	0.75	1.02	1.02	0.06	1.16	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00	
AVG 20 DEG C RATE		13.66	0.08	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.39				0.03	0.30	0.00	0.00	0.10	0.00	0.00				0.00	0.00	0.00
* g/m ² /d		** mg/L/day																									

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	
576	0.200	30.40	0.29	575.90	20.48	5.92	5.72	0.00	5.83	0.00	8.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.1	0.0	0.
577	0.100	30.40	0.29	575.90	20.48	6.19	4.90	0.00	5.12	0.00	7.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.1	0.0	0.
578	0.000	30.40	0.29	575.90	20.48	6.30	4.23	0.00	4.57	0.00	6.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
576	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
577	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
578	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20 DEG C RATE							0.000	0.000	0.000	0.000																	

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT DRAINAGE DITCH 19
 REACH NO. 51 DD19

WATER QUALITY/HYDRAULIC MODEL FOR:
 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
585	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	1.71	0.00	1.71	0.00	0.78	0.00	0.00	0.00	0.00	0.00	0.00
585	WSTLD	0.00048	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
----------	---------------	----------------	------------------------	---------	-----------------	------------------	---------------	---------	---------	-----------------------	-----------------------------	----------------------------	----------------------------	----------------	---------------------------	---------------

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

585	1.40	1.30	0.00076	62.7	0.00792	0.15	0.15	0.07	1.34	9.59	134.44	0.10	0.00	0.000	0.000	0.008
586	1.30	1.20	0.00076	62.7	0.00792	0.15	0.29	0.07	1.34	9.59	134.44	0.10	0.00	0.000	0.000	0.008
587	1.20	1.10	0.00076	62.7	0.00792	0.15	0.44	0.07	1.34	9.59	134.44	0.10	0.00	0.000	0.000	0.008
588	1.10	1.00	0.00076	62.7	0.00792	0.15	0.58	0.07	1.34	9.59	134.44	0.10	0.00	0.000	0.000	0.008
589	1.00	0.90	0.00076	62.7	0.00792	0.15	0.73	0.07	1.34	9.59	134.44	0.10	0.00	0.000	0.000	0.008
590	0.90	0.80	0.00076	62.7	0.00792	0.15	0.88	0.07	1.34	9.59	134.44	0.10	0.00	0.000	0.000	0.008
591	0.80	0.70	0.00076	62.7	0.00792	0.15	1.02	0.07	1.34	9.59	134.44	0.10	0.00	0.000	0.000	0.008
592	0.70	0.60	0.00076	62.7	0.00792	0.15	1.17	0.07	1.34	9.59	134.44	0.10	0.00	0.000	0.000	0.008
593	0.60	0.50	0.00076	62.7	0.00792	0.15	1.32	0.07	1.34	9.59	134.44	0.10	0.00	0.000	0.000	0.008
594	0.50	0.40	0.00076	62.7	0.00792	0.15	1.46	0.07	1.34	9.59	134.44	0.10	0.00	0.000	0.000	0.008
595	0.40	0.30	0.00076	62.7	0.00792	0.15	1.61	0.07	1.34	9.59	134.44	0.10	0.00	0.000	0.000	0.008
596	0.30	0.20	0.00076	62.7	0.00792	0.15	1.75	0.07	1.34	9.59	134.44	0.10	0.00	0.000	0.000	0.008
597	0.20	0.10	0.00076	62.7	0.00792	0.15	1.90	0.07	1.34	9.59	134.44	0.10	0.00	0.000	0.000	0.008
598	0.10	0.00	0.00076	62.7	0.00792	0.15	2.05	0.07	1.34	9.59	134.44	0.10	0.00	0.000	0.000	0.008
TOT						2.05				134.24	1882.09					
AVG			0.0079					0.07	1.34			0.10				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECA	BOD1 SETT	ABOD1 DECA	BOD1 HYDR	BOD2 DECA	BOD2 SETT	ABOD2 DECA	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECA	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECA	NCM DECA	NCM SETT	
		mg/L	1/da	1/da	1/da	1/da	1/da	1/da	1/da	1/da	*	*	*	1/da	1/da	1/da	*	1/da	1/da	1/da	*	**	**	1/da	1/da	1/da	
585	1.300	7.49	13.20	0.13	0.90	0.00	0.00	0.00	0.00	0.00	0.75	1.60	1.60	0.06	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	
586	1.200	7.49	13.20	0.13	0.90	0.00	0.00	0.00	0.00	0.00	0.75	1.49	1.49	0.06	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	
587	1.100	7.49	13.20	0.13	0.90	0.00	0.00	0.00	0.00	0.00	0.75	1.41	1.41	0.06	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	
588	1.000	7.49	13.20	0.13	0.90	0.00	0.00	0.00	0.00	0.00	0.75	1.33	1.33	0.06	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	
589	0.900	7.49	13.20	0.13	0.90	0.00	0.00	0.00	0.00	0.00	0.75	1.26	1.26	0.06	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	
590	0.800	7.49	13.20	0.13	0.90	0.00	0.00	0.00	0.00	0.00	0.75	1.21	1.21	0.06	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.00	
591	0.700	7.49	13.20	0.13	0.90	0.00	0.00	0.00	0.00	0.00	0.75	1.16	1.16	0.06	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00	
592	0.600	7.49	13.20	0.13	0.90	0.00	0.00	0.00	0.00	0.00	0.75	1.11	1.11	0.06	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.00	0.00	0.00	
593	0.500	7.49	13.20	0.13	0.90	0.00	0.00	0.00	0.00	0.00	0.75	1.08	1.08	0.06	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00	
594	0.400	7.49	13.20	0.13	0.90	0.00	0.00	0.00	0.00	0.00	0.75	1.04	1.04	0.06	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.00	0.00	0.00	
595	0.300	7.49	13.20	0.13	0.90	0.00	0.00	0.00	0.00	0.00	0.75	1.01	1.01	0.06	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00	
596	0.200	7.49	13.20	0.13	0.90	0.00	0.00	0.00	0.00	0.00	0.75	0.99	0.99	0.06	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.00	0.00	0.00	0.00	
597	0.100	7.49	13.20	0.13	0.90	0.00	0.00	0.00	0.00	0.00	0.75	0.97	0.97	0.06	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.00	0.00	0.00	0.00	
598	0.000	7.49	13.20	0.13	0.90	0.00	0.00	0.00	0.00	0.00	0.75	0.95	0.95	0.06	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00	
AVG 20 DEG C RATE			10.90	0.08	0.05	0.00	0.00	0.00	0.00	0.00	0.39			0.03	0.05	0.00	0.00	0.10	0.00	0.00				0.00	0.00	0.00	
* g/m ² /d				** mg/L/day																							

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	
585	1.300	30.40	0.34	666.88	42.40	4.89	13.26	0.00	13.28	0.00	12.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.2	0.0	0.
586	1.200	30.40	0.34	666.88	42.40	5.45	11.68	0.00	11.73	0.00	10.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.5	0.0	0.
587	1.100	30.40	0.34	666.88	42.40	5.72	10.31	0.00	10.39	0.00	9.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.7	0.0	0.
588	1.000	30.40	0.34	666.88	42.40	5.88	9.12	0.00	9.22	0.00	8.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.9	0.0	0.
589	0.900	30.40	0.34	666.88	42.40	5.99	8.09	0.00	8.21	0.00	7.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.1	0.0	0.
590	0.800	30.40	0.34	666.88	42.40	6.07	7.19	0.00	7.33	0.00	6.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.4	0.0	0.
591	0.700	30.40	0.34	666.88	42.40	6.15	6.40	0.00	6.57	0.00	5.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.6	0.0	0.
592	0.600	30.40	0.34	666.88	42.40	6.21	5.72	0.00	5.92	0.00	5.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.8	0.0	0.

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

593	0.500	30.40	0.34	666.88	42.40	6.26	5.13	0.00	5.35	0.00	4.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.1	0.0	0.	
594	0.400	30.40	0.34	666.88	42.40	6.31	4.62	0.00	4.86	0.00	4.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.3	0.0	0.
595	0.300	30.40	0.34	666.88	42.40	6.35	4.17	0.00	4.44	0.00	3.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.5	0.0	0.
596	0.200	30.40	0.34	666.88	42.40	6.39	3.78	0.00	4.07	0.00	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.7	0.0	0.
597	0.100	30.40	0.34	666.88	42.40	6.42	3.44	0.00	3.76	0.00	2.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.0	0.0	0.
598	0.000	30.40	0.34	666.88	42.40	6.45	3.15	0.00	3.49	0.00	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
585	1.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
586	1.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
587	1.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
588	1.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
589	0.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
590	0.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
591	0.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
592	0.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
593	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
594	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
595	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
596	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
597	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
598	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT DRAINAGE DITCH 4 WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 53 DD04 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
601	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	1.71	0.00	1.71	0.00	0.78	0.00	0.00	0.00	0.00	0.00	0.00
601	WSTLD	0.00005	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00	0.00	0.00
602	WSTLD	0.00001	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00	0.00	0.00
611	WSTLD	0.00000	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00	0.00	0.00
614	WSTLD	0.00001	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00	0.00	0.00
615	WSTLD	0.00002	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00	0.00	0.00
616	WSTLD	0.00087	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	25.30	0.00	0.00	0.00	0.00	0.00	0.00
617	WSTLD	0.00000	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00	0.00	0.00
619	WSTLD	0.00011	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00	0.00	0.00
620	WSTLD	0.00023	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00	0.00	0.00
621	WSTLD	0.00003	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00	0.00	0.00
625	WSTLD	0.00001	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00	0.00	0.00
633	WSTLD	0.01522	30.00	0.30	582.30	52.50	2.00	23.00	0.00	23.00	0.00	8.60	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM	BEGIN	ENDING	FLOW	PCT	ADVCTV	TRAVEL	CUM	DEPTH	WIDTH	VOLUME	SURFACE	X-SECT	TIDAL	TIDAL	DISPRSN	MEAN
------	-------	--------	------	-----	--------	--------	-----	-------	-------	--------	---------	--------	-------	-------	---------	------

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

NO.	DIST km	DIST km	EFF m ³ /s	VELO m/s	TIME days	TIME days	m	m	m ³	AREA m ²	AREA m ²	PRISM m ³	VELO m/s	m ² /s	VELO m/s	
601	4.20	4.10	0.00033	14.2	0.00597	0.19	0.19	0.05	1.05	5.53	104.70	0.06	0.00	0.000	0.000	0.006
602	4.10	4.00	0.00034	15.9	0.00601	0.19	0.39	0.05	1.05	5.60	105.31	0.06	0.00	0.000	0.000	0.006
603	4.00	3.90	0.00034	15.9	0.00601	0.19	0.58	0.05	1.05	5.60	105.31	0.06	0.00	0.000	0.000	0.006
604	3.90	3.80	0.00034	15.9	0.00601	0.19	0.77	0.05	1.05	5.60	105.31	0.06	0.00	0.000	0.000	0.006
605	3.80	3.70	0.00034	15.9	0.00601	0.19	0.96	0.05	1.05	5.60	105.31	0.06	0.00	0.000	0.000	0.006
606	3.70	3.60	0.00034	15.9	0.00601	0.19	1.16	0.05	1.05	5.60	105.31	0.06	0.00	0.000	0.000	0.006
607	3.60	3.50	0.00034	15.9	0.00601	0.19	1.35	0.05	1.05	5.60	105.31	0.06	0.00	0.000	0.000	0.006
608	3.50	3.40	0.00034	15.9	0.00601	0.19	1.54	0.05	1.05	5.60	105.31	0.06	0.00	0.000	0.000	0.006
609	3.40	3.30	0.00034	15.9	0.00601	0.19	1.74	0.05	1.05	5.60	105.31	0.06	0.00	0.000	0.000	0.006
610	3.30	3.20	0.00034	15.9	0.00601	0.19	1.93	0.05	1.05	5.60	105.31	0.06	0.00	0.000	0.000	0.006
611	3.20	3.10	0.00034	16.4	0.00602	0.19	2.12	0.05	1.06	5.63	105.51	0.06	0.00	0.000	0.000	0.006
612	3.10	3.00	0.00034	16.4	0.00602	0.19	2.31	0.05	1.06	5.63	105.51	0.06	0.00	0.000	0.000	0.006
613	3.00	2.90	0.00034	16.4	0.00602	0.19	2.51	0.05	1.06	5.63	105.51	0.06	0.00	0.000	0.000	0.006
614	2.90	2.80	0.00035	19.0	0.00608	0.19	2.70	0.05	1.07	5.75	106.51	0.06	0.00	0.000	0.000	0.006
615	2.80	2.70	0.00037	23.3	0.00620	0.19	2.88	0.06	1.08	5.96	108.28	0.06	0.00	0.000	0.000	0.006
616	2.70	2.60	0.00123	77.1	0.00934	0.12	3.01	0.08	1.56	13.21	155.53	0.13	0.00	0.000	0.000	0.009
617	2.60	2.50	0.00124	77.1	0.00935	0.12	3.13	0.08	1.56	13.22	155.57	0.13	0.00	0.000	0.000	0.009
618	2.50	2.40	0.00124	77.1	0.00935	0.12	3.25	0.08	1.56	13.22	155.57	0.13	0.00	0.000	0.000	0.009
619	2.40	2.30	0.00134	78.9	0.00962	0.12	3.37	0.09	1.60	13.98	159.56	0.14	0.00	0.000	0.000	0.010
620	2.30	2.20	0.00157	82.0	0.01014	0.11	3.49	0.09	1.67	15.49	167.21	0.15	0.00	0.000	0.000	0.010
621	2.20	2.10	0.00160	82.3	0.01021	0.11	3.60	0.09	1.68	15.69	168.14	0.16	0.00	0.000	0.000	0.010
622	2.10	2.00	0.00160	82.3	0.01021	0.11	3.72	0.09	1.68	15.69	168.14	0.16	0.00	0.000	0.000	0.010
623	2.00	1.90	0.00160	82.3	0.01021	0.11	3.83	0.09	1.68	15.69	168.14	0.16	0.00	0.000	0.000	0.010
624	1.90	1.80	0.00160	82.3	0.01021	0.11	3.94	0.09	1.68	15.69	168.14	0.16	0.00	0.000	0.000	0.010
625	1.80	1.70	0.00161	82.4	0.01022	0.11	4.06	0.09	1.68	15.72	168.31	0.16	0.00	0.000	0.000	0.010
626	1.70	1.60	0.00161	82.4	0.01022	0.11	4.17	0.09	1.68	15.72	168.31	0.16	0.00	0.000	0.000	0.010
627	1.60	1.50	0.00161	82.4	0.01022	0.11	4.28	0.09	1.68	15.72	168.31	0.16	0.00	0.000	0.000	0.010
628	1.50	1.40	0.00161	82.4	0.01022	0.11	4.40	0.09	1.68	15.72	168.31	0.16	0.00	0.000	0.000	0.010
629	1.40	1.30	0.00161	82.4	0.01022	0.11	4.51	0.09	1.68	15.72	168.31	0.16	0.00	0.000	0.000	0.010
630	1.30	1.20	0.00161	82.4	0.01022	0.11	4.62	0.09	1.68	15.72	168.31	0.16	0.00	0.000	0.000	0.010
631	1.20	1.10	0.00161	82.4	0.01022	0.11	4.74	0.09	1.68	15.72	168.31	0.16	0.00	0.000	0.000	0.010
632	1.10	1.00	0.00161	82.4	0.01022	0.11	4.85	0.09	1.68	15.72	168.31	0.16	0.00	0.000	0.000	0.010
633	1.00	0.90	0.01683	98.3	0.02271	0.05	4.90	0.22	3.41	74.11	340.57	0.74	0.00	0.000	0.000	0.023
634	0.90	0.80	0.01683	98.3	0.02271	0.05	4.95	0.22	3.41	74.11	340.57	0.74	0.00	0.000	0.000	0.023
635	0.80	0.70	0.01683	98.3	0.02271	0.05	5.00	0.22	3.41	74.11	340.57	0.74	0.00	0.000	0.000	0.023
636	0.70	0.60	0.01683	98.3	0.02271	0.05	5.05	0.22	3.41	74.11	340.57	0.74	0.00	0.000	0.000	0.023
637	0.60	0.50	0.01683	98.3	0.02271	0.05	5.10	0.22	3.41	74.11	340.57	0.74	0.00	0.000	0.000	0.023
638	0.50	0.40	0.01683	98.3	0.02271	0.05	5.15	0.22	3.41	74.11	340.57	0.74	0.00	0.000	0.000	0.023
639	0.40	0.30	0.01683	98.3	0.02271	0.05	5.21	0.22	3.41	74.11	340.57	0.74	0.00	0.000	0.000	0.023
640	0.30	0.20	0.01683	98.3	0.02271	0.05	5.26	0.22	3.41	74.11	340.57	0.74	0.00	0.000	0.000	0.023
641	0.20	0.10	0.01683	98.3	0.02271	0.05	5.31	0.22	3.41	74.11	340.57	0.74	0.00	0.000	0.000	0.023
642	0.10	0.00	0.01683	98.3	0.02271	0.05	5.36	0.22	3.41	74.11	340.57	0.74	0.00	0.000	0.000	0.023
TOT						5.36				1083.26	7802.00					
AVG					0.0091			0.11	1.86			0.26				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAY 1/da	BOD1 SETT 1/da	ABOD1 DECAY 1/da	BOD1 HYDR 1/da	BOD2 DECAY 1/da	BOD2 SETT 1/da	ABOD2 DECAY 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAY 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAY 1/da	NCM DECAY 1/da	NCM SETT 1/da	
601	4.100	7.49	17.17	0.13	1.21	0.00	0.00	0.00	0.00	0.00	0.75	1.01	1.01	0.06	1.21	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
602	4.000	7.49	17.07	0.13	1.20	0.00	0.00	0.00	0.00	0.00	0.75	0.99	0.99	0.06	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00
603	3.900	7.49	17.07	0.13	1.20	0.00	0.00	0.00	0.00	0.00	0.75	0.96	0.96	0.06	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00
604	3.800	7.49	17.07	0.13	1.20	0.00	0.00	0.00	0.00	0.00	0.75	0.94	0.94	0.06	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00
605	3.700	7.49	17.07	0.13	1.20	0.00	0.00	0.00	0.00	0.00	0.75	0.92	0.92	0.06	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00
606	3.600	7.49	17.07	0.13	1.20	0.00	0.00	0.00	0.00	0.00	0.75	0.91	0.91	0.06	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00
607	3.500	7.49	17.07	0.13	1.20	0.00	0.00	0.00	0.00	0.00	0.75	0.89	0.89	0.06	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00
608	3.400	7.49	17.07	0.13	1.20	0.00	0.00	0.00	0.00	0.00	0.75	0.88	0.88	0.06	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00
609	3.300	7.49	17.07	0.13	1.20	0.00	0.00	0.00	0.00	0.00	0.75	0.88	0.88	0.06	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00
610	3.200	7.49	17.07	0.13	1.20	0.00	0.00	0.00	0.00	0.00	0.75	0.87	0.87	0.06	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00
611	3.100	7.49	17.03	0.13	1.20	0.00	0.00	0.00	0.00	0.00	0.75	0.87	0.87	0.06	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00
612	3.000	7.49	17.03	0.13	1.20	0.00	0.00	0.00	0.00	0.00	0.75	0.87	0.87	0.06	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00
613	2.900	7.49	17.03	0.13	1.20	0.00	0.00	0.00	0.00	0.00	0.75	0.86	0.86	0.06	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

615	2.700	30.40	0.29	575.23	20.32	6.38	3.03	0.00	3.16	0.00	3.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.1	0.0	0.
616	2.600	30.40	0.36	700.25	50.45	4.56	15.45	0.00	15.58	0.00	17.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.2	0.0	0.
617	2.500	30.40	0.36	700.29	50.46	5.14	14.03	0.00	14.17	0.00	15.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.3	0.0	0.
618	2.400	30.40	0.36	700.29	50.46	5.45	12.75	0.00	12.90	0.00	14.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.4	0.0	0.
619	2.300	30.40	0.36	704.62	51.50	5.47	12.40	0.00	12.55	0.00	15.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.4	0.0	0.
620	2.200	30.40	0.37	711.69	53.20	5.34	12.82	0.00	12.98	0.00	17.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.5	0.0	0.
621	2.100	30.40	0.37	712.46	53.39	5.52	11.98	0.00	12.15	0.00	16.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.6	0.0	0.
622	2.000	30.40	0.37	712.46	53.39	5.67	11.05	0.00	11.23	0.00	15.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.7	0.0	0.
623	1.900	30.40	0.37	712.46	53.39	5.78	10.19	0.00	10.38	0.00	14.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.8	0.0	0.
624	1.800	30.40	0.37	712.46	53.39	5.87	9.41	0.00	9.60	0.00	13.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.8	0.0	0.
625	1.700	30.40	0.37	712.60	53.42	5.93	8.73	0.00	8.93	0.00	12.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.9	0.0	0.
626	1.600	30.40	0.37	712.60	53.42	6.00	8.07	0.00	8.28	0.00	11.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.0	0.0	0.
627	1.500	30.40	0.37	712.60	53.42	6.06	7.47	0.00	7.69	0.00	10.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.1	0.0	0.
628	1.400	30.40	0.37	712.60	53.42	6.11	6.91	0.00	7.14	0.00	9.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.1	0.0	0.
629	1.300	30.40	0.37	712.60	53.42	6.16	6.41	0.00	6.64	0.00	9.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.2	0.0	0.
630	1.200	30.40	0.37	712.60	53.42	6.20	5.94	0.00	6.19	0.00	8.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.3	0.0	0.
631	1.100	30.40	0.37	712.60	53.42	6.24	5.52	0.00	5.77	0.00	7.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.4	0.0	0.
632	1.000	30.40	0.37	712.60	53.42	6.28	5.13	0.00	5.39	0.00	7.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.4	0.0	0.
633	0.900	30.40	0.31	594.74	52.59	3.02	20.85	0.00	21.12	0.00	8.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.5	0.0	0.
634	0.800	30.40	0.31	594.74	52.59	3.51	20.42	0.00	20.70	0.00	8.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.6	0.0	0.
635	0.700	30.40	0.31	594.74	52.59	3.90	20.00	0.00	20.28	0.00	8.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.7	0.0	0.
636	0.600	30.40	0.31	594.74	52.59	4.21	19.58	0.00	19.88	0.00	7.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.7	0.0	0.
637	0.500	30.40	0.31	594.74	52.59	4.46	19.18	0.00	19.48	0.00	7.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.8	0.0	0.
638	0.400	30.40	0.31	594.74	52.59	4.67	18.78	0.00	19.09	0.00	7.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.9	0.0	0.
639	0.300	30.40	0.31	594.74	52.59	4.83	18.39	0.00	18.71	0.00	7.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.0	0.0	0.
640	0.200	30.40	0.31	594.74	52.59	4.97	18.01	0.00	18.34	0.00	7.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.0	0.0	0.
641	0.100	30.40	0.31	594.74	52.59	5.08	17.64	0.00	17.97	0.00	7.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.1	0.0	0.
642	0.000	30.40	0.31	594.74	52.59	5.18	17.28	0.00	17.62	0.00	7.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
601	4.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
602	4.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
603	3.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
604	3.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
605	3.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

606	3.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
607	3.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
608	3.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
609	3.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
610	3.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
611	3.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
612	3.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
613	2.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
614	2.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
615	2.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
616	2.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
617	2.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
618	2.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
619	2.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
620	2.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
621	2.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
622	2.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
623	1.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
624	1.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
625	1.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
626	1.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
627	1.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
628	1.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
629	1.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
630	1.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
631	1.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
632	1.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
633	0.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
634	0.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
635	0.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
636	0.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
637	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
638	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
639	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
640	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
641	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
642	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT TRIBUTARY 9 WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 58 DRAINAGE DITCH 3 - UPLAND BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
667	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	1.71	0.00	1.71	0.00	0.78	0.00	0.00	0.00	0.00	0.00	0.00
667	WSTLD	0.00001	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
667	0.50	0.40	0.00029	3.3	0.00573	0.20	0.20	0.05	1.01	5.11	101.01	0.05	0.00	0.000	0.000	0.006
668	0.40	0.30	0.00029	3.3	0.00573	0.20	0.40	0.05	1.01	5.11	101.01	0.05	0.00	0.000	0.000	0.006
TOT AVG					0.0057	0.40		0.05	1.01	10.22	202.01	0.05				

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR 1/da	BOD2 DECAT 1/da	BOD2 SETT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAT 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da		
667	0.400	7.50	17.85	0.13	1.26	0.00	0.00	0.00	0.00	0.00	0.75	0.89	0.89	0.06	1.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
668	0.300	7.41	17.83	0.13	1.26	0.00	0.00	0.00	0.00	0.00	0.75	1.09	1.09	0.06	1.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE		14.74	0.08	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.39			0.03	0.49	0.00	0.00	0.10	0.00	0.00	0.00			0.00	0.00	0.00		
* g/m ² /d			** mg/L/day																									

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	
667	0.400	30.40	0.26	528.69	9.11	6.35	2.25	0.00	2.25	0.00	1.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0
668	0.300	30.40	2.37	4291.75	1263.10	5.58	5.33	0.00	5.33	0.00	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
667	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
668	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20 DEG C RATE										0.000	0.000	0.000	0.000										0.000	0.000	0.000		

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT REACH NO. 59 TRIBUTARY 9 - TIDAL WATER QUALITY/HYDRAULIC MODEL FOR: BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
669	UPR RCH	0.00029	30.40	2.37	4291.75	1263.10	5.58	5.33	0.00	5.33	0.00	1.59	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
669	0.30	0.20	0.00029	3.3	0.00002	50.60	51.00	0.80	16.00	1280.00	1600.00	12.80	160.00	0.000	0.058	0.000
670	0.20	0.10	0.00029	3.3	0.00002	50.60	101.60	0.80	16.00	1280.00	1600.00	12.80	320.00	0.001	0.117	0.001
671	0.10	0.00	0.00029	3.3	0.00002	50.60	152.20	0.80	16.00	1280.00	1600.00	12.80	480.00	0.001	0.175	0.001
TOT AVG						151.79		0.80	16.00	3840.00	4800.00	12.80				

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR 1/da	BOD2 DECAT 1/da	BOD2 SETT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAT 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da			
669	0.200	7.40	1.06	0.13	0.08	0.00	0.00	0.00	0.00	0.00	0.75	1.11	1.11	0.06	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00		
670	0.100	7.40	1.06	0.13	0.08	0.00	0.00	0.00	0.00	0.00	0.75	1.19	1.19	0.06	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00	0.00		
671	0.000	7.40	1.06	0.13	0.08	0.00	0.00	0.00	0.00	0.00	0.75	1.29	1.29	0.06	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00	0.00		
AVG 20 DEG C RATE			0.88	0.08	0.02	0.00	0.00	0.00	0.00	0.00	0.39			0.03	0.02	0.00	0.00	0.10	0.00	0.00	0.00			0.00	0.00	0.00			
* g/m ² /d			** mg/L/day																										

***** WATER QUALITY CONSTITUENT VALUES

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	
669	0.200	30.40	2.54	4587.47	1361.64	5.35	5.66	0.00	5.77	0.00	1.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.1	0.0	0.
670	0.100	30.40	2.60	4693.69	1397.04	5.21	6.86	0.00	7.09	0.00	1.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.1	0.0	0.
671	0.000	30.40	2.63	4759.04	1418.82	5.11	8.45	0.00	8.79	0.00	1.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
669	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
670	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
671	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20 DEG C RATE										0.000	0.000	0.000	0.000														

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT TRIBUTARY 6 WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 61 DRAINAGE DITCH 11 - UPLAND BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
680	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	1.71	0.00	1.71	0.00	0.78	0.00	0.00	0.00	0.00	0.00	0.00
680	WSTLD	0.00004	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

680	1.60	1.50	0.00033	13.4	0.00595	0.19	0.19	0.05	1.04	5.50	104.39	0.05	0.00	0.000	0.000	0.006
681	1.50	1.40	0.00033	13.4	0.00595	0.19	0.39	0.05	1.04	5.50	104.39	0.05	0.00	0.000	0.000	0.006
682	1.40	1.30	0.00033	13.4	0.00595	0.19	0.58	0.05	1.04	5.50	104.39	0.05	0.00	0.000	0.000	0.006
683	1.30	1.20	0.00033	13.4	0.00595	0.19	0.78	0.05	1.04	5.50	104.39	0.05	0.00	0.000	0.000	0.006
684	1.20	1.10	0.00033	13.4	0.00595	0.19	0.97	0.05	1.04	5.50	104.39	0.05	0.00	0.000	0.000	0.006
685	1.10	1.00	0.00033	13.4	0.00595	0.19	1.17	0.05	1.04	5.50	104.39	0.05	0.00	0.000	0.000	0.006
686	1.00	0.90	0.00033	13.4	0.00595	0.19	1.36	0.05	1.04	5.50	104.39	0.05	0.00	0.000	0.000	0.006
687	0.90	0.80	0.00033	13.4	0.00595	0.19	1.56	0.05	1.04	5.50	104.39	0.05	0.00	0.000	0.000	0.006
688	0.80	0.70	0.00033	13.4	0.00595	0.19	1.75	0.05	1.04	5.50	104.39	0.05	0.00	0.000	0.000	0.006
689	0.70	0.60	0.00033	13.4	0.00595	0.19	1.95	0.05	1.04	5.50	104.39	0.05	0.00	0.000	0.000	0.006
TOT							1.95			54.96	1043.89					
AVG			0.0059					0.05	1.04			0.05				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECA 1/da	BOD1 SETT 1/da	ABOD1 DECA 1/da	BOD1 HYDR 1/da	BOD2 DECA 1/da	BOD2 SETT 1/da	ABOD2 DECA 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECA 1/da	NH3-N SRCE 1/da	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECA 1/da	NCM DECA 1/da	NCM SETT 1/da	
680	1.500	7.49	17.23	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.75	1.00	1.00	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
681	1.400	7.49	17.23	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.75	0.97	0.97	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
682	1.300	7.49	17.23	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.75	0.94	0.94	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
683	1.200	7.49	17.23	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.75	0.92	0.92	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
684	1.100	7.49	17.23	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.75	0.91	0.91	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
685	1.000	7.49	17.23	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.75	0.89	0.89	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
686	0.900	7.49	17.23	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.75	0.88	0.88	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
687	0.800	7.49	17.23	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.75	0.88	0.88	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
688	0.700	7.49	17.23	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.75	0.87	0.87	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
689	0.600	7.41	17.21	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.75	0.95	0.95	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20	DEG C	RATE	14.23	0.08	0.09	0.00	0.00	0.00	0.00	0.00	0.39			0.03	0.09	0.00	0.00	0.10	0.00	0.00	0.00			0.00	0.00	0.00	

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	
680	1.500	30.40	0.28	552.09	14.74	6.14	3.94	0.00	3.94	0.00	5.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
681	1.400	30.40	0.28	552.09	14.74	6.33	3.45	0.00	3.45	0.00	4.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
682	1.300	30.40	0.28	552.09	14.74	6.40	3.05	0.00	3.05	0.00	3.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
683	1.200	30.40	0.28	552.09	14.74	6.44	2.74	0.00	2.74	0.00	3.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
684	1.100	30.40	0.28	552.09	14.74	6.46	2.50	0.00	2.50	0.00	2.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
685	1.000	30.40	0.28	552.09	14.74	6.48	2.30	0.00	2.30	0.00	2.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
686	0.900	30.40	0.28	552.09	14.74	6.49	2.15	0.00	2.15	0.00	1.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
687	0.800	30.40	0.28	552.09	14.74	6.50	2.02	0.00	2.02	0.00	1.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
688	0.700	30.40	0.28	552.09	14.74	6.51	1.93	0.00	1.93	0.00	1.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
689	0.600	30.40	2.27	4113.26	1203.42	6.08	3.22	0.00	3.22	0.00	1.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.

***** PHYTOPLANKTON AND PERIPLHYTON DATA *****

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
680	1.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
681	1.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
682	1.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
683	1.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
684	1.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
685	1.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
686	0.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
687	0.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
688	0.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
689	0.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT TRIBUTARY 6 WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 62 TRIBUTARY 6 - TIDAL BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
690	UPR RCH	0.00033	30.40	2.27	4113.26	1203.42	6.08	3.22	0.00	3.22	0.00	1.33	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
690	0.60	0.50	0.00033	13.4	0.00005	25.50	27.45	0.60	12.00	720.00	1200.00	7.20	120.00	0.000	0.061	0.000
691	0.50	0.40	0.00033	13.4	0.00005	25.50	52.95	0.60	12.00	720.00	1200.00	7.20	240.00	0.001	0.122	0.001
692	0.40	0.30	0.00033	13.4	0.00005	25.50	78.45	0.60	12.00	720.00	1200.00	7.20	360.00	0.001	0.183	0.001
693	0.30	0.20	0.00033	13.4	0.00005	25.50	103.95	0.60	12.00	720.00	1200.00	7.20	480.00	0.002	0.245	0.002
694	0.20	0.10	0.00033	13.4	0.00005	25.50	129.45	0.60	12.00	720.00	1200.00	7.20	600.00	0.002	0.306	0.002
695	0.10	0.00	0.00033	13.4	0.00005	25.50	154.95	0.60	12.00	720.00	1200.00	7.20	720.00	0.003	0.367	0.003
TOT						153.00				4320.00	7200.00	7.20				
AVG					0.0000			0.60	12.00			7.20				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR 1/da	BOD2 DECAT 1/da	BOD2 SETT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAT 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da
690	0.500	7.40	1.41	0.13	0.11	0.00	0.00	0.00	0.00	0.00	0.75	0.97	0.97	0.06	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00
691	0.400	7.40	1.41	0.13	0.11	0.00	0.00	0.00	0.00	0.00	0.75	1.01	1.01	0.06	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
692	0.300	7.39	1.41	0.13	0.11	0.00	0.00	0.00	0.00	0.00	0.75	1.06	1.06	0.06	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00
693	0.200	7.39	1.41	0.13	0.11	0.00	0.00	0.00	0.00	0.00	0.75	1.12	1.12	0.06	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00
694	0.100	7.39	1.41	0.13	0.11	0.00	0.00	0.00	0.00	0.00	0.75	1.20	1.20	0.06	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.00	0.00	0.00	0.00
695	0.000	7.39	1.41	0.13	0.11	0.00	0.00	0.00	0.00	0.00	0.75	1.29	1.29	0.06	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00
AVG	20 DEG C RATE		1.17	0.08	0.01	0.00	0.00	0.00	0.00	0.00	0.39			0.03	0.01	0.00	0.00	0.10	0.00	0.00	0.00		0.00	0.00	0.00	

* g/m²/d ** mg/L/day

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL	
690	0.500	30.40	2.57	4642.93	1380.22	5.90	3.47	0.00	3.53	0.00	1.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.5	0.0	0.
691	0.400	30.40	2.68	4845.55	1447.85	5.79	4.08	0.00	4.20	0.00	1.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.1	0.0	0.
692	0.300	30.40	2.75	4973.03	1490.40	5.67	4.88	0.00	5.06	0.00	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.6	0.0	0.
693	0.200	30.40	2.80	5066.74	1521.68	5.55	5.87	0.00	6.10	0.00	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.1	0.0	0.
694	0.100	30.40	2.85	5141.14	1546.52	5.44	7.06	0.00	7.35	0.00	1.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.7	0.0	0.
695	0.000	30.40	2.88	5203.01	1567.17	5.36	8.49	0.00	8.83	0.00	2.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
690	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
691	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
692	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
693	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
694	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
695	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT TRIBUTARY 10 WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 64 TRIBUTARY 10 - UPLAND BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
698	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	1.71	0.00	1.71	0.00	0.78	0.00	0.00	0.00	0.00	0.00	0.00
698	WSTLD	0.00003	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
698	0.70	0.60	0.00031	9.9	0.00587	0.20	0.20	0.05	1.03	5.36	103.17	0.05	0.00	0.000	0.000	0.006
699	0.60	0.50	0.00031	9.9	0.00587	0.20	0.39	0.05	1.03	5.36	103.17	0.05	0.00	0.000	0.000	0.006
700	0.50	0.40	0.00031	9.9	0.00587	0.20	0.59	0.05	1.03	5.36	103.17	0.05	0.00	0.000	0.000	0.006
701	0.40	0.30	0.00031	9.9	0.00587	0.20	0.79	0.05	1.03	5.36	103.17	0.05	0.00	0.000	0.000	0.006
702	0.30	0.20	0.00031	9.9	0.00587	0.20	0.99	0.05	1.03	5.36	103.17	0.05	0.00	0.000	0.000	0.006
TOT AVG					0.0059	0.99		0.05	1.03	26.78	515.83					0.05

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR 1/da	BOD2 DECAT 1/da	BOD2 SETT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR HYDR *	ORG-N 1/da	ORG-N SETT 1/da	NH3-N DECAT 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da		
698	0.600	7.50	17.45	0.13	1.23	0.00	0.00	0.00	0.00	0.00	0.75	0.96	0.96	0.06	1.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
699	0.500	7.50	17.45	0.13	1.23	0.00	0.00	0.00	0.00	0.00	0.75	0.94	0.94	0.06	1.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
700	0.400	7.50	17.45	0.13	1.23	0.00	0.00	0.00	0.00	0.00	0.75	0.92	0.92	0.06	1.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
701	0.300	7.50	17.45	0.13	1.23	0.00	0.00	0.00	0.00	0.00	0.75	0.90	0.90	0.06	1.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
702	0.200	7.40	17.43	0.13	1.23	0.00	0.00	0.00	0.00	0.00	0.75	1.13	1.13	0.06	1.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE		14.41	0.08	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.39				0.03	0.19	0.00	0.00	0.10	0.00	0.00				0.00	0.00	0.00	
* g/m ² /d		** mg/L/day																										

***** WATER QUALITY CONSTITUENT VALUES

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	
698	0.600	30.40	0.27	544.01	12.80	6.22	3.35	0.00	3.35	0.00	4.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0
699	0.500	30.40	0.27	544.01	12.80	6.38	2.97	0.00	2.97	0.00	3.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0
700	0.400	30.40	0.27	544.01	12.80	6.44	2.67	0.00	2.67	0.00	2.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0
701	0.300	30.40	0.27	544.01	12.80	6.46	2.44	0.00	2.44	0.00	2.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0
702	0.200	30.40	2.55	4607.40	1368.50	5.70	6.00	0.00	6.00	0.00	2.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0

***** PHYTOPLANKTON AND PERIPHYTON DATA

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
698	0.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
699	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
700	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
701	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
702	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20 DEG C RATE										0.000	0.000	0.000	0.000														

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT REACH NO. 65 TRIBUTARY 10 - TIDAL WATER QUALITY/HYDRAULIC MODEL FOR: BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
703	UPR RCH	0.00031	30.40	2.55	4607.40	1368.50	5.70	6.00	0.00	6.00	0.00	2.02	0.00	0.00	0.00	0.00	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
703	0.20	0.10	0.00031	9.9	0.00004	31.13	32.11	0.65	13.00	845.00	1300.00	8.45	130.00	0.000	0.060	0.000
704	0.10	0.00	0.00031	9.9	0.00004	31.13	63.24	0.65	13.00	845.00	1300.00	8.45	260.00	0.001	0.121	0.001
TOT AVG					0.0000	62.25		0.65	13.00	1690.00	2600.00	8.45				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECA	BOD1 SETT	ABOD1 DECA	BOD1 HYDR	BOD2 DECA	BOD2 SETT	ABOD2 DECA	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECA	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECA	NCM DECA	NCM SETT		
703	0.100	7.39	1.30	0.13	0.10	0.00	0.00	0.00	0.00	0.00	0.75	1.17	1.17	0.06	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00	0.00	0.00
704	0.000	7.39	1.30	0.13	0.10	0.00	0.00	0.00	0.00	0.00	0.75	1.27	1.27	0.06	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			1.08	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.39			0.03	0.04	0.00	0.00	0.10	0.00	0.00	0.00				0.00	0.00	0.00	

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO	BOD1	BOD2	EBOD1	EBOD2	ORG-N	NH3-N	NO3-N	TOT-N	EORG-N	ETOT-N	ORG-P	PO4-P	TOT-P	EORG-P	ETOT-P	CHL A	PERIP	COLI	
703	0.100	30.40	2.83	5109.05	1535.87	5.43	6.59	0.00	6.76	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.6	0.0	0.
704	0.000	30.40	2.93	5296.74	1598.49	5.44	8.22	0.00	8.57	0.00	2.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.	

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
703	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
704	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20 DEG C RATE										0.000	0.000	0.000	0.000										0.000	0.000	0.000		

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT REACH NO. 68 TRIBUTARY 8 - UPLAND WATER QUALITY/HYDRAULIC MODEL FOR: BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO	BOD1	BOD2	EBOD1	EBOD2	ORG-N	NH3-N	NO3-N	PO4-P	CHL A	COLI	NCM
715	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	1.71	0.00	1.71	0.00	0.78	0.00	0.00	0.00	0.00	0.00	0.00
715	WSTLD	0.00001	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
715	0.60	0.50	0.00029	3.7	0.00574	0.20	0.20	0.05	1.01	5.12	101.12	0.05	0.00	0.000	0.000	0.006
716	0.50	0.40	0.00029	3.7	0.00574	0.20	0.40	0.05	1.01	5.12	101.12	0.05	0.00	0.000	0.000	0.006
717	0.40	0.30	0.00029	3.7	0.00574	0.20	0.61	0.05	1.01	5.12	101.12	0.05	0.00	0.000	0.000	0.006
718	0.30	0.20	0.00029	3.7	0.00574	0.20	0.81	0.05	1.01	5.12	101.12	0.05	0.00	0.000	0.000	0.006
719	0.20	0.10	0.00029	3.7	0.00574	0.20	1.01	0.05	1.01	5.12	101.12	0.05	0.00	0.000	0.000	0.006
TOT AVG					0.0057	1.01			1.01	25.62	505.59					

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECAT	BOD1 SETT	ABOD1 DECAT	BOD1 HYDR	BOD2 DECAT	BOD2 SETT	ABOD2 DECAT	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECAT	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECAT	NCM DECAT	NCM SETT		
715	0.500	7.50	17.83	0.13	1.26	0.00	0.00	0.00	0.00	0.00	0.75	0.89	0.89	0.06	1.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
716	0.400	7.50	17.83	0.13	1.26	0.00	0.00	0.00	0.00	0.00	0.75	0.88	0.88	0.06	1.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
717	0.300	7.50	17.83	0.13	1.26	0.00	0.00	0.00	0.00	0.00	0.75	0.88	0.88	0.06	1.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
718	0.200	7.50	17.83	0.13	1.26	0.00	0.00	0.00	0.00	0.00	0.75	0.87	0.87	0.06	1.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
719	0.100	7.39	17.81	0.13	1.26	0.00	0.00	0.00	0.00	0.00	0.75	1.13	1.13	0.06	1.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20	DEG C	RATE	14.72	0.08	0.20	0.00	0.00	0.00	0.00	0.00	0.39			0.03	0.20	0.00	0.00	0.10	0.00	0.00	0.00			0.00	0.00	0.00	0.00	0.00
*	g/m ² /d		**		mg/L/day																							

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL mg/L	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A ug/L	PERIP g/m ²	COLI #/100mL	
715	0.500	30.40	0.26	529.53	9.31	6.35	2.30	0.00	2.30	0.00	2.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0
716	0.400	30.40	0.26	529.53	9.31	6.46	2.15	0.00	2.15	0.00	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0
717	0.300	30.40	0.26	529.53	9.31	6.50	2.03	0.00	2.03	0.00	1.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0
718	0.200	30.40	0.26	529.53	9.31	6.51	1.93	0.00	1.93	0.00	1.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0
719	0.100	30.40	2.73	4933.99	1477.88	6.12	5.95	0.00	5.95	0.00	1.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO ug/L	PERI N PRF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
715	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
716	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
717	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
718	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
719	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20	DEG C	RATE								0.000	0.000	0.000	0.000										0.000	0.000	0.000		

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT TRIBUTARY 8
REACH NO. 69 TRIBUTARY 8 - TIDAL

WATER QUALITY/HYDRAULIC MODEL FOR:
BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
720	UPR RCH	0.00029	30.40	2.73	4933.99	1477.88	6.12	5.95	0.00	5.95	0.00	1.98	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
720	0.10	0.00	0.00029	3.7	0.00006	19.69	20.70	0.50	10.00	500.00	1000.00	5.00	100.00	0.001	0.063	0.001
TOT AVG					0.0001	19.69		0.50	10.00	500.00	1000.00	5.00				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAY 1/da	BOD1 SETT 1/da	ABOD1 DECAY 1/da	BOD1 HYDR 1/da	BOD2 DECAY 1/da	BOD2 SETT 1/da	ABOD2 DECAY 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAY 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAY 1/da	NCM DECAY 1/da	NCM SETT 1/da	
720	0.000	7.38	1.69	0.13	0.13	0.00	0.00	0.00	0.00	0.00	0.75	1.19	1.19	0.06	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	
AVG 20 DEG C RATE		1.40	0.08	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.39			0.03	0.10	0.00	0.00	0.10	0.00	0.00	0.00			0.00	0.00	0.00	
*	g/m²/d		**	mg/L/day																							

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL	
720	0.000	30.40	3.19	5757.04	1752.31	6.06	6.93	0.00	8.00	0.00	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
720	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20 DEG C RATE										0.000	0.000	0.000	0.000										0.000	0.000	0.000		

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT MARINA 1
REACH NO. 71 MARINA 1 - TIDAL

WATER QUALITY/HYDRAULIC MODEL FOR:
BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

***** REACH INPUTS

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
727	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	1.71	0.00	1.71	0.00	0.78	0.00	0.00	0.00	0.00	0.00	0.00
728	WSTLD	0.00000	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
727	0.20	0.10	0.00028	0.0	0.00001	157.05	157.05	1.20	32.00	3840.00	3200.00	38.40	320.00	0.000	0.054	0.000
728	0.10	0.00	0.00028	0.4	0.00001	156.49	313.54	1.20	32.00	3840.00	3200.00	38.40	640.00	0.000	0.109	0.000
TOT AVG					0.0000	313.54		1.20	32.00	7680.00	6400.00	38.40				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECAT	BOD1 SETT DECAT	ABOD1 DECAT	BOD1 HYDR DECAT	BOD2 DECAT	BOD2 SETT DECAT	ABOD2 DECAT	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT DECAT	NH3-N DECAT	NH3-N SRCE RATE	DENIT HYDR	ORG-P SETT	ORG-P SRCE	PO4 PROD	PHYTO PROD	PERIP PROD	COLI DECAT	NCM DECAT	NCM SETT	
727	0.100	7.37	0.71	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.75	1.08	1.08	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.00	0.00	0.00	0.00	
728	0.000	7.37	0.71	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.75	1.14	1.14	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.55	0.00	0.00	0.00	0.00	
AVG 20 DEG C RATE			0.58	0.08	0.02	0.00	0.00	0.00	0.00	0.00	0.39			0.03	0.02	0.00	0.00	0.10	0.00	0.00	0.00			0.00	0.00	0.00	
*	g/m²/d		**	mg/L/day																							

***** WATER QUALITY CONSTITUENT VALUES

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL	
727	0.100	30.40	3.32	5987.19	1829.24	5.71	5.28	0.00	5.65	0.00	1.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.4	0.0	0.
728	0.000	30.40	3.35	6036.46	1845.67	6.06	6.20	0.00	6.93	0.00	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.8	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
727	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
728	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20 DEG C RATE										0.000	0.000	0.000	0.000										0.000	0.000	0.000		

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

REACH NO. 73 MARINA02 - TIDAL

BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
730	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	1.71	0.00	1.71	0.00	0.78	0.00	0.00	0.00	0.00	0.00	0.00
746	WSTLD	0.00005	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
730	1.80	1.70	0.00028	0.0	0.00001	157.05	157.05	1.20	32.00	3840.00	3200.00	38.40	320.00	0.000	0.054	0.000
731	1.70	1.60	0.00028	0.0	0.00001	157.05	314.10	1.20	32.00	3840.00	3200.00	38.40	640.00	0.000	0.109	0.000
732	1.60	1.50	0.00028	0.0	0.00001	157.05	471.14	1.20	32.00	3840.00	3200.00	38.40	960.00	0.001	0.164	0.001
733	1.50	1.40	0.00028	0.0	0.00001	157.05	628.19	1.20	32.00	3840.00	3200.00	38.40	1280.00	0.001	0.218	0.001
734	1.40	1.30	0.00028	0.0	0.00001	157.05	785.24	1.20	32.00	3840.00	3200.00	38.40	1600.00	0.001	0.273	0.001
735	1.30	1.20	0.00028	0.0	0.00001	157.05	942.29	1.20	32.00	3840.00	3200.00	38.40	1920.00	0.001	0.327	0.001
736	1.20	1.10	0.00028	0.0	0.00001	157.05	1099.33	1.20	32.00	3840.00	3200.00	38.40	2240.00	0.002	0.382	0.002
737	1.10	1.00	0.00028	0.0	0.00001	157.05	1256.38	1.20	32.00	3840.00	3200.00	38.40	2560.00	0.002	0.437	0.002
738	1.00	0.90	0.00028	0.0	0.00001	157.05	1413.43	1.20	32.00	3840.00	3200.00	38.40	2880.00	0.002	0.491	0.002
739	0.90	0.80	0.00028	0.0	0.00001	157.05	1570.47	1.20	32.00	3840.00	3200.00	38.40	3200.00	0.002	0.546	0.002
740	0.80	0.70	0.00028	0.0	0.00001	157.05	1727.52	1.20	32.00	3840.00	3200.00	38.40	3520.00	0.003	0.600	0.003
741	0.70	0.60	0.00028	0.0	0.00001	157.05	1884.57	1.20	32.00	3840.00	3200.00	38.40	3840.00	0.003	0.655	0.003
742	0.60	0.50	0.00028	0.0	0.00001	157.05	2041.62	1.20	32.00	3840.00	3200.00	38.40	4160.00	0.003	0.709	0.003
743	0.50	0.40	0.00028	0.0	0.00001	157.05	2198.67	1.20	32.00	3840.00	3200.00	38.40	4480.00	0.003	0.764	0.003
744	0.40	0.30	0.00028	0.0	0.00001	157.05	2355.71	1.20	32.00	3840.00	3200.00	38.40	4800.00	0.004	0.819	0.004
745	0.30	0.20	0.00028	0.0	0.00001	157.05	2512.76	1.20	32.00	3840.00	3200.00	38.40	5120.00	0.004	0.873	0.004
746	0.20	0.10	0.00033	14.2	0.00001	134.68	2647.44	1.20	32.00	3840.00	3200.00	38.40	5440.00	0.004	0.928	0.004
747	0.10	0.00	0.00033	14.2	0.00001	134.68	2782.12	1.20	32.00	3840.00	3200.00	38.40	5760.00	0.004	0.982	0.004
TOT						2782.12				69120.01	57600.00					
AVG					0.0000			1.20	32.00			38.40				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECAY	BOD1 SETT	ABOD1 DECAY	BOD1 HYDR	BOD2 DECAY	BOD2 SETT	ABOD2 DECAY	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECAY	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECAY	NCM DECAY	NCM SETT
		mg/L	1/da	1/da	1/da	1/da	1/da	1/da	1/da	1/da	*	*	*	1/da	1/da	1/da	*	1/da	1/da	1/da	*	**	**	1/da	1/da	1/da
730	1.700	7.37	0.71	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.75	0.87	0.87	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00
731	1.600	7.37	0.71	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.75	0.88	0.88	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00
732	1.500	7.37	0.71	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.75	0.88	0.88	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
733	1.400	7.37	0.71	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.75	0.89	0.89	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.00	0.00	0.00
734	1.300	7.37	0.71	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.75	0.90	0.90	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.00	0.00	0.00
735	1.200	7.37	0.71	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.75	0.90	0.90	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.00	0.00	0.00
736	1.100	7.37	0.71	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.75	0.91	0.91	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.00	0.00	0.00	0.00
737	1.000	7.37	0.71	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.75	0.92	0.92	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.00	0.00	0.00	0.00
738	0.900	7.37	0.71	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.75	0.94	0.94	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.00	0.00	0.00	0.00
739	0.800	7.37	0.71	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.75	0.95	0.95	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.00	0.00	0.00	0.00
740	0.700	7.37	0.71	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.75	0.97	0.97	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.34	0.00	0.00	0.00	0.00
741	0.600	7.37	0.71	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.75	0.99	0.99	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.00	0.00	0.00	0.00
742	0.500	7.37	0.71	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.75	1.01	1.01	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.00	0.00	0.00	0.00
743	0.400	7.37	0.71	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.75	1.03	1.03	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.43	0.00	0.00	0.00	0.00
744	0.300	7.37	0.71	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.75	1.06	1.06	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.46	0.00	0.00	0.00	0.00
745	0.200	7.37	0.71	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.75	1.09	1.09	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.49	0.00	0.00	0.00	0.00
746	0.100	7.37	0.71	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.75	1.12	1.12	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00
747	0.000	7.37	0.71	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.75	1.16	1.16	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.55	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.58	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.39			0.03	0.00	0.00	0.00	0.10	0.00	0.00	0.00		0.00	0.00	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL
730	1.700	30.40	3.26	5874.80	1791.81	5.96	1.99	0.00	2.03	0.00	0.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.4	0.0	0.
731	1.600	30.40	3.28	5923.06	1807.89	5.98	2.05	0.00	2.13	0.00	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.0	0.
732	1.500	30.40	3.30	5952.26	1817.63	5.99	2.12	0.00	2.25	0.00	0.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.1	0.0	0.
733	1.400	30.40	3.31	5973.22	1824.62	6.00	2.22	0.00	2.38	0.00	0.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.5	0.0	0.
734	1.300	30.40	3.32	5989.59	1830.07	6.01	2.33	0.00	2.53	0.00	1.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.9	0.0	0.
735	1.200	30.40	3.33	6003.02	1834.55	6.01	2.45	0.00	2.70	0.00	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.3	0.0	0.
736	1.100	30.40	3.33	6014.42	1838.35	6.01	2.60	0.00	2.88	0.00	1.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.6	0.0	0.
737	1.000	30.40	3.34	6024.31	1841.64	6.00	2.77	0.00	3.09	0.00	1.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.0	0.0	0.
738	0.900	30.40	3.35	6033.06	1844.56	5.99	2.97	0.00	3.33	0.00	1.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.4	0.0	0.
739	0.800	30.40	3.35	6040.89	1847.17	5.98	3.19	0.00	3.60	0.00	1.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.8	0.0	0.
740	0.700	30.40	3.35	6047.99	1849.54	5.97	3.45	0.00	3.89	0.00	1.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.2	0.0	0.
741	0.600	30.40	3.36	6054.49	1851.70	5.97	3.73	0.00	4.22	0.00	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.5	0.0	0.
742	0.500	30.40	3.36	6060.47	1853.70	5.96	4.06	0.00	4.59	0.00	1.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.9	0.0	0.
743	0.400	30.40	3.36	6066.01	1855.54	5.97	4.43	0.00	4.99	0.00	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.3	0.0	0.
744	0.300	30.40	3.37	6071.17	1857.27	5.99	4.84	0.00	5.45	0.00	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.7	0.0	0.
745	0.200	30.40	3.37	6076.01	1858.88	6.03	5.30	0.00	5.95	0.00	1.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.0	0.0	0.
746	0.100	30.40	3.37	6080.56	1860.39	6.11	5.82	0.00	6.51	0.00	1.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.4	0.0	0.
747	0.000	30.40	3.37	6085.53	1862.05	6.22	6.40	0.00	7.12	0.00	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.8	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
730	1.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
731	1.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
732	1.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
733	1.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
734	1.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
735	1.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
736	1.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
737	1.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
738	0.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
739	0.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
740	0.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	4.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
741	0.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	4.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
742	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	4.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
743	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	5.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT HWY 190
REACH NO. 76 PAQUET FROM HWY 190 TO DD16

WATER QUALITY/HYDRAULIC MODEL FOR:
BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
776	UPR RCH	0.00045	30.40	0.31	605.95	27.72	6.41	2.70	0.00	2.70	0.00	3.28	0.00	0.00	0.00	0.00	0.00	0.00
776	WSTLD	0.00283	33.80	0.26	520.90	7.23	6.00	1.76	0.00	1.76	0.00	0.77	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
776	7.20	7.10	0.00328	91.4	0.02645	0.04	2.60	0.08	1.57	12.39	156.75	0.12	0.00	0.000	0.000	0.026
777	7.10	7.00	0.00328	91.4	0.02645	0.04	2.65	0.08	1.57	12.39	156.75	0.12	0.00	0.000	0.000	0.026
778	7.00	6.90	0.00328	91.4	0.02645	0.04	2.69	0.08	1.57	12.39	156.75	0.12	0.00	0.000	0.000	0.026
779	6.90	6.80	0.00328	91.4	0.02645	0.04	2.73	0.08	1.57	12.39	156.75	0.12	0.00	0.000	0.000	0.026
780	6.80	6.70	0.00328	91.4	0.02645	0.04	2.78	0.08	1.57	12.39	156.75	0.12	0.00	0.000	0.000	0.026
781	6.70	6.60	0.00328	91.4	0.02645	0.04	2.82	0.08	1.57	12.39	156.75	0.12	0.00	0.000	0.000	0.026
782	6.60	6.50	0.00328	91.4	0.02645	0.04	2.86	0.08	1.57	12.39	156.75	0.12	0.00	0.000	0.000	0.026
783	6.50	6.40	0.00328	91.4	0.02645	0.04	2.91	0.08	1.57	12.39	156.75	0.12	0.00	0.000	0.000	0.026
784	6.40	6.30	0.00328	91.4	0.02645	0.04	2.95	0.08	1.57	12.39	156.75	0.12	0.00	0.000	0.000	0.026
785	6.30	6.20	0.00328	91.4	0.02645	0.04	3.00	0.08	1.57	12.39	156.75	0.12	0.00	0.000	0.000	0.026
786	6.20	6.10	0.00328	91.4	0.02645	0.04	3.04	0.08	1.57	12.39	156.75	0.12	0.00	0.000	0.000	0.026
787	6.10	6.00	0.00328	91.4	0.02645	0.04	3.08	0.08	1.57	12.39	156.75	0.12	0.00	0.000	0.000	0.026
788	6.00	5.90	0.00328	91.4	0.02645	0.04	3.13	0.08	1.57	12.39	156.75	0.12	0.00	0.000	0.000	0.026
789	5.90	5.80	0.00328	91.4	0.02645	0.04	3.17	0.08	1.57	12.39	156.75	0.12	0.00	0.000	0.000	0.026
790	5.80	5.70	0.00328	91.4	0.02645	0.04	3.21	0.08	1.57	12.39	156.75	0.12	0.00	0.000	0.000	0.026
791	5.70	5.60	0.00328	91.4	0.02645	0.04	3.26	0.08	1.57	12.39	156.75	0.12	0.00	0.000	0.000	0.026
792	5.60	5.50	0.00328	91.4	0.02645	0.04	3.30	0.08	1.57	12.39	156.75	0.12	0.00	0.000	0.000	0.026
793	5.50	5.40	0.00328	91.4	0.02645	0.04	3.35	0.08	1.57	12.39	156.75	0.12	0.00	0.000	0.000	0.026
794	5.40	5.30	0.00328	91.4	0.02645	0.04	3.39	0.08	1.57	12.39	156.75	0.12	0.00	0.000	0.000	0.026
795	5.30	5.20	0.00328	91.4	0.02645	0.04	3.43	0.08	1.57	12.39	156.75	0.12	0.00	0.000	0.000	0.026
796	5.20	5.10	0.00328	91.4	0.02645	0.04	3.48	0.08	1.57	12.39	156.75	0.12	0.00	0.000	0.000	0.026
TOT						0.92				260.27	3291.69	0.12				
AVG				0.0264				0.08	1.57							

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECATY 1/da	BOD1 SETT 1/da	ABOD1 DECATY 1/da	BOD1 HYDR 1/da	BOD2 DECATY 1/da	BOD2 SETT 1/da	ABOD2 DECATY 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECATY 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECATY 1/da	NCM DECATY 1/da	NCM SETT 1/da	
776	7.100	7.50	15.96	0.13	0.81	0.00	0.00	0.00	0.00	0.00	0.78	0.90	0.90	0.06	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
777	7.000	7.50	15.96	0.13	0.81	0.00	0.00	0.00	0.00	0.00	0.78	0.90	0.90	0.06	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
778	6.900	7.50	15.96	0.13	0.81	0.00	0.00	0.00	0.00	0.00	0.78	0.90	0.90	0.06	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
779	6.800	7.50	15.96	0.13	0.81	0.00	0.00	0.00	0.00	0.00	0.78	0.90	0.90	0.06	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
780	6.700	7.50	15.96	0.13	0.81	0.00	0.00	0.00	0.00	0.00	0.78	0.90	0.90	0.06	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
781	6.600	7.50	15.96	0.13	0.81	0.00	0.00	0.00	0.00	0.00	0.78	0.90	0.90	0.06	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
782	6.500	7.50	15.96	0.13	0.81	0.00	0.00	0.00	0.00	0.00	0.78	0.90	0.90	0.06	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
783	6.400	7.50	15.96	0.13	0.81	0.00	0.00	0.00	0.00	0.00	0.78	0.90	0.90	0.06	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
784	6.300	7.50	15.96	0.13	0.81	0.00	0.00	0.00	0.00	0.00	0.78	0.90	0.90	0.06	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
785	6.200	7.50	15.96	0.13	0.81	0.00	0.00	0.00	0.00	0.00	0.78	0.90	0.90	0.06	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
786	6.100	7.50	15.96	0.13	0.81	0.00	0.00	0.00	0.00	0.00	0.78	0.90	0.90	0.06	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
787	6.000	7.50	15.96	0.13	0.81	0.00	0.00	0.00	0.00	0.00	0.78	0.91	0.91	0.06	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
788	5.900	7.50	15.96	0.13	0.81	0.00	0.00	0.00	0.00	0.00	0.78	0.91	0.91	0.06	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

	frac	m	PREF	LIM	LIM	LIM	LIM	LIM	1/da	1/da	1/da	1/da	RATIO	µg/L	PREF	LIM	1/da	1/da	1/da	RATIO	g/m²						
776	7.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
777	7.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
778	6.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
779	6.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
780	6.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
781	6.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
782	6.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
783	6.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
784	6.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
785	6.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
786	6.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
787	6.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
788	5.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
789	5.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
790	5.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
791	5.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
792	5.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
793	5.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
794	5.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
795	5.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
796	5.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT HWY 190 WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 78 PAQUET FROM RKM 5.1 TO DD17 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
806	UPR RCH	0.00328	30.40	0.27	532.47	10.02	6.76	1.95	0.00	1.95	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
806	TRIB	0.00029	30.40	0.26	523.50	7.86	6.49	1.79	0.00	1.79	0.00	0.86	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
806	5.10	5.00	0.00356	84.1	0.02721	0.04	3.52	0.08	1.61	13.10	160.73	0.13	0.00	0.000	0.000	0.027
807	5.00	4.90	0.00356	84.1	0.02721	0.04	3.56	0.08	1.61	13.10	160.73	0.13	0.00	0.000	0.000	0.027
808	4.90	4.80	0.00356	84.1	0.02721	0.04	3.60	0.08	1.61	13.10	160.73	0.13	0.00	0.000	0.000	0.027
809	4.80	4.70	0.00356	84.1	0.02721	0.04	3.65	0.08	1.61	13.10	160.73	0.13	0.00	0.000	0.000	0.027
810	4.70	4.60	0.00356	84.1	0.02721	0.04	3.69	0.08	1.61	13.10	160.73	0.13	0.00	0.000	0.000	0.027
811	4.60	4.50	0.00356	84.1	0.02721	0.04	3.73	0.08	1.61	13.10	160.73	0.13	0.00	0.000	0.000	0.027
812	4.50	4.40	0.00356	84.1	0.02721	0.04	3.78	0.08	1.61	13.10	160.73	0.13	0.00	0.000	0.000	0.027
813	4.40	4.30	0.00356	84.1	0.02721	0.04	3.82	0.08	1.61	13.10	160.73	0.13	0.00	0.000	0.000	0.027
814	4.30	4.20	0.00356	84.1	0.02721	0.04	3.86	0.08	1.61	13.10	160.73	0.13	0.00	0.000	0.000	0.027
815	4.20	4.10	0.00356	84.1	0.02721	0.04	3.90	0.08	1.61	13.10	160.73	0.13	0.00	0.000	0.000	0.027
816	4.10	4.00	0.00356	84.1	0.02721	0.04	3.95	0.08	1.61	13.10	160.73	0.13	0.00	0.000	0.000	0.027
817	4.00	3.90	0.00356	84.1	0.02721	0.04	3.99	0.08	1.61	13.10	160.73	0.13	0.00	0.000	0.000	0.027
818	3.90	3.80	0.00356	84.1	0.02721	0.04	4.03	0.08	1.61	13.10	160.73	0.13	0.00	0.000	0.000	0.027
TOT						0.55				170.27	2089.53					
AVG				0.0272				0.08	1.61			0.13				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR 1/da	BOD2 DECAT 1/da	BOD2 SETT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAT 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da	
806	5.000	7.50	15.65	0.13	0.79	0.00	0.00	0.00	0.00	0.00	0.78	0.91	0.91	0.06	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
807	4.900	7.50	15.65	0.13	0.79	0.00	0.00	0.00	0.00	0.00	0.78	0.91	0.91	0.06	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
808	4.800	7.50	15.65	0.13	0.79	0.00	0.00	0.00	0.00	0.00	0.78	0.91	0.91	0.06	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
809	4.700	7.50	15.65	0.13	0.79	0.00	0.00	0.00	0.00	0.00	0.78	0.91	0.91	0.06	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
810	4.600	7.50	15.65	0.13	0.79	0.00	0.00	0.00	0.00	0.00	0.78	0.91	0.91	0.06	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
811	4.500	7.50	15.65	0.13	0.79	0.00	0.00	0.00	0.00	0.00	0.78	0.91	0.91	0.06	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
812	4.400	7.50	15.65	0.13	0.79	0.00	0.00	0.00	0.00	0.00	0.78	0.91	0.91	0.06	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
813	4.300	7.50	15.65	0.13	0.79	0.00	0.00	0.00	0.00	0.00	0.78	0.91	0.91	0.06	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
814	4.200	7.50	15.65	0.13	0.79	0.00	0.00	0.00	0.00	0.00	0.78	0.91	0.91	0.06	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
815	4.100	7.50	15.65	0.13	0.79	0.00	0.00	0.00	0.00	0.00	0.78	0.91	0.91	0.06	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
816	4.000	7.50	15.65	0.13	0.79	0.00	0.00	0.00	0.00	0.00	0.78	0.91	0.91	0.06	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
817	3.900	7.50	15.65	0.13	0.79	0.00	0.00	0.00	0.00	0.00	0.78	0.91	0.91	0.06	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
818	3.800	7.50	15.65	0.13	0.79	0.00	0.00	0.00	0.00	0.00	0.78	0.91	0.91	0.06	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20	DEG C	RATE	12.92	0.08	0.05	0.00	0.00	0.00	0.00	0.00	0.41			0.03	0.05	0.00	0.00	0.10	0.00	0.00	0.00			0.00	0.00	0.00	
*	g/m ² /d		**	mg/L/day																							

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	
806	5.000	30.40	0.27	531.75	9.84	6.75	1.94	0.00	1.94	0.00	0.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
807	4.900	30.40	0.27	531.75	9.84	6.75	1.95	0.00	1.95	0.00	0.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
808	4.800	30.40	0.27	531.75	9.84	6.76	1.95	0.00	1.95	0.00	0.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
809	4.700	30.40	0.27	531.75	9.84	6.76	1.96	0.00	1.96	0.00	0.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
810	4.600	30.40	0.27	531.75	9.84	6.76	1.96	0.00	1.96	0.00	0.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
811	4.500	30.40	0.27	531.75	9.84	6.76	1.97	0.00	1.97	0.00	0.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
812	4.400	30.40	0.27	531.75	9.84	6.76	1.97	0.00	1.97	0.00	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
813	4.300	30.40	0.27	531.75	9.84	6.76	1.98	0.00	1.98	0.00	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
814	4.200	30.40	0.27	531.75	9.84	6.76	1.98	0.00	1.98	0.00	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
815	4.100	30.40	0.27	531.75	9.84	6.76	1.99	0.00	1.99	0.00	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
816	4.000	30.40	0.27	531.75	9.84	6.76	1.99	0.00	1.99	0.00	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
817	3.900	30.40	0.27	531.75	9.84	6.76	1.99	0.00	1.99	0.00	0.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
818	3.800	30.40	0.27	531.75	9.84	6.76	2.00	0.00	2.00	0.00	0.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
806	5.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
807	4.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
808	4.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
809	4.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

810	4.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
811	4.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
812	4.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
813	4.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
814	4.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
815	4.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
816	4.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
817	3.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
818	3.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT HWY 190 WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 80 PAQUET FROM DD17 TO TIDAL REACH BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
836	UPR RCH	0.00356	30.40	0.27	531.75	9.84	6.76	2.00	0.00	2.00	0.00	0.92	0.00	0.00	0.00	0.00	0.00	0.00
836	TRIB	0.00271	30.40	0.43	828.86	38.02	6.07	7.55	0.00	7.55	0.00	3.17	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
836	3.80	3.70	0.00628	86.5	0.03299	0.04	4.07	0.10	1.90	19.03	190.49	0.19	0.00	0.000	0.000	0.033
837	3.70	3.60	0.00628	86.5	0.03299	0.04	4.10	0.10	1.90	19.03	190.49	0.19	0.00	0.000	0.000	0.033
838	3.60	3.50	0.00628	86.5	0.03299	0.04	4.14	0.10	1.90	19.03	190.49	0.19	0.00	0.000	0.000	0.033
839	3.50	3.40	0.00628	86.5	0.03299	0.04	4.17	0.10	1.90	19.03	190.49	0.19	0.00	0.000	0.000	0.033
TOT AVG				0.0330		0.14		0.10	1.90	76.13	761.97	0.19				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECAY	BOD1 SETT	ABOD1 DECAY	BOD1 HYDR	BOD2 DECAY	BOD2 SETT	ABOD2 DECAY	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECAY	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECAY	NCM DECAY	NCM SETT							
836	3.700	7.49	13.76	0.13	0.64	0.00	0.00	0.00	0.00	0.00	0.78	1.06	1.06	0.06	0.64	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00							
837	3.600	7.49	13.76	0.13	0.64	0.00	0.00	0.00	0.00	0.00	0.78	1.05	1.05	0.06	0.64	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.00	0.00	0.00	0.00							
838	3.500	7.49	13.76	0.13	0.64	0.00	0.00	0.00	0.00	0.00	0.78	1.05	1.05	0.06	0.64	0.00	0.00	0.00	0.00	0.00	0.00	0.60	0.00	0.00	0.00	0.00							
839	3.400	7.48	13.76	0.13	0.64	0.00	0.00	0.00	0.00	0.00	0.78	1.32	1.32	0.06	0.64	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00							
AVG 20 DEG C RATE	11.36	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41			0.03	0.13	0.00	0.00	0.10	0.00	0.00	0.00			0.00	0.00	0.00							
*	g/m²/d		**	mg/L/day																													

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL
--------------	-------------	------------	----------	------	----	---------	-----------	-----------	------------	------------	------------	------------	------------	------------	-------------	-------------	------------	------------	------------	-------------	-------------	------------	------------	--------------

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

836	3.700	30.40	0.34	660.20	22.02	6.54	4.31	0.00	4.58	0.00	1.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.5	0.0	0.0
837	3.600	30.40	0.34	660.20	22.02	6.59	4.23	0.00	4.76	0.00	1.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.0	0.0	0.0
838	3.500	30.40	0.34	660.20	22.02	6.64	4.15	0.00	4.95	0.00	1.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.5	0.0	0.0
839	3.400	30.40	0.68	1265.92	227.24	5.85	8.47	0.00	9.54	0.00	2.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
836	3.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.5	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
837	3.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	5.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
838	3.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.5	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
839	3.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT HWY 190 WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 81 PAQUET TIDAL REACH TO BP02 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
840	UPR RCH	0.00628	30.40	0.68	1265.92	227.24	5.85	8.47	0.00	9.54	0.00	2.66	0.00	0.00	0.00	10.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
840	3.40	3.30	0.00628	86.5	0.00030	3.83	8.00	1.10	18.90	2079.00	1890.00	20.79	189.00	0.000	0.070	0.000
841	3.30	3.20	0.00628	86.5	0.00030	3.83	11.84	1.10	18.90	2079.00	1890.00	20.79	378.00	0.001	0.116	0.001
842	3.20	3.10	0.00628	86.5	0.00030	3.83	15.67	1.10	18.90	2079.00	1890.00	20.79	567.00	0.001	0.168	0.001
843	3.10	3.00	0.00628	86.5	0.00030	3.83	19.50	1.10	18.90	2079.00	1890.00	20.79	756.00	0.001	0.222	0.001
844	3.00	2.90	0.00628	86.5	0.00030	3.83	23.33	1.10	18.90	2079.00	1890.00	20.79	945.00	0.001	0.276	0.001
845	2.90	2.80	0.00628	86.5	0.00030	3.83	27.16	1.10	18.90	2079.00	1890.00	20.79	1134.00	0.002	0.331	0.002
846	2.80	2.70	0.00628	86.5	0.00030	3.83	31.00	1.10	18.90	2079.00	1890.00	20.79	1323.00	0.002	0.386	0.002
847	2.70	2.60	0.00628	86.5	0.00030	3.83	34.83	1.10	18.90	2079.00	1890.00	20.79	1512.00	0.002	0.441	0.002
848	2.60	2.50	0.00628	86.5	0.00030	3.83	38.66	1.10	18.90	2079.00	1890.00	20.79	1701.00	0.002	0.496	0.002
849	2.50	2.40	0.00628	86.5	0.00030	3.83	42.49	1.10	18.90	2079.00	1890.00	20.79	1890.00	0.003	0.551	0.003
TOT AVG						38.32				20790.00	18900.00					
				0.0003				1.10	18.90					20.79		

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE mg/L	BOD1 DECAT 1/da	BOD1 SETT DECAT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR DECAT 1/da	BOD2 DECAT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT DECAT 1/da	NH3-N SRCE 1/da	NH3-N DECAT 1/da	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da
840	3.300	7.47	0.77	0.13	0.06	0.00	0.00	0.00	0.00	0.50	1.29	1.29	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

841	3.200	7.46	0.77	0.13	0.06	0.00	0.00	0.00	0.00	0.00	0.50	1.39	1.39	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00
842	3.100	7.45	0.77	0.13	0.06	0.00	0.00	0.00	0.00	0.00	0.50	1.44	1.44	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00
843	3.000	7.44	0.77	0.13	0.06	0.00	0.00	0.00	0.00	0.00	0.50	1.47	1.47	0.05	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00
844	2.900	7.44	0.77	0.13	0.06	0.00	0.00	0.00	0.00	0.00	0.50	1.48	1.48	0.05	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00
845	2.800	7.43	0.77	0.13	0.06	0.00	0.00	0.00	0.00	0.00	0.50	1.48	1.48	0.05	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00
846	2.700	7.43	0.77	0.13	0.06	0.00	0.00	0.00	0.00	0.00	0.50	1.47	1.47	0.05	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00
847	2.600	7.42	0.77	0.13	0.06	0.00	0.00	0.00	0.00	0.00	0.50	1.46	1.46	0.05	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00
848	2.500	7.42	0.77	0.13	0.06	0.00	0.00	0.00	0.00	0.00	0.50	1.43	1.43	0.05	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00
849	2.400	7.42	0.77	0.13	0.06	0.00	0.00	0.00	0.00	0.00	0.50	1.40	1.40	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00

AVG 20 DEG C RATE 0.64 0.08 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.26 0.03 0.00 0.00 0.00 0.10 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL
840	3.300	30.40	0.97	1787.57	403.97	4.90	12.36	0.00	13.43	0.00	3.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.
841	3.200	30.40	1.17	2154.23	528.19	4.47	13.91	0.00	14.98	0.00	3.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.
842	3.100	30.40	1.35	2472.53	636.03	4.23	14.71	0.00	15.78	0.00	3.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.
843	3.000	30.40	1.51	2753.41	731.19	4.09	15.12	0.00	16.19	0.00	4.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.
844	2.900	30.40	1.65	3007.24	817.19	4.03	15.29	0.00	16.36	0.00	4.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.
845	2.800	30.40	1.78	3240.64	896.27	4.01	15.29	0.00	16.36	0.00	4.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.
846	2.700	30.40	1.90	3457.99	969.90	4.02	15.16	0.00	16.23	0.00	3.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.
847	2.600	30.40	2.02	3662.30	1039.12	4.05	14.92	0.00	15.99	0.00	3.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.
848	2.500	30.40	2.13	3855.76	1104.67	4.10	14.58	0.00	15.64	0.00	3.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.
849	2.400	30.40	2.23	4040.01	1167.09	4.15	14.13	0.00	15.20	0.00	3.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
840	3.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
841	3.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
842	3.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
843	3.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
844	2.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
845	2.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
846	2.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
847	2.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
848	2.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
849	2.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT HWY 190
 REACH NO. 82 PAQUET FROM BP02 TO BP03

WATER QUALITY/HYDRAULIC MODEL FOR:
 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
850	UPR RCH	0.00628	30.40	2.23	4040.01	1167.09	4.15	14.13	0.00	15.20	0.00	3.68	0.00	0.00	0.00	10.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
850	2.40	2.30	0.00628	86.5	0.00034	3.37	45.87	1.00	18.29	1829.00	1829.00	18.29	2072.90	0.003	0.635	0.003
851	2.30	2.20	0.00628	86.5	0.00034	3.37	49.24	1.00	18.29	1829.00	1829.00	18.29	2255.80	0.003	0.691	0.003
852	2.20	2.10	0.00628	86.5	0.00034	3.37	52.61	1.00	18.29	1829.00	1829.00	18.29	2438.70	0.004	0.747	0.004
853	2.10	2.00	0.00628	86.5	0.00034	3.37	55.98	1.00	18.29	1829.00	1829.00	18.29	2621.60	0.004	0.803	0.004
854	2.00	1.90	0.00628	86.5	0.00034	3.37	59.35	1.00	18.29	1829.00	1829.00	18.29	2804.50	0.004	0.860	0.004
855	1.90	1.80	0.00628	86.5	0.00034	3.37	62.72	1.00	18.29	1829.00	1829.00	18.29	2987.40	0.005	0.916	0.005
856	1.80	1.70	0.00628	86.5	0.00034	3.37	66.09	1.00	18.29	1829.00	1829.00	18.29	3170.30	0.005	0.972	0.005
857	1.70	1.60	0.00628	86.5	0.00034	3.37	69.47	1.00	18.29	1829.00	1829.00	18.29	3353.20	0.005	1.028	0.005
TOT AVG					0.0003	26.97		1.00	18.29	14632.00	14632.00	18.29				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECAY	BOD1 SETT	ABOD1 DECAY	BOD1 HYDR	BOD2 DECAY	BOD2 SETT	ABOD2 DECAY	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECAY	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECAY	NCM DECAY	NCM SETT	
850	2.300	7.41	0.97	0.13	0.06	0.00	0.00	0.00	0.00	0.00	1.19	2.06	2.06	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00
851	2.200	7.41	0.97	0.13	0.06	0.00	0.00	0.00	0.00	0.00	1.19	2.03	2.03	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00
852	2.100	7.40	0.97	0.13	0.06	0.00	0.00	0.00	0.00	0.00	1.19	2.00	2.00	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00
853	2.000	7.40	0.97	0.13	0.06	0.00	0.00	0.00	0.00	0.00	1.19	1.98	1.98	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00
854	1.900	7.39	0.97	0.13	0.06	0.00	0.00	0.00	0.00	0.00	1.19	1.96	1.96	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00
855	1.800	7.39	0.97	0.13	0.06	0.00	0.00	0.00	0.00	0.00	1.19	1.95	1.95	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00
856	1.700	7.39	0.97	0.13	0.06	0.00	0.00	0.00	0.00	0.00	1.19	1.94	1.94	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00
857	1.600	7.38	0.97	0.13	0.06	0.00	0.00	0.00	0.00	0.00	1.19	1.93	1.93	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00
AVG 20	DEG C RATE	0.80	0.08	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.62			0.03	0.01	0.00	0.00	0.10	0.00	0.00	0.00			0.00	0.00	0.00	0.00

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EOG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EOG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL	
850	2.300	30.40	2.33	4223.91	1229.39	4.19	13.56	0.00	14.62	0.00	3.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.
851	2.200	30.40	2.44	4408.40	1291.90	4.25	13.08	0.00	14.15	0.00	3.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.
852	2.100	30.40	2.54	4587.30	1352.51	4.32	12.69	0.00	13.76	0.00	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.
853	2.000	30.40	2.63	4761.17	1411.41	4.38	12.37	0.00	13.44	0.00	3.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.
854	1.900	30.40	2.73	4930.46	1468.77	4.45	12.11	0.00	13.18	0.00	3.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.
855	1.800	30.40	2.82	5095.59	1524.71	4.53	11.89	0.00	12.96	0.00	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

856	1.700	30.40	2.91	5256.90	1579.36	4.61	11.70	0.00	12.77	0.00	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0
857	1.600	30.40	3.00	5414.68	1632.82	4.71	11.54	0.00	12.61	0.00	3.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
850	2.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
851	2.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
852	2.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
853	2.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
854	1.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
855	1.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
856	1.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
857	1.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT HWY 190
REACH NO. 83 PAQUET FROM BP03 TO TRIB 24

WATER QUALITY/HYDRAULIC MODEL FOR:
BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM mg/L
858	UPR RCH	0.00628	30.40	3.00	5414.68	1632.82	4.71	11.54	0.00	12.61	0.00	3.21	0.00	0.00	0.00	10.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
858	1.60	1.50	0.00628	86.5	0.00020	5.90	75.37	1.50	21.34	3201.00	2134.00	32.01	3566.60	0.003	0.876	0.003
859	1.50	1.40	0.00628	86.5	0.00020	5.90	81.27	1.50	21.34	3201.00	2134.00	32.01	3780.00	0.003	0.929	0.003
860	1.40	1.30	0.00628	86.5	0.00020	5.90	87.17	1.50	21.34	3201.00	2134.00	32.01	3993.40	0.004	0.981	0.003
TOT						17.70				9603.00	6402.00					
AVG				0.0002				1.50	21.34			32.01				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR 1/da	BOD2 DECAT 1/da	BOD2 SETT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAT 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da
858	1.500	7.38	0.73	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.94	1.67	1.67	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00
859	1.400	7.38	0.73	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.94	1.67	1.67	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00
860	1.300	7.38	0.73	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.94	1.66	1.66	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00
AVG	20 DEG C RATE	0.61	0.08	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.49			0.03	0.01	0.00	0.00	0.10	0.00	0.00	0.00		0.00	0.00	0.00	

* g/m²/d ** mg/L/day

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL	
858	1.500	30.40	3.07	5542.12	1675.99	4.80	11.43	0.00	12.50	0.00	3.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.
859	1.400	30.40	3.13	5648.24	1711.95	4.89	11.35	0.00	12.42	0.00	3.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.
860	1.300	30.40	3.19	5750.70	1746.66	5.00	11.29	0.00	12.35	0.00	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
858	1.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
859	1.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
860	1.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000 0.000

FINAL REPORT HWY 190 WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 85 PAQUET FROM TRIB 24 TO TRIB 25 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
865	UPR RCH	0.00628	30.40	3.19	5750.70	1746.66	5.00	11.29	0.00	12.35	0.00	3.30	0.00	0.00	0.00	10.00	0.00	0.00
865	TRIB	0.00028	30.40	3.23	5830.97	1773.92	5.11	10.61	0.00	11.68	0.00	3.20	0.00	0.00	0.00	10.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
865	1.30	1.20	0.00656	82.7	0.00020	5.65	92.81	1.50	21.34	3201.00	2134.00	32.01	5010.80	0.004	1.232	0.004
866	1.20	1.10	0.00656	82.7	0.00020	5.65	98.46	1.50	21.34	3201.00	2134.00	32.01	5224.20	0.005	1.284	0.005
867	1.10	1.00	0.00656	82.7	0.00020	5.65	104.11	1.50	21.34	3201.00	2134.00	32.01	5437.60	0.005	1.337	0.005
TOT AVG					0.0002	16.94		1.50	21.34	9603.00	6402.00	32.01				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECA 1/da	BOD1 SETT 1/da	ABOD1 DECA 1/da	BOD1 HYDR 1/da	BOD1 DECA 1/da	BOD2 SETT 1/da	ABOD2 DECA 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECA 1/da	NH3-N SRCE 1/da	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECA 1/da	NCM DECA 1/da	NCM SETT 1/da
865	1.200	7.37	0.73	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.47	1.19	1.19	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00
866	1.100	7.37	0.73	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.47	1.19	1.19	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

867 1.000 7.37 0.73 0.13 0.04 0.00 0.00 0.00 0.00 0.47 1.19 1.19 0.06 0.04 0.00 0.00 0.00 0.00 0.00 0.81 0.00 0.00 0.00 0.00
 AVG 20 DEG C RATE 0.61 0.08 0.01 0.00 0.00 0.00 0.00 0.00 0.24 0.03 0.01 0.00 0.00 0.10 0.00 0.00 0.00 0.00 0.00

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	
865	1.200	30.40	3.24	5840.95	1777.23	5.11	11.23	0.00	12.30	0.00	3.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.
866	1.100	30.40	3.28	5925.47	1805.85	5.21	11.33	0.00	12.39	0.00	3.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.
867	1.000	30.40	3.33	6007.93	1833.76	5.31	11.33	0.00	12.39	0.00	3.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
865	1.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
866	1.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
867	1.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE

0.000 0.000 0.000 0.000

0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT HWY 190
 REACH NO. 88 PAQUET FROM TRIB 25 TO BP04

WATER QUALITY/HYDRAULIC MODEL FOR:
 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
878	UPR RCH	0.00656	30.40	3.33	6007.93	1833.76	5.31	11.33	0.00	12.39	0.00	3.34	0.00	0.00	0.00	10.00	0.00	0.00
878	TRIB	0.00028	30.40	3.37	6070.18	1854.86	5.33	10.63	0.00	11.70	0.00	3.18	0.00	0.00	0.00	10.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
878	1.00	0.90	0.00684	79.3	0.00015	7.73	111.84	1.50	30.48	4572.00	3048.00	45.72	7854.60	0.005	1.353	0.005
879	0.90	0.80	0.00684	79.3	0.00015	7.73	119.57	1.50	30.48	4572.00	3048.00	45.72	8159.40	0.005	1.405	0.005
880	0.80	0.70	0.00684	79.3	0.00015	7.73	127.30	1.50	30.48	4572.00	3048.00	45.72	8464.20	0.005	1.458	0.005
881	0.70	0.60	0.00684	79.3	0.00015	7.73	135.03	1.50	30.48	4572.00	3048.00	45.72	8769.00	0.005	1.510	0.005
882	0.60	0.50	0.00684	79.3	0.00015	7.73	142.76	1.50	30.48	4572.00	3048.00	45.72	9073.80	0.006	1.563	0.006
883	0.50	0.40	0.00684	79.3	0.00015	7.73	150.49	1.50	30.48	4572.00	3048.00	45.72	9378.60	0.006	1.616	0.006
884	0.40	0.30	0.00684	79.3	0.00015	7.73	158.22	1.50	30.48	4572.00	3048.00	45.72	9683.40	0.006	1.668	0.006
885	0.30	0.20	0.00684	79.3	0.00015	7.73	165.95	1.50	30.48	4572.00	3048.00	45.72	9988.20	0.006	1.721	0.006
TOT						61.85				36576.00	24384.00					
AVG					0.0001			1.50	30.48			45.72				

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECATY 1/da	BOD1 SETT DECATY 1/da	ABOD1 DECATY 1/da	BOD1 HYDR DECATY 1/da	BOD2 DECATY 1/da	BOD2 SETT DECATY 1/da	ABOD2 DECATY 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT DECATY 1/da	NH3-N 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECATY 1/da	NCM DECATY 1/da	NCM SETT 1/da	
878	0.900	7.37	0.73	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.72	0.72	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00
879	0.800	7.37	0.73	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.73	0.73	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00
880	0.700	7.37	0.73	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.73	0.73	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00
881	0.600	7.37	0.73	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.73	0.73	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00
882	0.500	7.36	0.73	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.71	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00
883	0.400	7.36	0.73	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.69	0.69	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00
884	0.300	7.36	0.73	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.67	0.67	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00
885	0.200	7.36	0.73	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.64	0.64	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.61	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.03	0.00	0.00	0.00	0.10	0.00	0.00			0.00	0.00	0.00	
* g/m ² /d			** mg/L/day																								

***** WATER QUALITY CONSTITUENT VALUES

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL
878	0.900	30.40	3.37	6075.08	1856.50	5.40	11.25	0.00	12.32	0.00	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0
879	0.800	30.40	3.40	6134.00	1876.43	5.50	11.39	0.00	12.46	0.00	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0
880	0.700	30.40	3.43	6191.36	1895.83	5.59	11.42	0.00	12.48	0.00	3.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0
881	0.600	30.40	3.46	6247.28	1914.75	5.68	11.33	0.00	12.40	0.00	3.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0
882	0.500	30.40	3.50	6301.82	1933.20	5.78	11.15	0.00	12.21	0.00	3.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0
883	0.400	30.40	3.53	6355.07	1951.21	5.89	10.86	0.00	11.93	0.00	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0
884	0.300	30.40	3.55	6407.11	1968.82	6.00	10.48	0.00	11.55	0.00	2.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0
885	0.200	30.40	3.58	6457.98	1986.03	6.13	10.00	0.00	11.07	0.00	2.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0

***** PHYTOPLANKTON AND PERIPHYTON DATA

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
878	0.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
879	0.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
880	0.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
881	0.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
882	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
883	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
884	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
885	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20 DEG C RATE										0.000	0.000	0.000	0.000										0.000	0.000	0.000		

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

REACH NO. 89 PAQUET FROM BP04 TO LIBERTY

BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
886	UPR RCH	0.00684	30.40	3.58	6457.98	1986.03	6.13	10.00	0.00	11.07	0.00	2.60	0.00	0.00	0.00	10.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
886	0.20	0.10	0.00684	79.3	0.00015	7.73	173.68	1.50	30.48	4572.00	3048.00	45.72	10293.00	0.006	1.773	0.006
887	0.10	0.00	0.00684	79.3	0.00015	7.73	181.42	1.50	30.48	4572.00	3048.00	45.72	10597.80	0.007	1.826	0.007
TOT AVG					0.0001	15.46		1.50	30.48	9144.00	6096.00	45.72				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECAT	BOD1 SETT	ABOD1 DECAT	BOD1 HYDR DECAT	BOD2 DECAT	BOD2 SETT	ABOD2 DECAT	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECAT	NH3-N SRCE	NO3-N RATE	DENIT HYDR	ORG-P SETT	ORG-P SRCE	PO4 PROD	PHYTO PROD	PERIP PROD	COLI DECAT	NCM DECAT	NCM SETT				
886	0.100	7.36	0.73	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.60	0.60	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.68	0.00	0.00	0.00	0.00	0.00			
887	0.000	7.36	0.73	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.52	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55	0.00	0.00	0.00	0.00	0.00			
AVG 20 DEG C RATE			0.61	0.08	0.02	0.00	0.00	0.00	0.00	0.00	0.00			0.03	0.02	0.00	0.00	0.10	0.00	0.00	0.00				0.00	0.00	0.00				
*	g/m²/d		**	mg/L/day																											

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL		
886	0.100	30.40	3.61	6507.77	2002.87	6.26	9.42	0.00	10.32	0.00	2.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.4	0.0	0.
887	0.000	30.40	3.64	6556.51	2019.36	6.40	8.05	0.00	8.78	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.8	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
886	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
887	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20 DEG C RATE										0.000	0.000	0.000	0.000										0.000	0.000	0.000		

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT DRAINAGE DITCH 16

WATER QUALITY/HYDRAULIC MODEL FOR:

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

REACH NO. 77 DD16

BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
797	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	1.79	0.00	1.79	0.00	0.81	0.00	0.00	0.00	0.00	0.00	0.00
797	WSTLD	0.00000	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
797	0.90	0.80	0.00029	1.1	0.00568	0.20	0.20	0.05	1.00	5.04	100.32	0.05	0.00	0.000	0.000	0.006
798	0.80	0.70	0.00029	1.1	0.00568	0.20	0.41	0.05	1.00	5.04	100.32	0.05	0.00	0.000	0.000	0.006
799	0.70	0.60	0.00029	1.1	0.00568	0.20	0.61	0.05	1.00	5.04	100.32	0.05	0.00	0.000	0.000	0.006
800	0.60	0.50	0.00029	1.1	0.00568	0.20	0.81	0.05	1.00	5.04	100.32	0.05	0.00	0.000	0.000	0.006
801	0.50	0.40	0.00029	1.1	0.00568	0.20	1.02	0.05	1.00	5.04	100.32	0.05	0.00	0.000	0.000	0.006
802	0.40	0.30	0.00029	1.1	0.00568	0.20	1.22	0.05	1.00	5.04	100.32	0.05	0.00	0.000	0.000	0.006
803	0.30	0.20	0.00029	1.1	0.00568	0.20	1.43	0.05	1.00	5.04	100.32	0.05	0.00	0.000	0.000	0.006
804	0.20	0.10	0.00029	1.1	0.00568	0.20	1.63	0.05	1.00	5.04	100.32	0.05	0.00	0.000	0.000	0.006
805	0.10	0.00	0.00029	1.1	0.00568	0.20	1.83	0.05	1.00	5.04	100.32	0.05	0.00	0.000	0.000	0.006
TOT						1.83				45.32	902.85					
AVG				0.0057				0.05	1.00			0.05				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECAT	BOD1 SETT	ABOD1 DECAT	BOD1 HYDR	BOD2 DECAT	BOD2 SETT	ABOD2 DECAT	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECAT	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECAT	NCM DECAT	NCM SETT	
797	0.800	7.50	17.98	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.78	0.91	0.91	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
798	0.700	7.50	17.98	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.78	0.90	0.90	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
799	0.600	7.50	17.98	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.78	0.90	0.90	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
800	0.500	7.50	17.98	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.78	0.90	0.90	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
801	0.400	7.50	17.98	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.78	0.90	0.90	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
802	0.300	7.50	17.98	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.78	0.90	0.90	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
803	0.200	7.50	17.98	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.78	0.90	0.90	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
804	0.100	7.50	17.98	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.78	0.90	0.90	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
805	0.000	7.50	17.98	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.78	0.90	0.90	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20	DEG C	RATE	14.85	0.08	0.11	0.00	0.00	0.00	0.00	0.00	0.41			0.03	0.11	0.00	0.00	0.10	0.00	0.00	0.00			0.00	0.00	0.00	

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL	
797	0.800	30.40	0.26	523.50	7.86	6.36	1.97	0.00	1.97	0.00	1.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
798	0.700	30.40	0.26	523.50	7.86	6.45	1.92	0.00	1.92	0.00	1.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
799	0.600	30.40	0.26	523.50	7.86	6.47	1.89	0.00	1.89	0.00	1.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

832	0.40	0.30	0.00271	89.6	0.01221	0.09	1.33	0.11	1.97	22.23	197.01	0.22	0.00	0.000	0.000	0.012
833	0.30	0.20	0.00271	89.6	0.01221	0.09	1.42	0.11	1.97	22.23	197.01	0.22	0.00	0.000	0.000	0.012
834	0.20	0.10	0.00271	89.6	0.01221	0.09	1.52	0.11	1.97	22.23	197.01	0.22	0.00	0.000	0.000	0.012
835	0.10	0.00	0.00271	89.6	0.01221	0.09	1.61	0.11	1.97	22.23	197.01	0.22	0.00	0.000	0.000	0.012

TOT						1.61				377.85	3349.13					
AVG					0.0122			0.11	1.97			0.22				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR 1/da	BOD2 DECAT 1/da	BOD2 SETT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da	
819	1.600	7.49	9.00	0.13	0.57	0.00	0.00	0.00	0.00	0.00	0.78	2.03	2.03	0.05	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
820	1.500	7.49	9.00	0.13	0.57	0.00	0.00	0.00	0.00	0.00	0.78	1.96	1.96	0.06	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
821	1.400	7.49	9.00	0.13	0.57	0.00	0.00	0.00	0.00	0.00	0.78	1.89	1.89	0.06	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
822	1.300	7.49	9.00	0.13	0.57	0.00	0.00	0.00	0.00	0.00	0.78	1.82	1.82	0.06	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
823	1.200	7.49	9.00	0.13	0.57	0.00	0.00	0.00	0.00	0.00	0.78	1.76	1.76	0.06	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
824	1.100	7.49	9.00	0.13	0.57	0.00	0.00	0.00	0.00	0.00	0.78	1.70	1.70	0.06	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
825	1.000	7.49	9.00	0.13	0.57	0.00	0.00	0.00	0.00	0.00	0.78	1.65	1.65	0.06	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
826	0.900	7.49	9.00	0.13	0.57	0.00	0.00	0.00	0.00	0.00	0.78	1.60	1.60	0.06	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
827	0.800	7.49	9.00	0.13	0.57	0.00	0.00	0.00	0.00	0.00	0.78	1.55	1.55	0.06	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
828	0.700	7.49	9.00	0.13	0.57	0.00	0.00	0.00	0.00	0.00	0.78	1.51	1.51	0.06	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
829	0.600	7.49	9.00	0.13	0.57	0.00	0.00	0.00	0.00	0.00	0.78	1.47	1.47	0.06	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
830	0.500	7.49	9.00	0.13	0.57	0.00	0.00	0.00	0.00	0.00	0.78	1.43	1.43	0.06	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
831	0.400	7.49	9.00	0.13	0.57	0.00	0.00	0.00	0.00	0.00	0.78	1.39	1.39	0.06	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
832	0.300	7.49	9.00	0.13	0.57	0.00	0.00	0.00	0.00	0.00	0.78	1.36	1.36	0.06	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
833	0.200	7.49	9.00	0.13	0.57	0.00	0.00	0.00	0.00	0.00	0.78	1.32	1.32	0.06	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
834	0.100	7.49	9.00	0.13	0.57	0.00	0.00	0.00	0.00	0.00	0.78	1.29	1.29	0.06	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
835	0.000	7.49	9.00	0.13	0.57	0.00	0.00	0.00	0.00	0.00	0.78	1.26	1.26	0.06	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20	DEG C	RATE	7.43	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.41			0.03	0.03	0.00	0.00	0.10	0.00	0.00	0.00			0.00	0.00	0.00	
*	g/m ² /d		**	mg/L/day																							

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	
819	1.600	30.40	0.43	828.86	38.02	3.68	19.55	0.00	19.55	0.00	7.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
820	1.500	30.40	0.43	828.86	38.02	4.40	18.39	0.00	18.39	0.00	6.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
821	1.400	30.40	0.43	828.86	38.02	4.83	17.30	0.00	17.30	0.00	6.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
822	1.300	30.40	0.43	828.86	38.02	5.10	16.28	0.00	16.28	0.00	6.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
823	1.200	30.40	0.43	828.86	38.02	5.28	15.32	0.00	15.32	0.00	5.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
824	1.100	30.40	0.43	828.86	38.02	5.41	14.43	0.00	14.43	0.00	5.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
825	1.000	30.40	0.43	828.86	38.02	5.52	13.58	0.00	13.58	0.00	5.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
826	0.900	30.40	0.43	828.86	38.02	5.60	12.79	0.00	12.79	0.00	5.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
827	0.800	30.40	0.43	828.86	38.02	5.67	12.05	0.00	12.05	0.00	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
828	0.700	30.40	0.43	828.86	38.02	5.74	11.35	0.00	11.35	0.00	4.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
829	0.600	30.40	0.43	828.86	38.02	5.79	10.70	0.00	10.70	0.00	4.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
830	0.500	30.40	0.43	828.86	38.02	5.85	10.09	0.00	10.09	0.00	4.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

831	0.400	30.40	0.43	828.86	38.02	5.90	9.51	0.00	9.51	0.00	3.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																								
832	0.300	30.40	0.43	828.86	38.02	5.95	8.97	0.00	8.97	0.00	3.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																								
833	0.200	30.40	0.43	828.86	38.02	5.99	8.47	0.00	8.47	0.00	3.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																								
834	0.100	30.40	0.43	828.86	38.02	6.03	7.99	0.00	7.99	0.00	3.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																								
835	0.000	30.40	0.43	828.86	38.02	6.07	7.55	0.00	7.55	0.00	3.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																								

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
819	1.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
820	1.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
821	1.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
822	1.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
823	1.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
824	1.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
825	1.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
826	0.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
827	0.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
828	0.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
829	0.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
830	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
831	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
832	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
833	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
834	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
835	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT TRIBUTARY 24 WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 84 TRIB 24 FROM TOP TO PAQUET BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
861	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	1.79	0.00	1.79	0.00	0.81	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
861	0.40	0.30	0.00028	0.0	0.00002	60.83	60.83	0.74	20.10	1487.40	2010.00	14.87	201.00	0.000	0.059	0.000
862	0.30	0.20	0.00028	0.0	0.00002	60.83	121.66	0.74	20.10	1487.40	2010.00	14.87	402.00	0.001	0.118	0.001
863	0.20	0.10	0.00028	0.0	0.00002	60.83	182.49	0.74	20.10	1487.40	2010.00	14.87	603.00	0.001	0.177	0.001
864	0.10	0.00	0.00028	0.0	0.00002	60.83	243.33	0.74	20.10	1487.40	2010.00	14.87	804.00	0.002	0.236	0.002
TOT AVG						243.33		0.74	20.10	5949.60	8040.00					

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECATY 1/da	BOD1 SETT 1/da	ABOD1 DECATY 1/da	BOD1 HYDR 1/da	BOD2 DECATY 1/da	BOD2 SETT 1/da	ABOD2 DECATY 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECATY 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECATY 1/da	NCM DECATY 1/da	NCM SETT 1/da	
861	0.300	7.38	1.14	0.13	0.09	0.00	0.00	0.00	0.00	0.00	0.78	1.16	1.16	0.06	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00	0.00
862	0.200	7.38	1.14	0.13	0.09	0.00	0.00	0.00	0.00	0.00	0.78	1.23	1.23	0.06	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.00	0.00	0.00	0.00	0.00
863	0.100	7.38	1.14	0.13	0.09	0.00	0.00	0.00	0.00	0.00	0.78	1.33	1.33	0.06	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.60	0.00	0.00	0.00	0.00	0.00
864	0.000	7.37	1.14	0.13	0.09	0.00	0.00	0.00	0.00	0.00	0.78	1.46	1.46	0.06	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00
AVG 20	DEG C RATE		0.95	0.08	0.02	0.00	0.00	0.00	0.00	0.00	0.41			0.03	0.02	0.00	0.00	0.10	0.00	0.00	0.00			0.00	0.00	0.00	
*	g/m ² /d		**	mg/L/day																							

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	
861	0.300	30.40	3.11	5606.46	1699.22	5.38	5.85	0.00	6.11	0.00	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.5	0.0	0.
862	0.200	30.40	3.17	5715.69	1735.56	5.30	7.04	0.00	7.58	0.00	2.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.0	0.0	0.
863	0.100	30.40	3.20	5782.58	1757.82	5.20	8.64	0.00	9.44	0.00	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.5	0.0	0.
864	0.000	30.40	3.23	5830.97	1773.92	5.11	10.61	0.00	11.68	0.00	3.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²	
861	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0
862	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	5.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0
863	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0
864	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0
20	DEG C RATE									0.000	0.000	0.000	0.000								0.000	0.000	0.000			

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT TRIBUTARY 25 WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 86 TRIB 25 FROM TOP TO RKM 0.3 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
868	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	1.79	0.00	1.79	0.00	0.81	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST	ENDING DIST	FLOW	PCT EFF	ADVCTV VELO	TRAVEL TIME	CUM TIME	DEPTH	WIDTH	VOLUME	SURFACE AREA	X-SECT AREA	TIDAL PRISM	TIDAL VELO	DISPRSN	MEAN VELO
----------	------------	-------------	------	---------	-------------	-------------	----------	-------	-------	--------	--------------	-------------	-------------	------------	---------	-----------

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

	km	km	m ³ /s	m/s	days	days	m	m	m ³	m ²	m ²	m ³	m/s	m ² /s	m/s	
868	1.00	0.90	0.00028	0.0	0.00002	63.28	63.28	0.94	16.46	1547.24	1646.00	15.47	164.60	0.000	0.057	0.000
869	0.90	0.80	0.00028	0.0	0.00002	63.28	126.56	0.94	16.46	1547.24	1646.00	15.47	329.20	0.001	0.114	0.001
870	0.80	0.70	0.00028	0.0	0.00002	63.28	189.84	0.94	16.46	1547.24	1646.00	15.47	493.80	0.001	0.170	0.001
871	0.70	0.60	0.00028	0.0	0.00002	63.28	253.11	0.94	16.46	1547.24	1646.00	15.47	658.40	0.001	0.227	0.001
872	0.60	0.50	0.00028	0.0	0.00002	63.28	316.39	0.94	16.46	1547.24	1646.00	15.47	823.00	0.001	0.284	0.001
873	0.50	0.40	0.00028	0.0	0.00002	63.28	379.67	0.94	16.46	1547.24	1646.00	15.47	987.60	0.002	0.341	0.002
874	0.40	0.30	0.00028	0.0	0.00002	63.28	442.95	0.94	16.46	1547.24	1646.00	15.47	1152.20	0.002	0.398	0.002
TOT						442.95				10830.68	11522.00					
AVG					0.0000			0.94	16.46			15.47				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECA	BOD1 SETT	ABOD1 DECA	BOD1 HYDR	BOD2 DECA	BOD2 SETT	ABOD2 DECA	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECA	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECA	NCM DECA	NCM SETT	
		mg/L	1/da	1/da	1/da	1/da	1/da	1/da	1/da	1/da	*	*	*	1/da	*	**	**	1/da	1/da	1/da							
868	0.900	7.38	0.90	0.13	0.07	0.00	0.00	0.00	0.00	0.00	0.78	0.97	0.97	0.06	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
869	0.800	7.38	0.90	0.13	0.07	0.00	0.00	0.00	0.00	0.00	0.78	0.99	0.99	0.06	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
870	0.700	7.37	0.90	0.13	0.07	0.00	0.00	0.00	0.00	0.00	0.78	1.02	1.02	0.06	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
871	0.600	7.37	0.90	0.13	0.07	0.00	0.00	0.00	0.00	0.00	0.78	1.05	1.05	0.06	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
872	0.500	7.37	0.90	0.13	0.07	0.00	0.00	0.00	0.00	0.00	0.78	1.09	1.09	0.06	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
873	0.400	7.37	0.90	0.13	0.07	0.00	0.00	0.00	0.00	0.00	0.78	1.14	1.14	0.06	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
874	0.300	7.37	0.90	0.13	0.07	0.00	0.00	0.00	0.00	0.00	0.78	1.20	1.20	0.06	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20	DEG C	RATE	0.74	0.08	0.01	0.00	0.00	0.00	0.00	0.00	0.41			0.03	0.01	0.00	0.00	0.10	0.00	0.00	0.00			0.00	0.00	0.00	
*	g/m ² /d		**	mg/L/day																							

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO	BOD1	BOD2	EBOD1	EBOD2	ORG-N	NH3-N	NO3-N	TOT-N	EORG-N	ETOT-N	ORG-P	PO4-P	TOT-P	EORG-P	ETOT-P	CHL A	PERIP	COLI
						mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	g/m ²	#/100mL
868	0.900	30.40	3.15	5681.73	1725.53	5.67	2.91	0.00	2.91	0.00	1.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
869	0.800	30.40	3.21	5792.66	1762.46	5.58	3.24	0.00	3.24	0.00	1.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
870	0.700	30.40	3.25	5860.60	1785.08	5.48	3.69	0.00	3.69	0.00	1.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
871	0.600	30.40	3.28	5909.74	1801.44	5.37	4.23	0.00	4.23	0.00	1.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
872	0.500	30.40	3.30	5948.30	1814.28	5.27	4.88	0.00	4.88	0.00	1.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
873	0.400	30.40	3.32	5980.07	1824.86	5.18	5.64	0.00	5.64	0.00	2.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
874	0.300	30.40	3.33	6007.10	1833.86	5.14	6.53	0.00	6.53	0.00	2.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO μg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
868	0.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
869	0.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
870	0.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
871	0.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
872	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
873	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

NO.	DIST	SHADE	DEPTH	N	LIT	N	P	N&P	TOT	GROW	RESP	DEATH	SETT	P/R	PHYTO	N	LIT	N	P	N&P	SPC	TOT	GROW	RESP	DEATH	P/R	PERIP
		frac	m	PREF	LIM	LIM	LIM	LIM	LIM	1/da	1/da	1/da	1/da	RATIO	µg/L	PREF	LIM	LIM	LIM	LIM	LIM	LIM	1/da	1/da	1/da	RATIO	g/m ²
875	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
876	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
877	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20 DEG C RATE										0.000	0.000	0.000	0.000								0.000	0.000	0.000				

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

.....EXECUTION COMPLETED

Appendix D2 – Bayou Liberty and Bayou Bonfouca Summer Justifications

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Summer Justification			
DATA TYPE 3 - PROGRAM CONSTANTS			
CONSTANT NAME	VALUE	UNITS	DATA SOURCE
K2 MAXIMUM	25	1/day at 20 deg C	EPA Policy in the absence of a measured value.
DISPERSION EQUATION	3		Equation used to account for all modes of transport.
TIDE HEIGHT	0.1		Calculated from Survey Data
TIDAL PERIOD	19.75		Calculated from Survey Data
PERIOD OF TIDAL RISE	10.5		Calculated from Survey Data
S OXYGEN DEPENDENCE THRESHOLD	1		Calibration
SOD MAXIMUM RATE	50		To verify reasonableness of model inputs
PHYTOPLANKTON OXYGEN PROD	0		Calibration
PERIPHYTON OXYGEN PROD	0		Calibration

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Summer Justification						
DATA TYPE 8 - REACH IDENTIFICATION DATA						
Reach	ID	Name	Upstream River Kilometer	Downstream River Kilometer	Element Length, meters	Data Source
1	DD	DRAINAGE DITCH 1	24.20	20.30	0.1000	ARC MAP Calc.
2	BV	VINCENT FROM RKM 20.3 TO BV01	20.30	19.50	0.1000	ARC MAP Calc.
3	BV	VINCENT FROM BV01 RKM 18.5	19.50	18.50	0.1000	ARC MAP Calc.
4	BV	VINCENT FROM RKM 18.5 TO BV02	18.50	17.60	0.1000	ARC MAP Calc.
5	DD	DRAINAGE DITCH 2	2.10	0.00	0.1000	ARC MAP Calc.
6	BV	VINCENT FROM BV02 TO DD 8	17.60	16.90	0.0500	ARC MAP Calc.
7	DD	DRAINAGE DITCH 8	0.80	0.00	0.1000	ARC MAP Calc.
8	BV	VINCENT FROM DD 8 TO DD 9	16.90	16.00	0.1000	ARC MAP Calc.
9	DD	DRAINAGE DITCH 9	2.10	0.00	0.1000	ARC MAP Calc.
10	BV	VINCENT FROM DD 9 TO RKM 15.2	16.00	15.20	0.1000	ARC MAP Calc.
11	BV	VINCENT FROM RKM 15.2 TO BV03	15.20	14.90	0.0500	ARC MAP Calc.
12	BV	VINCENT FROM BV03 TO BONFOUCA	14.90	14.40	0.1000	ARC MAP Calc.
13	UB	UPPER BONFOUCA FROM RKM 5.0 TO DD 23	5.00	2.60	0.1000	ARC MAP Calc.
14	DD	DRAINAGE DITCH 23	1.00	0.00	0.1000	ARC MAP Calc.
15	UB	UPPER BONFOUCA FROM DD 23 TO BB01	2.60	1.10	0.1000	ARC MAP Calc.

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Summer Justification						
DATA TYPE 8 - REACH IDENTIFICATION DATA						
Reach	ID	Name	Upstream River Kilometer	Downstream River Kilometer	Element Length, meters	Data Source
16	UB	UPPER BONFOUCA FROM BB01 TO BAYOU VINCENT	1.10	0.00	0.1000	ARC MAP Calc.
17	BB	BONFOUCA FROM BV TO HWY 190	14.40	14.20	0.1000	ARC MAP Calc.
18	DD	HWY 190 (DRAINAGE DITCH 5)	1.80	0.00	0.1000	ARC MAP Calc.
19	BB	BONFOUCA FROM HWY 190 TO BB02	14.20	13.30	0.1000	ARC MAP Calc.
20	BB	BONFOUCA FROM BB02 TO WD	13.30	12.10	0.1000	ARC MAP Calc.
21	WD	WEST DRAINAGE CANAL	0.30	0.00	0.1000	ARC MAP Calc.
22	BB	BONFOUCA FROM WD TO DD6	12.10	10.00	0.1000	ARC MAP Calc.
23	DD	DRAINAGE DITCH 6	0.30	0.00	0.1000	ARC MAP Calc.
24	BB	BONFOUCA FROM DD 6 TO TRIB 2	10.00	9.20	0.1000	ARC MAP Calc.
25	DD	DRAINAGE DITCH 7	1.50	0.50	0.1000	ARC MAP Calc.
26	TR	TRIBUTARY 2	0.50	0.00	0.1000	ARC MAP Calc.
27	BB	BONFOUCA FROM TRIB 2 TO BB03	9.20	8.60	0.1000	ARC MAP Calc.
28	BB	BONFOUCA FROM BB03 TO CANAL 26	8.60	7.80	0.1000	ARC MAP Calc.
29	C	CANAL 26	2.00	0.00	0.1000	ARC MAP Calc.
30	BB	BONFOUCA FROM CANAL 26 TO TRIB 4	7.80	7.60	0.1000	ARC MAP Calc.

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Summer Justification						
DATA TYPE 8 - REACH IDENTIFICATION DATA						
Reach	ID	Name	Upstream River Kilometer	Downstream River Kilometer	Element Length, meters	Data Source
31	TR	TRIBUTARY 4 - UPLAND	1.90	0.80	0.1000	ARC MAP Calc.
32	TR	TRIBUTARY 4 - TIDAL	0.80	0.00	0.1000	ARC MAP Calc.
33	BB	BONFOUCA FROM TRIB 4 TO BB04	7.60	6.80	0.1000	ARC MAP Calc.
34	BB	BONFOUCA FROM BB04 TO Rkm 5.6	6.80	5.60	0.1000	ARC MAP Calc.
35	BB	BONFOUCA FROM RKM 5.6 TO BB05	5.60	4.50	0.1000	ARC MAP Calc.
36	BB	BONFOUCA FROM BB05 TO RKM 2.7	4.50	2.70	0.1000	ARC MAP Calc.
37	BB	BONFOUCA FROM RKM 2.7 TO LIBERTY	2.70	0.80	0.1000	ARC MAP Calc.
38	BL	LIBERTY FROM RKM 15.0 TO TRIB 1	15.00	14.40	0.1000	ARC MAP Calc.
39	TR	TRIBUTARY 1	2.40	0.00	0.1000	ARC MAP Calc.
40	BL	LIBERTY FROM RKM 14.4 TO DD22	14.40	13.70	0.1000	ARC MAP Calc.
41	DD	DD22	0.30	0.00	0.1000	ARC MAP Calc.
42	BL	LIBERTY FROM DD22 TO DD20	13.70	12.80	0.1000	ARC MAP Calc.
43	DD	DD20	2.70	0.00	0.1000	ARC MAP Calc.
44	BL	LIBERTY FROM DD20 TO BL03	12.80	12.60	0.1000	ARC MAP Calc.
45	BL	LIBERTY FROM BL03 TO HWY 190	12.60	10.10	0.1000	ARC MAP Calc.

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Summer Justification						
DATA TYPE 8 - REACH IDENTIFICATION DATA						
Reach	ID	Name	Upstream River Kilometer	Downstream River Kilometer	Element Length, meters	Data Source
46	DD	HWY 190 (DRAINAGE DITCH 14)	2.30	0.00	0.1000	ARC MAP Calc.
47	BL	LIBERTY FROM HWY 190 TO BL04	10.10	10.00	0.1000	ARC MAP Calc.
48	BL	LIBERTY FROM BL04 TO DD18	10.00	8.40	0.1000	ARC MAP Calc.
49	DD	DD18	0.30	0.00	0.1000	ARC MAP Calc.
50	BL	LIBERTY FROM DD18 TO DD19	8.40	7.80	0.1000	ARC MAP Calc.
51	DD	DD19	1.40	0.00	0.1000	ARC MAP Calc.
52	BL	LIBERTY FROM DD19 TO DD04	7.80	7.60	0.1000	ARC MAP Calc.
53	DD	DD04	4.20	0.00	0.1000	ARC MAP Calc.
54	BL	LIBERTY FROM DD04 TO BL05	7.60	6.90	0.1000	ARC MAP Calc.
55	BL	LIBERTY FROM BL05 TO RKM 6.3	6.90	6.30	0.1000	ARC MAP Calc.
56	BL	LIBERTY FROM RKM 6.3 TO RKM 6.0	6.30	6.00	0.1000	ARC MAP Calc.
57	BL	LIBERTY FROM RKM 6.0 TO TRIB 9	6.00	5.20	0.1000	ARC MAP Calc.
58	DD	DRAINAGE DITCH 3	0.50	0.30	0.1000	ARC MAP Calc.
59	TR	TRIBUTARY 9	0.30	0.00	0.1000	ARC MAP Calc.
60	BL	LIBERTY FROM TRIB 9 TO TRIB 6	5.20	4.40	0.1000	ARC MAP Calc.

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Summer Justification						
DATA TYPE 8 - REACH IDENTIFICATION DATA						
Reach	ID	Name	Upstream River Kilometer	Downstream River Kilometer	Element Length, meters	Data Source
61	DD	DRAINAGE DITCH 11	1.60	0.60	0.1000	ARC MAP Calc.
62	TR	TRIBUTARY 6	0.60	0.00	0.1000	ARC MAP Calc.
63	BL	LIBERTY FROM TRIB 6 TO TO TRIB 10	4.40	4.20	0.1000	ARC MAP Calc.
64	TR	TRIBUTARY 10 - UPLAND	0.70	0.20	0.1000	ARC MAP Calc.
65	TR	TRIBUTARY 10 - TIDAL	0.20	0.00	0.1000	ARC MAP Calc.
66	BL	LIBERTY FROM TRIB 10 TO BL07	4.20	3.30	0.1000	ARC MAP Calc.
67	BL	LIBERTY FROM BL07 TO TRIB 8	3.30	3.20	0.1000	ARC MAP Calc.
68	TR	TRIBUTARY 8	0.60	0.10	0.1000	ARC MAP Calc.
69	TR	TRIBUTARY 8	0.10	0.00	0.1000	ARC MAP Calc.
70	BL	LIBERTY FROM TRIB 8 TO M1	3.20	2.60	0.1000	ARC MAP Calc.
71	M	MARINA 1	0.20	0.00	0.1000	ARC MAP Calc.
72	BL	LIBERTY FROM M1 TO M2	2.60	2.50	0.1000	ARC MAP Calc.
73	M	MARINA02	1.80	0.00	0.1000	ARC MAP Calc.
74	BL	LIBERTY FROM M2 TO B PAQUET	2.50	1.10	0.1000	ARC MAP Calc.
75	DD	HWY 190 (DD13) PAQUET HEADWATERS	8.60	7.20	0.1000	ARC MAP Calc.

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Summer Justification						
DATA TYPE 8 - REACH IDENTIFICATION DATA						
Reach	ID	Name	Upstream River Kilometer	Downstream River Kilometer	Element Length, meters	Data Source
76	BP	PAQUET FROM HWY 190 TO DD16	7.20	5.10	0.1000	ARC MAP Calc.
77	DD	DD16	0.90	0.00	0.1000	ARC MAP Calc.
78	BP	PAQUET FROM RKM 5.1 TO DD17	5.10	3.80	0.1000	ARC MAP Calc.
79	DD	DD17	1.70	0.00	0.1000	ARC MAP Calc.
80	BP	PAQUET FROM DD17 TO TIDAL REACH	3.80	3.40	0.1000	ARC MAP Calc.
81	BP	PAQUET (TIDAL) TO BP02	3.40	2.40	0.1000	ARC MAP Calc.
82	BP	PAQUET FROM BP02 TO BP03	2.40	1.60	0.1000	ARC MAP Calc.
83	BP	PAQUET FROM BP03 TO TRIB 24	1.60	1.30	0.1000	ARC MAP Calc.
84	C1	TRIB 24 FROM TOP TO PAQUET	0.40	0.00	0.1000	ARC MAP Calc.
85	BP	PAQUET FROM TRIB 24 TO TRIB 25	1.30	1.00	0.1000	ARC MAP Calc.
86	C2	TRIB 25 FROM TOP TO RKM 0.3	1.00	0.30	0.1000	ARC MAP Calc.
87	C2	TRIB 25 FROM RKM 0.3 TO PAQUET	0.30	0.00	0.1000	ARC MAP Calc.
88	BP	PAQUET FROM TRIB 25 TO BP04	1.00	0.20	0.1000	ARC MAP Calc.
89	BP	PAQUET FROM BP04 TO LIBERTY	0.20	0.00	0.1000	ARC MAP Calc.
90	BL	LIBERTY FROM PAQUET TO BONFOUCA	1.10	0.00	0.1000	ARC MAP Calc.
91	BB	BONFOUCA FROM LIBERTY TO PONTCHARTRAIN (INCL BB06)	0.80	0.00	0.1000	ARC MAP Calc.

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Summer Justification									
Reach	Name	Data Type 9 - Advective Hydraulic Coefficients					Depth Exp. "e"	Depth Const. "f"	Data Source
		Width Coeff. "a"	Width Exp. "b"	Width Const. "c"	Data Source	Depth Coeff. "d"			
1	DRAINAGE DITCH 1	11.5977	0.3	0.000	Generic ditch	0.9468	0.36	0.000	Generic ditch
2	VINCENT FROM RKM 20.3 TO BV01	4.765	0.3	0.000	Bayou Vincent Reaches	0.3255	0.36	0.000	Bayou Vincent Reaches
3	VINCENT FROM BV01 RKM 18.5	4.765	0.3	0.000	Bayou Vincent Reaches	0.3255	0.36	0.000	Bayou Vincent Reaches
4	VINCENT FROM RKM 18.5 TO BV02	4.765	0.3	0.000	Bayou Vincent Reaches	0.3255	0.36	0.000	Bayou Vincent Reaches
5	DRAINAGE DITCH 2	11.5977	0.3	0.000	Generic ditch	0.9468	0.36	0.000	Generic ditch
6	VINCENT FROM BV02 TO DD 8	4.765	0.3	0.000	Bayou Vincent Reaches	0.3255	0.36	0.000	Bayou Vincent Reaches
7	DRAINAGE DITCH 8	11.5977	0.3	0.000	Generic ditch	0.9468	0.36	0.000	Generic ditch
8	VINCENT FROM DD 8 TO DD 9	4.765	0.3	0.000	Bayou Vincent Reaches	0.3255	0.36	0.000	Bayou Vincent Reaches
9	DRAINAGE DITCH 9	11.5977	0.3	0.000	Generic ditch	0.9468	0.36	0.000	Generic ditch
10	VINCENT FROM DD 9 TO RKM 15.2	4.765	0.3	0.000	Bayou Vincent Reaches	0.3255	0.36	0.000	Bayou Vincent Reaches
11	VINCENT FROM RKM 15.2 TO BV03	0	0	4.724	Bayou Vincent Reaches	0	0	0.271	Bayou Vincent Reaches
12	VINCENT FROM BV03 TO BONFOUCA	0	0	4.724	Bayou Vincent Reaches	0	0	0.271	Bayou Vincent Reaches
13	UPPER BONFOUCA FROM RKM 5.0 TO DD 23	5.813	0.3	0.000	Upper Bayou Bonfouca Reaches	0.413	0.36	0.000	Upper Bayou Bonfouca Reaches
14	DRAINAGE DITCH 23	11.5977	0.3	0.000	Generic ditch	0.9468	0.36	0.000	Generic ditch
15	UPPER BONFOUCA FROM DD 23 TO BB01	5.813	0.3	0.000	Upper Bayou Bonfouca Reaches	0.413	0.36	0.000	Upper Bayou Bonfouca Reaches

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Summer Justification									
Reach	Name	Data Type 9 - Advective Hydraulic Coefficients					Depth Const. "f"	Data Source	
		Width Coeff. "a"	Width Exp. "b"	Width Const. "c"	Data Source	Depth Coeff. "d"			Depth Exp. "e"
16	UPPER BONFOUCA FROM BB01 TO BAYOU VINCENT	8.719	0.3	0.000	Upper Bayou Bonfouca Reaches	0.62	0.36	0.000	Upper Bayou Bonfouca Reaches
17	BONFOUCA FROM BV TO HWY 190	0	0	10.840	Bayou Bonfouca Reaches	0	0	0.872	Bayou Bonfouca Reaches
18	HWY 190 (DRAINAGE DITCH 5)	11.5977	0.3	0.000	Generic ditch	0.9468	0.36	0.000	Generic ditch
19	BONFOUCA FROM HWY 190 TO BB02	0	0	10.840	Bayou Bonfouca Reaches	0	0	0.872	Bayou Bonfouca Reaches
20	BONFOUCA FROM BB02 TO WD	0	0	10.840	Bayou Bonfouca Reaches	0	0	0.872	Bayou Bonfouca Reaches
21	WEST DRAINAGE CANAL	0.000	0	3	Tidal Channel & Marine Reaches	0	0	0.150	Tidal Channel & Marine Reaches
22	BONFOUCA FROM WD TO DD6	0	0	54.250	Bayou Bonfouca Reaches	0	0	1.240	Bayou Bonfouca Reaches
23	DRAINAGE DITCH 6	11.5977	0.3	0.000	Generic ditch	0.9468	0.36	0.000	Generic ditch
24	BONFOUCA FROM DD 6 TO TRIB 2	0	0	93.080	Bayou Bonfouca Reaches	0	0	1.603	Bayou Bonfouca Reaches
25	DRAINAGE DITCH 7	11.5977	0.3	0.000	Generic ditch	0.9468	0.36	0.000	Generic ditch
26	TRIBUTARY 2	0	0	12.000	Tidal Channel & Marine Reaches	0	0	0.600	Tidal Channel & Marine Reaches
27	BONFOUCA FROM TRIB 2 TO BB03	0	0	93.080	Bayou Bonfouca Reaches	0	0	1.603	Bayou Bonfouca Reaches
28	BONFOUCA FROM BB03 TO CANAL 26	0	0	93.080	Bayou Bonfouca Reaches	0	0	1.603	Bayou Bonfouca Reaches
29	CANAL 26	0	0	114.000	Tidal Channel & Marine Reaches	0	0	1.000	Tidal Channel & Marine Reaches
30	BONFOUCA FROM CANAL 26 TO TRIB 4	0	0	76.510	Bayou Bonfouca Reaches	0	0	1.872	Bayou Bonfouca Reaches

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Summer Justification									
Reach	Name	Data Type 9 - Advective Hydraulic Coefficients					Depth Exp. "e"	Depth Const. "f"	Data Source
		Width Coeff. "a"	Width Exp. "b"	Width Const. "c"	Data Source	Depth Coeff. "d"			
31	TRIBUTARY 4 - UPLAND	11.5977	0.3	0.000	Generic ditch	0.9468	0.36	0.000	Generic ditch
32	TRIBUTARY 4 - TIDAL	0	0	18.000	Tidal Channel & Marine Reaches	0	0	0.900	Tidal Channel & Marine Reaches
33	BONFOUCA FROM TRIB 4 TO BB04	0	0	76.510	Bayou Bonfouca Reaches	0	0	1.872	Bayou Bonfouca Reaches
34	BONFOUCA FROM BB04 TO Rkm 5.6	0	0	91.440	Bayou Bonfouca Reaches	0	0	1.890	Bayou Bonfouca Reaches
35	BONFOUCA FROM RKM 5.6 TO BB05	0	0	114.300	Bayou Bonfouca Reaches	0	0	1.670	Bayou Bonfouca Reaches
36	BONFOUCA FROM BB05 TO RKM 2.7	0	0	77.700	Bayou Bonfouca Reaches	0	0	1.440	Bayou Bonfouca Reaches
37	BONFOUCA FROM RKM 2.7 TO LIBERTY	0	0	88.000	Bayou Bonfouca Reaches	0	0	1.600	Bayou Bonfouca Reaches
38	LIBERTY FROM RKM 15.0 TO TRIB 1	8.719	0.3	0.000	Bayou Liberty Reaches	0.62	0.36	0.000	Bayou Liberty Reaches
39	TRIBUTARY 1	11.5977	0.3	0.000	Generic ditch	0.9468	0.36	0.000	Generic ditch
40	LIBERTY FROM RKM 14.4 TO DD22	8.719	0.3	0.000	Bayou Liberty Reaches	0.62	0.36	0.000	Bayou Liberty Reaches
41	DD22	11.5977	0.3	0.000	Generic ditch	0.9468	0.36	0.000	Generic ditch
42	LIBERTY FROM DD22 TO DD20	17.4376	0.3	0.000	Bayou Liberty Reaches	0.992	0.36	0.000	Bayou Liberty Reaches
43	DD20	11.5977	0.3	0.000	Generic ditch	0.9468	0.36	0.000	Generic ditch
44	LIBERTY FROM DD20 TO BL03	0	0	8.840	Bayou Liberty Reaches	0	0	0.472	Bayou Liberty Reaches
45	LIBERTY FROM BL03 TO HWY 190	0	0	8.840	Bayou Liberty Reaches	0	0	0.472	Bayou Liberty Reaches

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Summer Justification									
Reach	Name	Data Type 9 - Advective Hydraulic Coefficients					Depth Const. "f"	Data Source	
		Width Coeff. "a"	Width Exp. "b"	Width Const. "c"	Data Source	Depth Coeff. "d"			Depth Exp. "e"
46	HWY 190 (DRAINAGE DITCH 14)	11.5977	0.3	0.000	Generic ditch	0.9468	0.36	0.000	Generic ditch
47	LIBERTY FROM HWY 190 TO BL04	0	0	18.600	Bayou Liberty Reaches	0	0	1.400	Bayou Liberty Reaches
48	LIBERTY FROM BL04 TO DD18	0	0	18.600	Bayou Liberty Reaches	0	0	1.400	Bayou Liberty Reaches
49	DD18	11.5977	0.3	0.000	Generic ditch	0.9468	0.36	0.000	Generic ditch
50	LIBERTY FROM DD18 TO DD19	0	0	18.600	Bayou Liberty Reaches	0	0	1.400	Bayou Liberty Reaches
51	DD19	11.5977	0.3	0.000	Generic ditch	0.9468	0.36	0.000	Generic ditch
52	LIBERTY FROM DD19 TO DD04	0	0	42.670	Bayou Liberty Reaches	0	0	2.280	Bayou Liberty Reaches
53	DD04	11.5977	0.3	0.000	Generic ditch	0.9468	0.36	0.000	Generic ditch
54	LIBERTY FROM DD04 TO BL05	0	0	42.670	Bayou Liberty Reaches	0	0	2.280	Bayou Liberty Reaches
55	LIBERTY FROM BL05 TO RKM 6.3	0	0	42.670	Bayou Liberty Reaches	0	0	2.280	Bayou Liberty Reaches
56	LIBERTY FROM RKM 6.3 TO RKM 6.0	0	0	39.690	Bayou Liberty Reaches	0	0	1.700	Bayou Liberty Reaches
57	LIBERTY FROM RKM 6.0 TO TRIB 9	0	0	47.550	Bayou Liberty Reaches	0	0	2.080	Bayou Liberty Reaches
58	DRAINAGE DITCH 3	11.5977	0.3	0.000	Generic ditch	0.9468	0.36	0.000	Generic ditch
59	TRIBUTARY 9	0	0	16.000	Tidal Channel & Marine Reaches	0	0	0.800	Tidal Channel & Marine Reaches
60	LIBERTY FROM TRIB 9 TO TRIB 6	0	0	47.550	Bayou Liberty Reaches	0	0	2.080	Bayou Liberty Reaches

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Summer Justification									
		Data Type 9 - Advective Hydraulic Coefficients							
Reach	Name	Width Coeff. "a"	Width Exp. "b"	Width Const. "c"	Data Source	Depth Coeff. "d"	Depth Exp. "e"	Depth Const. "f"	Data Source
61	DRAINAGE DITCH 11	11.5977	0.3	0.000	Generic ditch	0.9468	0.36	0.000	Generic ditch
62	TRIBUTARY 6	0	0	12.000	Tidal Channel & Marine Reaches	0	0	0.600	Tidal Channel & Marine Reaches
63	LIBERTY FROM TRIB 6 TO TO TRIB 10	0	0	52.730	Bayou Liberty Reaches	0	0	2.090	Bayou Liberty Reaches
64	TRIBUTARY 10 - UPLAND	11.5977	0.3	0.000	Generic ditch	0.9468	0.36	0.000	Generic ditch
65	TRIBUTARY 10 - TIDAL	0	0	13.000	Tidal Channel & Marine Reaches	0	0	0.650	Tidal Channel & Marine Reaches
66	LIBERTY FROM TRIB 10 TO BL07	0	0	52.120	Bayou Liberty Reaches	0	0	2.140	Bayou Liberty Reaches
67	LIBERTY FROM BL07 TO TRIB 8	0	0	52.120	Bayou Liberty Reaches	0	0	2.140	Bayou Liberty Reaches
68	TRIBUTARY 8	11.5977	0.3	0.000	Generic ditch	0.9468	0.36	0.000	Generic ditch
69	TRIBUTARY 8	0	0	10.000	Tidal Channel & Marine Reaches	0	0	0.500	Tidal Channel & Marine Reaches
70	LIBERTY FROM TRIB 8 TO M1	0	0	52.120	Bayou Liberty Reaches	0	0	2.140	Bayou Liberty Reaches
71	MARINA 1	0	0	32.000	Tidal Channel & Marine Reaches	0	0	1.200	Tidal Channel & Marine Reaches
72	LIBERTY FROM M1 TO M2	0	0	56.540	Bayou Liberty Reaches	0	0	2.130	Bayou Liberty Reaches
73	MARINA02	0	0	32.000	Tidal Channel & Marine Reaches	0	0	1.200	Tidal Channel & Marine Reaches
74	LIBERTY FROM M2 TO B PAQUET	0	0	60.960	Bayou Liberty Reaches	0	0	2.130	Bayou Liberty Reaches
75	HWY 190 (DD13) PAQUET HEADWATERS	11.5977	0.3	0.000	Generic ditch	0.9468	0.36	0.000	Generic ditch

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Summer Justification									
Reach	Name	Data Type 9 - Advective Hydraulic Coefficients			Data Source	Depth Coeff. "d"	Depth Exp. "e"	Depth Const. "f"	Data Source
		Width Coeff. "a"	Width Exp. "b"	Width Const. "c"					
76	PAQUET FROM HWY 190 TO DD16	8.72	0.3	0.000	Bayou Paquet Reaches	0.62	0.36	0.000	Bayou Paquet Reaches
77	DD16	11.5977	0.3	0.000	Generic ditch	0.9468	0.36	0.000	Generic ditch
78	PAQUET FROM RKM 5.1 TO DD17	8.72	0.3	0.000	Bayou Paquet Reaches	0.62	0.36	0.000	Bayou Paquet Reaches
79	DD17	11.5977	0.3	0.000	Generic ditch	0.9468	0.36	0.000	Generic ditch
80	PAQUET FROM DD17 TO TIDAL REACH	8.72	0.3	0.000	Bayou Paquet Reaches	0.62	0.36	0.000	Bayou Paquet Reaches
81	PAQUET (TIDAL) TO BP02	0	0	18.900	Bayou Paquet Reaches	0	0	1.100	Bayou Paquet Reaches
82	PAQUET FROM BP02 TO BP03	0	0	18.290	Bayou Paquet Reaches	0	0	1.000	Bayou Paquet Reaches
83	PAQUET FROM BP03 TO TRIB 24	0	0	21.340	Bayou Paquet Reaches	0	0	1.500	Bayou Paquet Reaches
84	TRIB 24 FROM TOP TO PAQUET	0	0	20.100	Tidal Channel & Marine Reaches	0	0	0.740	Tidal Channel & Marine Reaches
85	PAQUET FROM TRIB 24 TO TRIB 25	0	0	21.340	Bayou Paquet Reaches	0	0	1.450	Bayou Paquet Reaches
86	TRIB 25 FROM TOP TO RKM 0.3	0	0	16.460	Tidal Channel & Marine Reaches	0	0	0.940	Tidal Channel & Marine Reaches
87	TRIB 25 FROM RKM 0.3 TO PAQUET	0	0	32.000	Tidal Channel & Marine Reaches	0	0	0.770	Tidal Channel & Marine Reaches
88	PAQUET FROM TRIB 25 TO BP04	0	0	30.480	Bayou Paquet Reaches	0	0	1.500	Bayou Paquet Reaches
89	PAQUET FROM BP04 TO LIBERTY	0	0	30.480	Bayou Paquet Reaches	0	0	1.500	Bayou Paquet Reaches
90	LIBERTY FROM PAQUET TO BONFOUCA	0	0	60.960	Bayou Liberty Reaches	0	0	2.130	Bayou Liberty Reaches
91	BONFOUCA FROM LIBERTY TO PONTCHARTRAIN (INCL BB06)	0	0	105.590	Bayou Bonfouca Reaches	0	0	1.957	Bayou Bonfouca Reaches

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Summer Justification							
DATA TYPE 10 - DISPERSIVE HYDRAULIC COEFFICIENTS							
Reach	Tidal Range	Data Source	a	b	c	d	Data Source
1	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
2	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
3	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
4	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
5	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
6	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
7	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
8	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
9	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
10	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
11	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
12	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
13	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
14	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
15	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
16	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
17	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
18	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
19	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
20	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
21	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
22	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
23	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
24	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
25	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
26	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
27	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
28	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
29	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
30	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
31	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
32	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
33	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
34	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
35	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
36	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
37	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
38	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
39	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
40	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
41	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
42	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
43	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
44	1.0	Calibration	100.00	0.8333	0.0	1.0	Constant values used for advective dispersion
45	1.0	Calibration	100.00	0.8333	0.0	1.0	Constant values used for advective dispersion

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Summer Justification							
DATA TYPE 10 - DISPERSIVE HYDRAULIC COEFFICIENTS							
Reach	Tidal Range	Data Source	a	b	c	d	Data Source
46	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
47	1.0	Calibration	100.00	0.8333	0.0	1.0	Constant values used for advective dispersion
48	1.0	Calibration	100.00	0.8333	0.0	1.0	Constant values used for advective dispersion
49	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
50	1.0	Calibration	150.00	0.8333	0.0	1.0	Constant values used for advective dispersion
51	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
52	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
53	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
54	1.0	Calibration	250.00	0.8333	0.0	1.0	Constant values used for advective dispersion
55	1.0	Calibration	300.00	0.8333	0.0	1.0	Constant values used for advective dispersion
56	1.0	Calibration	300.00	0.8333	0.0	1.0	Constant values used for advective dispersion
57	1.0	Calibration	300.00	0.8333	0.0	1.0	Constant values used for advective dispersion
58	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
59	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
60	1.0	Calibration	300.00	0.8333	0.0	1.0	Constant values used for advective dispersion
61	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
62	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
63	1.0	Calibration	300.00	0.8333	0.0	1.0	Constant values used for advective dispersion
64	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
65	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
66	1.0	Calibration	300.00	0.8333	0.0	1.0	Constant values used for advective dispersion
67	1.0	Calibration	300.00	0.8333	0.0	1.0	Constant values used for advective dispersion
68	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
69	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
70	1.0	Calibration	300.00	0.8333	0.0	1.0	Constant values used for advective dispersion
71	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
72	1.0	Calibration	300.00	0.8333	0.0	1.0	Constant values used for advective dispersion
73	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
74	1.0	Calibration	300.00	0.8333	0.0	1.0	Constant values used for advective dispersion
75	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
76	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
77	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
78	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
79	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
80	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
81	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
82	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
83	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
84	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
85	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
86	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
87	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
88	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
89	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
90	1.0	Calibration	300.00	0.8333	0.0	1.0	Constant values used for advective dispersion
91	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Summer Justification						
DATA TYPE 11-INITIAL CONDITIONS						
Reach	Name	Temp, deg C	Sal, ppt	DO, mg/l	Chlorophyll a	Data Source
1	DRAINAGE DITCH 1	30.40	0.26	3.00	0.00	90th Percentile Temp for WQN 0301
2	VINCENT FROM RKM 20.3 TO BV01	30.40	0.26	3.00	0.00	90th Percentile Temp for WQN 0301
3	VINCENT FROM BV01 RKM 18.5	30.40	0.26	3.00	0.00	90th Percentile Temp for WQN 0301
4	VINCENT FROM RKM 18.5 TO BV02	30.40	0.39	3.00	0.00	90th Percentile Temp for WQN 0301
5	DRAINAGE DITCH 2	30.40	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
6	VINCENT FROM BV02 TO DD 8	30.40	0.39	3.00	0.00	90th Percentile Temp for WQN 0301
7	DRAINAGE DITCH 8	30.40	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
8	VINCENT FROM DD 8 TO DD 9	30.40	0.28	3.00	0.00	90th Percentile Temp for WQN 0301
9	DRAINAGE DITCH 9	30.40	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
10	VINCENT FROM DD 9 TO RKM 15.2	30.40	0.17	3.00	0.00	90th Percentile Temp for WQN 0301
11	VINCENT FROM RKM 15.2 TO BV03	30.40	0.17	3.00	24.60	90th Percentile Temp for WQN 0301
12	VINCENT FROM BV03 TO BONFOUCA	30.40	0.17	3.00	24.60	90th Percentile Temp for WQN 0301
13	UPPER BONFOUCA FROM RKM 5.0 TO DD 23	30.40	0.17	3.00	0.00	90th Percentile Temp for WQN 0301
14	DRAINAGE DITCH 23	30.40	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
15	UPPER BONFOUCA FROM DD 23 TO BB01	30.40	0.17	3.00	0.00	90th Percentile Temp for WQN 0301
16	UPPER BONFOUCA FROM BB01 TO BAYOU VINCENT	30.40	0.17	3.00	0.00	90th Percentile Temp for WQN 0301
17	BONFOUCA FROM BV TO HWY 190	30.40	0.24	3.00	24.60	90th Percentile Temp for WQN 0301
18	HWY 190 (DRAINAGE DITCH 5)	30.40	0.27	3.00	0.00	90th Percentile Temp for WQN 0301
19	BONFOUCA FROM HWY 190 TO BB02	30.40	0.27	3.00	49.90	90th Percentile Temp for WQN 0301
20	BONFOUCA FROM BB02 TO WD	30.40	0.45	3.00	49.90	90th Percentile Temp for WQN 0301
21	WEST DRAINAGE CANAL	30.40	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
22	BONFOUCA FROM WD TO DD6	30.40	1.15	3.00	8.80	90th Percentile Temp for WQN 0301
23	DRAINAGE DITCH 6	30.40	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
24	BONFOUCA FROM DD 6 TO TRIB 2	30.40	2.10	3.00	8.80	90th Percentile Temp for WQN 0301
25	DRAINAGE DITCH 7	30.40	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
26	TRIBUTARY 2	30.40	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
27	BONFOUCA FROM TRIB 2 TO BB03	30.40	2.40	3.00	8.80	90th Percentile Temp for WQN 0301
28	BONFOUCA FROM BB03 TO CANAL 26	30.40	2.68	3.00	8.80	90th Percentile Temp for WQN 0301
29	CANAL 26	30.40	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
30	BONFOUCA FROM CANAL 26 TO TRIB 4	30.40	3.00	3.00	10.60	90th Percentile Temp for WQN 0301
31	TRIBUTARY 4 - UPLAND	30.40	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
32	TRIBUTARY 4 - TIDAL	30.40	0.30	3.00	10.60	90th Percentile Temp for WQN 0301
33	BONFOUCA FROM TRIB 4 TO BB04	30.40	3.10	3.00	11.30	90th Percentile Temp for WQN 0301
34	BONFOUCA FROM BB04 TO Rkm 5.6	30.40	3.30	3.00	11.30	90th Percentile Temp for WQN 0301
35	BONFOUCA FROM RKM 5.6 TO BB05	30.40	3.30	3.00	12.90	90th Percentile Temp for WQN 0301
36	BONFOUCA FROM BB05 TO RKM 2.7	30.40	3.62	3.00	12.90	90th Percentile Temp for WQN 0301
37	BONFOUCA FROM RKM 2.7 TO LIBERTY	30.40	3.82	3.00	10.20	90th Percentile Temp for WQN 0301
38	LIBERTY FROM RKM 15.0 TO TRIB 1	30.40	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
39	TRIBUTARY 1	30.40	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
40	LIBERTY FROM RKM 14.4 TO DD22	30.40	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
41	DD22	30.40	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
42	LIBERTY FROM DD22 TO DD20	30.40	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
43	DD20	30.40	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
44	LIBERTY FROM DD20 TO BL03	30.40	0.48	3.00	14.80	90th Percentile Temp for WQN 0301
45	LIBERTY FROM BL03 TO HWY 190	30.40	0.48	3.00	14.80	90th Percentile Temp for WQN 0301

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Summer Justification						
DATA TYPE 11-INITIAL CONDITIONS						
Reach	Name	Temp, deg C	Sal, ppt	DO, mg/l	Chlorophyll a	Data Source
46	HWY 190 (DRAINAGE DITCH 14)	30.40	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
47	LIBERTY FROM HWY 190 TO BL04	30.40	0.54	3.00	14.80	90th Percentile Temp for WQN 0301
48	LIBERTY FROM BL04 TO DD18	30.40	0.54	3.00	57.10	90th Percentile Temp for WQN 0301
49	DD18	30.40	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
50	LIBERTY FROM DD18 TO DD19	30.40	1.70	3.00	3.20	90th Percentile Temp for WQN 0301
51	DD19	30.40	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
52	LIBERTY FROM DD19 TO DD04	30.40	2.90	3.00	3.20	90th Percentile Temp for WQN 0301
53	DD04	30.40	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
54	LIBERTY FROM DD04 TO BL05	30.40	3.09	3.00	3.20	90th Percentile Temp for WQN 0301
55	LIBERTY FROM BL05 TO RKM 6.3	30.40	3.09	3.00	3.20	90th Percentile Temp for WQN 0301
56	LIBERTY FROM RKM 6.3 TO RKM 6.0	30.40	3.09	3.00	3.20	90th Percentile Temp for WQN 0301
57	LIBERTY FROM RKM 6.0 TO TRIB 9	30.40	3.09	3.00	3.20	90th Percentile Temp for WQN 0301
58	DRAINAGE DITCH 3	30.40	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
59	TRIBUTARY 9	30.40	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
60	LIBERTY FROM TRIB 9 TO TRIB 6	30.40	2.80	3.00	3.20	90th Percentile Temp for WQN 0301
61	DRAINAGE DITCH 11	30.40	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
62	TRIBUTARY 6	30.40	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
63	LIBERTY FROM TRIB 6 TO TO TRIB 10	30.40	2.40	3.00	3.20	90th Percentile Temp for WQN 0301
64	TRIBUTARY 10 - UPLAND	30.40	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
65	TRIBUTARY 10 - TIDAL	30.40	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
66	LIBERTY FROM TRIB 10 TO BL07	30.40	2.12	3.00	3.20	90th Percentile Temp for WQN 0301
67	LIBERTY FROM BL07 TO TRIB 8	30.40	2.12	3.00	65.20	90th Percentile Temp for WQN 0301
68	TRIBUTARY 8	30.40	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
69	TRIBUTARY 8	30.40	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
70	LIBERTY FROM TRIB 8 TO M1	30.40	2.80	3.00	65.20	90th Percentile Temp for WQN 0301
71	MARINA 1	30.40	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
72	LIBERTY FROM M1 TO M2	30.40	3.50	3.00	6.80	90th Percentile Temp for WQN 0301
73	MARINA02	30.40	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
74	LIBERTY FROM M2 TO B PAQUET	30.40	4.16	3.00	6.80	90th Percentile Temp for WQN 0301
75	HWY 190 (DD13) PAQUET HEADWATERS	30.40	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
76	PAQUET FROM HWY 190 TO DD16	30.40	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
77	DD16	30.40	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
78	PAQUET FROM RKM 5.1 TO DD17	30.40	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
79	DD17	30.40	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
80	PAQUET FROM DD17 TO TIDAL REACH	30.40	1.60	3.00	0.00	90th Percentile Temp for WQN 0301
81	PAQUET (TIDAL) TO BP02	30.40	3.17	3.00	14.60	90th Percentile Temp for WQN 0301
82	PAQUET FROM BP02 TO BP03	30.40	3.32	3.00	14.60	90th Percentile Temp for WQN 0301
83	PAQUET FROM BP03 TO TRIB 24	30.40	3.47	3.00	14.60	90th Percentile Temp for WQN 0301
84	TRIB 24 FROM TOP TO PAQUET	30.40	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
85	PAQUET FROM TRIB 24 TO TRIB 25	30.40	3.70	3.00	13.60	90th Percentile Temp for WQN 0301
86	TRIB 25 FROM TOP TO RKM 0.3	30.40	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
87	TRIB 25 FROM RKM 0.3 TO PAQUET	30.40	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
88	PAQUET FROM TRIB 25 TO BP04	30.40	3.94	3.00	13.60	90th Percentile Temp for WQN 0301
89	PAQUET FROM BP04 TO LIBERTY	30.40	3.94	3.00	13.60	90th Percentile Temp for WQN 0301
90	LIBERTY FROM PAQUET TO BONFOUCA	30.40	4.16	3.00	6.80	90th Percentile Temp for WQN 0301
91	BONFOUCA FROM LIBERTY TO PONTCHARTRAIN (INCL BB06)	30.40	4.00	3.00	7.40	90th Percentile Temp for WQN 0301

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Summer Justification						Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908			
DATA TYPE 12 - REAERATION, SEDIMENT OXYGEN DEMAND AND BOD COEFFICIENTS						DATA TYPE 12 - REAERATION, SEDIMENT OXYGEN DEMAND AND BOD COEFFICIENTS			
REACH	NAME	K2 OPT	Data Source	a	BKGRND SOD, gmO2/m2/day at 20 deg C	Data Source	Aerobic BOD1 Dec Rate (1/day)	BOD1 SETT RATE (1/day)	Data Source
1	DRAINAGE DITCH 1	15	Louisiana Equation	0	0.144	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
2	VINCENT FROM RKM 20.3 TO BV01	15	Louisiana Equation	0	0.086	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
3	VINCENT FROM BV01 RKM 18.5	15	Louisiana Equation	0	1.725	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
4	VINCENT FROM RKM 18.5 TO BV02	15	Louisiana Equation	0	2.013	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
5	DRAINAGE DITCH 2	15	Louisiana Equation	0	0.144	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
6	VINCENT FROM BV02 TO DD 8	15	Louisiana Equation	0	2.013	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
7	DRAINAGE DITCH 8	15	Louisiana Equation	0	0.144	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
8	VINCENT FROM DD 8 TO DD 9	15	Louisiana Equation	0	2.013	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
9	DRAINAGE DITCH 9	15	Louisiana Equation	0	0.144	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
10	VINCENT FROM DD 9 TO RKM 15.2	15	Louisiana Equation	0	2.013	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
11	VINCENT FROM RKM 15.2 TO BV03	15	Louisiana Equation	0	1.208	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
12	VINCENT FROM BV03 TO BONFOUCA	15	Louisiana Equation	0	1.208	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
13	UPPER BONFOUCA FROM RKM 5.0 TO DD 23	15	Louisiana Equation	0	0.144	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
14	DRAINAGE DITCH 23	15	Louisiana Equation	0	0.144	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
15	UPPER BONFOUCA FROM DD 23 TO BB01	15	Louisiana Equation	0	0.144	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Summer Justification					Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908				
DATA TYPE 12 - REAERATION, SEDIMENT OXYGEN DEMAND AND BOD COEFFICIENTS					DATA TYPE 12 - REAERATION, SEDIMENT OXYGEN DEMAND AND BOD COEFFICIENTS				
REACH	NAME	K2 OPT	Data Source	a	BKGRND SOD, gmO2/m2/day at 20 deg C	Data Source	Aerobic BOD1 Dec Rate (1/day)	BOD1 SETT RATE (1/day)	Data Source
16	UPPER BONFOUCA FROM BB01 TO BAYOU VINCENT	15	Louisiana Equation	0	0.144	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
17	BONFOUCA FROM BV TO HWY 190	15	Louisiana Equation	0	0.805	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
18	HWY 190 (DRAINAGE DITCH 5)	15	Louisiana Equation	0	0.144	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
19	BONFOUCA FROM HWY 190 TO BB02	15	Louisiana Equation	0	1.035	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
20	BONFOUCA FROM BB02 TO WD	15	Louisiana Equation	0	1.035	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
21	WEST DRAINAGE CANAL	15	Louisiana Equation	0	0.144	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
22	BONFOUCA FROM WD TO DD6	11	Texas Equation	0	0.661	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
23	DRAINAGE DITCH 6	15	Louisiana Equation	0	0.144	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
24	BONFOUCA FROM DD 6 TO TRIB 2	1	$K_2 = a$	0.5	0.625	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
25	DRAINAGE DITCH 7	15	Louisiana Equation	0	0.625	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
26	TRIBUTARY 2	11	Texas Equation	0	0.625	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
27	BONFOUCA FROM TRIB 2 TO BB03	1	$K_2 = a$	0.5	0.500	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
28	BONFOUCA FROM BB03 TO CANAL 26	1	$K_2 = a$	0.5	0.500	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
29	CANAL 26	11	Texas Equation	0	0.625	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
30	BONFOUCA FROM CANAL 26 TO TRIB 4	1	$K_2 = a$	0.48	0.500	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Summer Justification					Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908				
DATA TYPE 12 - REAERATION, SEDIMENT OXYGEN DEMAND AND BOD COEFFICIENTS					DATA TYPE 12 - REAERATION, SEDIMENT OXYGEN DEMAND AND BOD COEFFICIENTS				
REACH	NAME	K2 OPT	Data Source	a	BKGRND SOD, gmO2/m2/day at 20 deg C	Data Source	Aerobic BOD1 Dec Rate (1/day)	BOD1 SETT RATE (1/day)	Data Source
31	TRIBUTARY 4 - UPLAND	15	Louisiana Equation	0	0.625	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
32	TRIBUTARY 4 - TIDAL	11	Texas Equation	0	0.625	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
33	BONFOUCA FROM TRIB 4 TO BB04	1	$K_2 = a$	0.48	0.250	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
34	BONFOUCA FROM BB04 TO Rkm 5.6	1	$K_2 = a$	0.48	0.000	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
35	BONFOUCA FROM RKM 5.6 TO BB05	1	$K_2 = a$	0.54	0.000	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
36	BONFOUCA FROM BB05 TO RKM 2.7	1	$K_2 = a$	0.66	0.063	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
37	BONFOUCA FROM RKM 2.7 TO LIBERTY	1	$K_2 = a$	0.58	0.000	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
38	LIBERTY FROM RKM 15.0 TO TRIB 1	15	Louisiana Equation	0	0.500	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
39	TRIBUTARY 1	15	Louisiana Equation	0	0.125	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
40	LIBERTY FROM RKM 14.4 TO DD22	15	Louisiana Equation	0	0.625	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
41	DD22	15	Louisiana Equation	0	0.125	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
42	LIBERTY FROM DD22 TO DD20	15	Louisiana Equation	0	0.675	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
43	DD20	15	Louisiana Equation	0	0.125	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
44	LIBERTY FROM DD20 TO BL03	15	Louisiana Equation	0	0.625	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
45	LIBERTY FROM BL03 TO HWY 190	15	Louisiana Equation	0	0.425	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Summer Justification					Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908				
DATA TYPE 12 - REAERATION, SEDIMENT OXYGEN DEMAND AND BOD COEFFICIENTS					DATA TYPE 12 - REAERATION, SEDIMENT OXYGEN DEMAND AND BOD COEFFICIENTS				
REACH	NAME	K2 OPT	Data Source	a	BKGRND SOD, gmO2/m2/day at 20 deg C	Data Source	Aerobic BOD1 Dec Rate (1/day)	BOD1 SETT RATE (1/day)	Data Source
46	HWY 190 (DRAINAGE DITCH 14)	15	Louisiana Equation	0	0.125	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
47	LIBERTY FROM HWY 190 TO BL04	11	Texas Equation	0	0.310	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
48	LIBERTY FROM BL04 TO DD18	11	Texas Equation	0	0.256	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
49	DD18	15	Louisiana Equation	0	0.388	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
50	LIBERTY FROM DD18 TO DD19	11	Texas Equation	0	0.078	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
51	DD19	15	Louisiana Equation	0	0.388	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
52	LIBERTY FROM DD19 TO DD04	11	Texas Equation	0	0.000	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
53	DD04	15	Louisiana Equation	0	0.388	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
54	LIBERTY FROM DD04 TO BL05	11	Texas Equation	0	0.031	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
55	LIBERTY FROM BL05 TO RKM 6.3	1	$K_2 = a$	0.36	0.078	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
56	LIBERTY FROM RKM 6.3 TO RKM 6.0	1	$K_2 = a$	0.47	0.031	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
57	LIBERTY FROM RKM 6.0 TO TRIB 9	1	$K_2 = a$	0.39	0.000	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
58	DRAINAGE DITCH 3	15	Louisiana Equation	0	0.388	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
59	TRIBUTARY 9	11	Texas Equation	0	0.388	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
60	LIBERTY FROM TRIB 9 TO TRIB 6	1	$K_2 = a$	0.44	0.000	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Summer Justification						Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908			
DATA TYPE 12 - REAERATION, SEDIMENT OXYGEN DEMAND AND BOD COEFFICIENTS						DATA TYPE 12 - REAERATION, SEDIMENT OXYGEN DEMAND AND BOD COEFFICIENTS			
REACH	NAME	K2 OPT	Data Source	a	BKGRND SOD, gmO2/m2/day at 20 deg C	Data Source	Aerobic BOD1 Dec Rate (1/day)	BOD1 SETT RATE (1/day)	Data Source
61	DRAINAGE DITCH 11	15	Louisiana Equation	0	0.388	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
62	TRIBUTARY 6	11	Texas Equation	0	0.388	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
63	LIBERTY FROM TRIB 6 TO TO TRIB 10	1	$K_2 = a$	0.43	0.000	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
64	TRIBUTARY 10 - UPLAND	15	Louisiana Equation	0	0.388	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
65	TRIBUTARY 10 - TIDAL	11	Texas Equation	0	0.388	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
66	LIBERTY FROM TRIB 10 TO BL07	1	$K_2 = a$	0.43	0.163	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
67	LIBERTY FROM BL07 TO TRIB 8	1	$K_2 = a$	0.43	0.171	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
68	TRIBUTARY 8	15	Louisiana Equation	0	0.388	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
69	TRIBUTARY 8	11	Texas Equation	0	0.388	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
70	LIBERTY FROM TRIB 8 TO M1	1	$K_2 = a$	0.43	0.155	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
71	MARINA 1	11	Texas Equation	0	0.388	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
72	LIBERTY FROM M1 TO M2	1	$K_2 = a$	0.43	0.000	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
73	MARINA02	11	Texas Equation	0	0.388	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
74	LIBERTY FROM M2 TO B PAQUET	1	$K_2 = a$	0.43	0.000	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
75	HWY 190 (DD13) PAQUET HEADWATERS	15	Louisiana Equation	0	0.406	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Summer Justification					Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908				
DATA TYPE 12 - REAERATION, SEDIMENT OXYGEN DEMAND AND BOD COEFFICIENTS					DATA TYPE 12 - REAERATION, SEDIMENT OXYGEN DEMAND AND BOD COEFFICIENTS				
REACH	NAME	K2 OPT	Data Source	a	BKGRND SOD, gmO2/m2/day at 20 deg C	Data Source	Aerobic BOD1 Dec Rate (1/day)	BOD1 SETT RATE (1/day)	Data Source
76	PAQUET FROM HWY 190 TO DD16	15	Louisiana Equation	0	0.406	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
77	DD16	15	Louisiana Equation	0	0.406	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
78	PAQUET FROM RKM 5.1 TO DD17	15	Louisiana Equation	0	0.406	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
79	DD17	15	Louisiana Equation	0	0.406	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
80	PAQUET FROM DD17 TO TIDAL REACH	15	Louisiana Equation	0	0.406	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
81	PAQUET (TIDAL) TO BP02	15	Louisiana Equation	0	0.260	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
82	PAQUET FROM BP02 TO BP03	1	$K_2 = a$	0.8	0.618	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
83	PAQUET FROM BP03 TO TRIB 24	1	$K_2 = a$	0.61	0.488	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
84	TRIB 24 FROM TOP TO PAQUET	15	Louisiana Equation	0	0.406	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
85	PAQUET FROM TRIB 24 TO TRIB 25	1	$K_2 = a$	0.61	0.244	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
86	TRIB 25 FROM TOP TO RKM 0.3	15	Louisiana Equation	0	0.406	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
87	TRIB 25 FROM RKM 0.3 TO PAQUET	15	Louisiana Equation	0	0.406	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
88	PAQUET FROM TRIB 25 TO BP04	1	$K_2 = a$	0.61	0.000	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
89	PAQUET FROM BP04 TO LIBERTY	1	$K_2 = a$	0.61	0.000	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
90	LIBERTY FROM PAQUET TO BONFOUCA	1	$K_2 = a$	0.43	0.000	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration
91	BONFOUCA FROM LIBERTY TO PONTCHARTRAIN (INCL BB06)	1	$K_2 = a$	0.5	0.000	Reduction required to meet 5.0/4.0 DO	0.0800	0.05	Calibration

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Summer Justification				
DATA TYPE 13 - NITROGEN AND PHOSPHORUS COEFFICIENTS				
Reach	Name	NBOD decay rate, 1/day	NBOD settling rate, 1/day	Data Source
1	DRAINAGE DITCH 1	0.0300	0.05	Calibration
2	VINCENT FROM RKM 20.3 TO BV01	0.0300	0.05	Calibration
3	VINCENT FROM BV01 RKM 18.5	0.0300	0.05	Calibration
4	VINCENT FROM RKM 18.5 TO BV02	0.0300	0.05	Calibration
5	DRAINAGE DITCH 2	0.0300	0.05	Calibration
6	VINCENT FROM BV02 TO DD 8	0.0300	0.10	Calibration
7	DRAINAGE DITCH 8	0.0300	0.05	Calibration
8	VINCENT FROM DD 8 TO DD 9	0.0300	0.10	Calibration
9	DRAINAGE DITCH 9	0.0300	0.05	Calibration
10	VINCENT FROM DD 9 TO RKM 15.2	0.0300	0.05	Calibration
11	VINCENT FROM RKM 15.2 TO BV03	0.0300	0.15	Calibration
12	VINCENT FROM BV03 TO BONFOUCA	0.0300	0.15	Calibration
13	UPPER BONFOUCA FROM RKM 5.0 TO DD 23	0.0300	0.05	Calibration
14	DRAINAGE DITCH 23	0.0300	0.05	Calibration
15	UPPER BONFOUCA FROM DD 23 TO BB01	0.0300	0.05	Calibration
16	UPPER BONFOUCA FROM BB01 TO BAYOU VINCENT	0.0300	0.05	Calibration
17	BONFOUCA FROM BV TO HWY 190	0.0300	0.15	Calibration
18	HWY 190 (DRAINAGE DITCH 5)	0.0300	0.05	Calibration
19	BONFOUCA FROM HWY 190 TO BB02	0.0300	0.15	Calibration
20	BONFOUCA FROM BB02 TO WD	0.0300	0.05	Calibration
21	WEST DRAINAGE CANAL	0.0300	0.05	Calibration
22	BONFOUCA FROM WD TO DD6	0.0300	0.05	Calibration
23	DRAINAGE DITCH 6	0.0300	0.05	Calibration
24	BONFOUCA FROM DD 6 TO TRIB 2	0.0300	0.05	Calibration
25	DRAINAGE DITCH 7	0.0300	0.05	Calibration
26	TRIBUTARY 2	0.0300	0.05	Calibration
27	BONFOUCA FROM TRIB 2 TO BB03	0.0300	0.05	Calibration
28	BONFOUCA FROM BB03 TO CANAL 26	0.0300	0.05	Calibration
29	CANAL 26	0.0300	0.05	Calibration
30	BONFOUCA FROM CANAL 26 TO TRIB 4	0.0300	0.05	Calibration
31	TRIBUTARY 4 - UPLAND	0.0300	0.05	Calibration
32	TRIBUTARY 4 - TIDAL	0.0300	0.05	Calibration
33	BONFOUCA FROM TRIB 4 TO BB04	0.0300	0.05	Calibration
34	BONFOUCA FROM BB04 TO Rkm 5.6	0.0300	0.05	Calibration
35	BONFOUCA FROM RKM 5.6 TO	0.03	0.05	Calibration
36	BONFOUCA FROM BB05 TO RKM	0.03	0.05	Calibration
37	BONFOUCA FROM RKM 2.7 TO	0.03	0.05	Calibration
38	LIBERTY FROM RKM 15.0 TO	0.03	0.05	Calibration
39	TRIBUTARY 1	0.03	0.05	Calibration
40	LIBERTY FROM RKM 14.4 TO	0.03	0.05	Calibration
41	DD22	0.03	0.05	Calibration
42	LIBERTY FROM DD22 TO DD20	0.03	0.05	Calibration
43	DD20	0.03	0.05	Calibration
44	LIBERTY FROM DD20 TO BL03	0.03	0.05	Calibration
45	LIBERTY FROM BL03 TO HWY	0.03	0.05	Calibration

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Summer Justification				
DATA TYPE 13 - NITROGEN AND PHOSPHORUS COEFFICIENTS				
Reach	Name	NBOD decay rate, 1/day	NBOD settling rate, 1/day	Data Source
46	HWY 190 (DRAINAGE DITCH 14)	0.03	0.05	Calibration
47	LIBERTY FROM HWY 190 TO	0.03	0.05	Calibration
48	LIBERTY FROM BL04 TO DD18	0.03	0.05	Calibration
49	DD18	0.03	0.05	Calibration
50	LIBERTY FROM DD18 TO DD19	0.03	0.05	Calibration
51	DD19	0.03	0.05	Calibration
52	LIBERTY FROM DD19 TO DD04	0.03	0.05	Calibration
53	DD04	0.03	0.05	Calibration
54	LIBERTY FROM DD04 TO BL05	0.03	0.05	Calibration
55	LIBERTY FROM BL05 TO RKM 6.3	0.03	0.05	Calibration
56	LIBERTY FROM RKM 6.3 TO RKM 6.0	0.03	0.05	Calibration
57	LIBERTY FROM RKM 6.0 TO TRIB 9	0.03	0.05	Calibration
58	DRAINAGE DITCH 3	0.03	0.05	Calibration
59	TRIBUTARY 9	0.03	0.05	Calibration
60	LIBERTY FROM TRIB 9 TO TRIB 6	0.03	0.05	Calibration
61	DRAINAGE DITCH 11	0.03	0.05	Calibration
62	TRIBUTARY 6	0.03	0.05	Calibration
63	LIBERTY FROM TRIB 6 TO TO TRIB 10	0.03	0.05	Calibration
64	TRIBUTARY 10 - UPLAND	0.03	0.05	Calibration
65	TRIBUTARY 10 - TIDAL	0.03	0.05	Calibration
66	LIBERTY FROM TRIB 10 TO BL07	0.03	0.05	Calibration
67	LIBERTY FROM BL07 TO TRIB 8	0.03	0.05	Calibration
68	TRIBUTARY 8	0.03	0.05	Calibration
69	TRIBUTARY 8	0.03	0.05	Calibration
70	LIBERTY FROM TRIB 8 TO M1	0.03	0.05	Calibration
71	MARINA 1	0.03	0.05	Calibration
72	LIBERTY FROM M1 TO M2	0.03	0.05	Calibration
73	MARINA02	0.03	0.05	Calibration
74	LIBERTY FROM M2 TO B PAQUET	0.03	0.05	Calibration
75	HWY 190 (DD13) PAQUET HEADWATERS	0.03	0.05	Calibration
76	PAQUET FROM HWY 190 TO DD16	0.03	0.05	Calibration
77	DD16	0.03	0.05	Calibration
78	PAQUET FROM RKM 5.1 TO DD17	0.03	0.05	Calibration
79	DD17	0.03	0.05	Calibration
80	PAQUET FROM DD17 TO TIDAL REACH	0.03	0.05	Calibration
81	PAQUET (TIDAL) TO BP02	0.03	0.05	Calibration
82	PAQUET FROM BP02 TO BP03	0.03	0.05	Calibration
83	PAQUET FROM BP03 TO TRIB 24	0.03	0.05	Calibration
84	TRIB 24 FROM TOP TO PAQUET	0.03	0.05	Calibration
85	PAQUET FROM TRIB 24 TO TRIB 25	0.03	0.05	Calibration
86	TRIB 25 FROM TOP TO RKM 0.3	0.03	0.05	Calibration
87	TRIB 25 FROM RKM 0.3 TO PAQUET	0.03	0.05	Calibration
88	PAQUET FROM TRIB 25 TO BP04	0.03	0.05	Calibration
89	PAQUET FROM BP04 TO LIBERTY	0.03	0.05	Calibration
90	LIBERTY FROM PAQUET TO BONFOUCA	0.03	0.05	Calibration
91	BONFOUCA FROM LIBERTY TO PONTCHARTRAIN (INCL BB06)	0.03	0.05	Calibration

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Summer Justification					
DATA TYPE 19 - NONPOINT SOURCES					
Reach	Reach Name	Length of Reach, km	CBOD, kg/day	NBOD, kg/day	Data Source
1	DRAINAGE DITCH 1	3.90	0.19	0.08	Reduction required to meet 5.0/4.0 DO
2	VINCENT FROM RKM 20.3 TO BV01	0.80	0.04	0.01	Reduction required to meet 5.0/4.0 DO
3	VINCENT FROM BV01 RKM 18.5	1.00	0.40	0.01	Reduction required to meet 5.0/4.0 DO
4	VINCENT FROM RKM 18.5 TO BV02	0.90	0.40	0.01	Reduction required to meet 5.0/4.0 DO
5	DRAINAGE DITCH 2	2.10	0.09	0.04	Reduction required to meet 5.0/4.0 DO
6	VINCENT FROM BV02 TO DD 8	0.70	0.40	0.04	Reduction required to meet 5.0/4.0 DO
7	DRAINAGE DITCH 8	0.80	0.03	0.01	Reduction required to meet 5.0/4.0 DO
8	VINCENT FROM DD 8 TO DD 9	0.90	0.49	0.04	Reduction required to meet 5.0/4.0 DO
9	DRAINAGE DITCH 9	2.10	0.09	0.04	Reduction required to meet 5.0/4.0 DO
10	VINCENT FROM DD 9 TO RKM 15.2	0.80	0.03	0.01	Reduction required to meet 5.0/4.0 DO
11	VINCENT FROM RKM 15.2 TO BV03	0.30	0.23	0.04	Reduction required to meet 5.0/4.0 DO
12	VINCENT FROM BV03 TO BONFOUCA	0.50	0.40	0.26	Reduction required to meet 5.0/4.0 DO
13	UPPER BONFOUCA FROM RKM 5.0 TO DD 23	2.40	0.11	0.05	Reduction required to meet 5.0/4.0 DO
14	DRAINAGE DITCH 23	1.00	0.04	0.02	Reduction required to meet 5.0/4.0 DO
15	UPPER BONFOUCA FROM DD 23 TO BB01	1.50	0.07	0.03	Reduction required to meet 5.0/4.0 DO

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Summer Justification					
DATA TYPE 19 - NONPOINT SOURCES					
Reach	Reach Name	Length of Reach, km	CBOD, kg/day	NBOD, kg/day	Data Source
16	UPPER BONFOUCA FROM BB01 TO BAYOU VINCENT	1.10	0.08	0.03	Reduction required to meet 5.0/4.0 DO
17	BONFOUCA FROM BV TO HWY 190	0.20	0.03	0.00	Reduction required to meet 5.0/4.0 DO
18	HWY 190 (DRAINAGE DITCH 5)	1.80	0.08	0.03	Reduction required to meet 5.0/4.0 DO
19	BONFOUCA FROM HWY 190 TO BB02	0.90	3.36	1.09	Reduction required to meet 5.0/4.0 DO
20	BONFOUCA FROM BB02 TO WD	1.20	6.47	0.60	Reduction required to meet 5.0/4.0 DO
21	WEST DRAINAGE CANAL	0.30	0.05	0.02	Reduction required to meet 5.0/4.0 DO
22	BONFOUCA FROM WD TO DD6	2.10	38.81	4.89	Reduction required to meet 5.0/4.0 DO
23	DRAINAGE DITCH 6	0.30	0.01	0.01	Reduction required to meet 5.0/4.0 DO
24	BONFOUCA FROM DD 6 TO TRIB 2	0.80	200.00	22.50	Reduction required to meet 5.0/4.0 DO
25	DRAINAGE DITCH 7	1.00	0.19	0.08	Reduction required to meet 5.0/4.0 DO
26	TRIBUTARY 2	0.50	2.31	0.77	Reduction required to meet 5.0/4.0 DO
27	BONFOUCA FROM TRIB 2 TO BB03	6.00	157.50	20.00	Reduction required to meet 5.0/4.0 DO
28	BONFOUCA FROM BB03 TO CANAL 26	6.00	182.50	18.75	Reduction required to meet 5.0/4.0 DO
29	CANAL 26	0.20	122.50	35.00	Reduction required to meet 5.0/4.0 DO
30	BONFOUCA FROM CANAL 26 TO TRIB 4	0.70	125.00	15.00	Reduction required to meet 5.0/4.0 DO

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Summer Justification					
DATA TYPE 19 - NONPOINT SOURCES					
Reach	Reach Name	Length of Reach, km	CBOD, kg/day	NBOD, kg/day	Data Source
31	TRIBUTARY 4 - UPLAND	1.60	0.21	0.09	Reduction required to meet 5.0/4.0 DO
32	TRIBUTARY 4 - TIDAL	3.10	7.13	2.15	Reduction required to meet 5.0/4.0 DO
33	BONFOUCA FROM TRIB 4 TO BB04	2.30	175.00	18.75	Reduction required to meet 5.0/4.0 DO
34	BONFOUCA FROM BB04 TO Rkm 5.6	1.10	350.00	37.50	Reduction required to meet 5.0/4.0 DO
35	BONFOUCA FROM RKM 5.6 TO BB05	1.10	406.25	50.00	Reduction required to meet 5.0/4.0 DO
36	BONFOUCA FROM BB05 TO RKM 2.7	1.10	406.25	6.25	Reduction required to meet 5.0/4.0 DO
37	BONFOUCA FROM RKM 2.7 TO LIBERTY	1.10	0.00	0.00	Reduction required to meet 5.0/4.0 DO
38	LIBERTY FROM RKM 15.0 TO TRIB 1	1.10	0.50	0.35	Reduction required to meet 5.0/4.0 DO
39	TRIBUTARY 1	1.10	0.09	0.04	Reduction required to meet 5.0/4.0 DO
40	LIBERTY FROM RKM 14.4 TO DD22	1.10	0.50	0.48	Reduction required to meet 5.0/4.0 DO
41	DD22	1.10	0.01	0.00	Reduction required to meet 5.0/4.0 DO
42	LIBERTY FROM DD22 TO DD20	1.10	2.70	3.00	Reduction required to meet 5.0/4.0 DO
43	DD20	1.10	0.10	0.04	Reduction required to meet 5.0/4.0 DO
44	LIBERTY FROM DD20 TO BL03	1.10	0.85	1.00	Reduction required to meet 5.0/4.0 DO
45	LIBERTY FROM BL03 TO HWY 190	1.10	10.00	0.88	Reduction required to meet 5.0/4.0 DO

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Summer Justification					
DATA TYPE 19 - NONPOINT SOURCES					
Reach	Reach Name	Length of Reach, km	CBOD, kg/day	NBOD, kg/day	Data Source
46	HWY 190 (DRAINAGE DITCH 14)	1.10	0.08	0.04	Reduction required to meet 5.0/4.0 DO
47	LIBERTY FROM HWY 190 TO BL04	1.10	4.65	1.55	Reduction required to meet 5.0/4.0 DO
48	LIBERTY FROM BL04 TO DD18	1.10	49.60	3.88	Reduction required to meet 5.0/4.0 DO
49	DD18	1.10	0.03	0.01	Reduction required to meet 5.0/4.0 DO
50	LIBERTY FROM DD18 TO DD19	1.10	19.38	2.33	Reduction required to meet 5.0/4.0 DO
51	DD19	1.10	0.16	0.07	Reduction required to meet 5.0/4.0 DO
52	LIBERTY FROM DD19 TO DD04	1.10	29.45	2.33	Reduction required to meet 5.0/4.0 DO
53	DD04	1.10	0.49	0.21	Reduction required to meet 5.0/4.0 DO
54	LIBERTY FROM DD04 TO BL05	1.10	75.95	2.33	Reduction required to meet 5.0/4.0 DO
55	LIBERTY FROM BL05 TO RKM 6.3	1.10	58.13	2.33	Reduction required to meet 5.0/4.0 DO
56	LIBERTY FROM RKM 6.3 TO RKM 6.0	1.10	31.00	1.55	Reduction required to meet 5.0/4.0 DO
57	LIBERTY FROM RKM 6.0 TO TRIB 9	1.10	93.00	1.55	Reduction required to meet 5.0/4.0 DO
58	DRAINAGE DITCH 3	1.10	0.02	0.01	Reduction required to meet 5.0/4.0 DO
59	TRIBUTARY 9	1.10	1.40	0.43	Reduction required to meet 5.0/4.0 DO
60	LIBERTY FROM TRIB 9 TO TRIB 6	1.10	170.50	27.13	Reduction required to meet 5.0/4.0 DO

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Summer Justification					
DATA TYPE 19 - NONPOINT SOURCES					
Reach	Reach Name	Length of Reach, km	CBOD, kg/day	NBOD, kg/day	Data Source
61	DRAINAGE DITCH 11	1.10	0.11	0.05	Reduction required to meet 5.0/4.0 DO
62	TRIBUTARY 6	1.10	1.78	0.57	Reduction required to meet 5.0/4.0 DO
63	LIBERTY FROM TRIB 6 TO TO TRIB 10	1.10	31.00	9.30	Reduction required to meet 5.0/4.0 DO
64	TRIBUTARY 10 - UPLAND	1.10	0.06	0.03	Reduction required to meet 5.0/4.0 DO
65	TRIBUTARY 10 - TIDAL	1.10	0.67	0.22	Reduction required to meet 5.0/4.0 DO
66	LIBERTY FROM TRIB 10 TO BL07	1.10	170.50	27.90	Reduction required to meet 5.0/4.0 DO
67	LIBERTY FROM BL07 TO TRIB 8	1.10	0.00	13.18	Reduction required to meet 5.0/4.0 DO
68	TRIBUTARY 8	1.10	0.06	0.03	Reduction required to meet 5.0/4.0 DO
69	TRIBUTARY 8	1.10	0.22	0.08	Reduction required to meet 5.0/4.0 DO
70	LIBERTY FROM TRIB 8 TO M1	1.10	19.38	10.08	Reduction required to meet 5.0/4.0 DO
71	MARINA 1	1.10	2.60	0.69	Reduction required to meet 5.0/4.0 DO
72	LIBERTY FROM M1 TO M2	1.10	38.75	9.30	Reduction required to meet 5.0/4.0 DO
73	MARINA02	1.10	22.48	6.20	Reduction required to meet 5.0/4.0 DO
74	LIBERTY FROM M2 TO B PAQUET	1.10	116.25	0.00	Reduction required to meet 5.0/4.0 DO
75	HWY 190 (DD13) PAQUET HEADWATERS	1.10	0.17	0.08	Reduction required to meet 5.0/4.0 DO

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Summer Justification					
DATA TYPE 19 - NONPOINT SOURCES					
Reach	Reach Name	Length of Reach, km	CBOD, kg/day	NBOD, kg/day	Data Source
76	PAQUET FROM HWY 190 TO DD16	1.10	0.49	0.21	Reduction required to meet 5.0/4.0 DO
77	DD16	1.10	0.11	0.05	Reduction required to meet 5.0/4.0 DO
78	PAQUET FROM RKM 5.1 TO DD17	1.10	0.33	0.11	Reduction required to meet 5.0/4.0 DO
79	DD17	1.10	0.21	0.09	Reduction required to meet 5.0/4.0 DO
80	PAQUET FROM DD17 TO TIDAL REACH	1.10	0.07	0.04	Reduction required to meet 5.0/4.0 DO
81	PAQUET (TIDAL) TO BP02	1.10	67.84	11.78	Reduction required to meet 5.0/4.0 DO
82	PAQUET FROM BP02 TO BP03	1.10	30.06	3.25	Reduction required to meet 5.0/4.0 DO
83	PAQUET FROM BP03 TO TRIB 24	1.10	17.88	3.25	Reduction required to meet 5.0/4.0 DO
84	TRIB 24 FROM TOP TO PAQUET	1.10	2.44	0.73	Reduction required to meet 5.0/4.0 DO
85	PAQUET FROM TRIB 24 TO TRIB 25	1.10	28.44	6.91	Reduction required to meet 5.0/4.0 DO
86	TRIB 25 FROM TOP TO RKM 0.3	1.10	3.74	1.08	Reduction required to meet 5.0/4.0 DO
87	TRIB 25 FROM RKM 0.3 TO PAQUET	1.10	2.93	0.89	Reduction required to meet 5.0/4.0 DO
88	PAQUET FROM TRIB 25 TO BP04	1.10	121.88	28.44	Reduction required to meet 5.0/4.0 DO
89	PAQUET FROM BP04 TO LIBERTY	1.10	130.00	24.38	Reduction required to meet 5.0/4.0 DO
90	LIBERTY FROM PAQUET TO BONFOUCA	1.10	121.88	0.00	Reduction required to meet 5.0/4.0 DO
91	BONFOUCA FROM LIBERTY TO PONTCHARTRAIN (INCL BB06)	1.10	0.00	0.00	Reduction required to meet 5.0/4.0 DO

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Summer Justification

DATA TYPE 20 - HEADWATER DATA FOR FLOW, TEMPERATURE, SALINITY, AND CONSERVATIVES

Headwater Name	Element No.	Headwater Flow, cms	Data Source	Temp, deg C	Salinity	Chlorides	Conductivity	Data Source
B Vincent & Bonfouca	1	0.00028	Minimal Flow	33.8	0.26	520.9	7.23	Survey Data Average
Browns Vill Rd (DD2)	67	0.00028	Minimal Flow	33.8	0.26	520.9	7.23	Survey Data Average
Drainage Ditch 8	102	0.00028	Minimal Flow	33.8	0.26	520.9	7.23	Survey Data Average
Drainage Ditch 9	119	0.00028	Minimal Flow	33.8	0.26	520.9	7.23	Survey Data Average
UPPER B BONFOUCA	159	0.00283	Minimal Flow	33.8	0.26	520.9	7.23	Survey Data Average
Drainage Ditch 23	183	0.00028	Minimal Flow	33.8	0.26	520.9	7.23	Survey Data Average
Highway 190(DD 5)	221	0.00028	Minimal Flow	33.8	0.26	520.9	7.23	Survey Data Average
West Drainage Canal	260	0.00028	Minimal Flow	33.8	0.26	520.9	7.23	Survey Data Average
Drainage Ditch 6	284	0.00028	Minimal Flow	33.8	0.26	520.9	7.23	Survey Data Average
Tributary 2	295	0.00028	Minimal Flow	33.8	0.26	520.9	7.23	Survey Data Average
Canal 26	324	0.00028	Minimal Flow	33.8	0.26	520.9	7.23	Survey Data Average
Tributary 4	346	0.00028	Minimal Flow	33.8	0.26	520.9	7.23	Survey Data Average
BAYOU LIBERTY	433	0.00283	Minimal Flow	33.8	0.26	520.9	7.23	Survey Data Average
Tributary 1	439	0.00028	Minimal Flow	33.8	0.26	520.9	7.23	Survey Data Average
Drainage Ditch 22	470	0.00028	Minimal Flow	33.8	0.26	520.9	7.23	Survey Data Average
Drainage Ditch 20	482	0.00028	Minimal Flow	33.8	0.26	520.9	7.23	Survey Data Average
Highway 190	536	0.00028	Minimal Flow	33.8	0.26	520.9	7.23	Survey Data Average
Drainage Ditch 18	576	0.00028	Minimal Flow	33.8	0.26	520.9	7.23	Survey Data Average
Drainage Ditch 19	585	0.00028	Minimal Flow	33.8	0.26	520.9	7.23	Survey Data Average
Drainage Ditch 4	601	0.00028	Minimal Flow	33.8	0.26	520.9	7.23	Survey Data Average
Tributary 9	667	0.00028	Minimal Flow	33.8	0.26	520.9	7.23	Survey Data Average
Tributary 6	680	0.00028	Minimal Flow	33.8	0.26	520.9	7.23	Survey Data Average
Tributary 10	698	0.00028	Minimal Flow	33.8	0.26	520.9	7.23	Survey Data Average
Tributary 8	715	0.00028	Minimal Flow	33.8	0.26	520.9	7.23	Survey Data Average
Marina 1	727	0.00028	Minimal Flow	33.8	0.26	520.9	7.23	Survey Data Average
Marina 2	730	0.00028	Minimal Flow	33.8	0.26	520.9	7.23	Survey Data Average
BAYOU PAQUET	762	0.00028	Minimal Flow	33.8	0.26	520.9	7.23	Survey Data Average
Drainage Ditch 16	797	0.00028	Minimal Flow	33.8	0.26	520.9	7.23	Survey Data Average
Drainage Ditch 17	819	0.00028	Minimal Flow	33.8	0.26	520.9	7.23	Survey Data Average
Tributary 24	861	0.00028	Minimal Flow	33.8	0.26	520.9	7.23	Survey Data Average
Tributary 25	868	0.00028	Minimal Flow	33.8	0.26	520.9	7.23	Survey Data Average

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Summer Justification

DATA TYPE 21 - HEADWATER DATA FOR DO, BOD, AND NITROGEN

Headwater Name	Dissolved Oxygen, mg/L	UCBOD1, mg/l	NBOD, mg/l	Data Source
B Vincent & Bonfouca	6.00	0.063	0.29	Reduction required to meet 5.0/4.0 DO
Browns Vill Rd (DD2)	6.00	0.063	0.29	Reduction required to meet 5.0/4.0 DO
Drainage Ditch 8	6.00	0.063	0.29	Reduction required to meet 5.0/4.0 DO
Drainage Ditch 9	6.00	0.063	0.29	Reduction required to meet 5.0/4.0 DO
UPPER B BONFOUCA	6.00	0.063	0.29	Reduction required to meet 5.0/4.0 DO
Drainage Ditch 23	6.00	0.063	0.29	Reduction required to meet 5.0/4.0 DO
Highway 190(DD 5)	6.00	0.063	0.29	Reduction required to meet 5.0/4.0 DO
West Drainage Canal	6.00	0.063	0.29	Reduction required to meet 5.0/4.0 DO
Drainage Ditch 6	6.00	2.75	1.25	Reduction required to meet 5.0/4.0 DO
Tributary 2	6.00	2.75	1.25	Reduction required to meet 5.0/4.0 DO
Canal 26	6.00	2.75	1.25	Reduction required to meet 5.0/4.0 DO
Tributary 4	6.00	2.75	1.25	Reduction required to meet 5.0/4.0 DO
BAYOU LIBERTY	6.00	0.55	0.25	Reduction required to meet 5.0/4.0 DO
Tributary 1	6.00	0.55	0.25	Reduction required to meet 5.0/4.0 DO
Drainage Ditch 22	6.00	0.55	0.25	Reduction required to meet 5.0/4.0 DO
Drainage Ditch 20	6.00	0.55	0.25	Reduction required to meet 5.0/4.0 DO
Highway 190	6.00	0.55	0.25	Reduction required to meet 5.0/4.0 DO
Drainage Ditch 18	6.00	1.71	0.78	Reduction required to meet 5.0/4.0 DO
Drainage Ditch 19	6.00	1.71	0.78	Reduction required to meet 5.0/4.0 DO
Drainage Ditch 4	6.00	1.71	0.78	Reduction required to meet 5.0/4.0 DO
Tributary 9	6.00	1.71	0.78	Reduction required to meet 5.0/4.0 DO
Tributary 6	6.00	1.71	0.78	Reduction required to meet 5.0/4.0 DO
Tributary 10	6.00	1.71	0.78	Reduction required to meet 5.0/4.0 DO
Tributary 8	6.00	1.71	0.78	Reduction required to meet 5.0/4.0 DO
Marina 1	6.00	1.71	0.78	Reduction required to meet 5.0/4.0 DO
Marina 2	6.00	1.71	0.78	Reduction required to meet 5.0/4.0 DO
BAYOU PAQUET	6.00	1.79	0.78	Reduction required to meet 5.0/4.0 DO
Drainage Ditch 16	6.00	1.79	0.78	Reduction required to meet 5.0/4.0 DO
Drainage Ditch 17	6.00	1.79	0.78	Reduction required to meet 5.0/4.0 DO
Tributary 24	6.00	1.79	0.78	Reduction required to meet 5.0/4.0 DO
Tributary 25	6.00	1.79	0.78	Reduction required to meet 5.0/4.0 DO

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Summer Justification							
DATA TYPE 24 - WASTELOAD DATA FOR FLOW, TEMPERATURE, SALINITY, AND CONSERVATIVES							
Wasteload / Withdrawal Name	EL #	Flow, cms	Temperature, deg C	Salinity	Conductivity	Chlorides	Data Source
V H Seal Apartments	1	0.0000411	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Groundwater	40	0.0055000	33.80	0.26	520.9	7.2	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Eagle Lake MHP	48	0.0034502	30.00	0.40	774.0	34.4	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
J&K Management LLC	63	0.0000099	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Stones Throw Apts	67	0.0010515	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Good Value Auto Sale	73	0.0000033	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Adams MHP	74	0.0001150	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Wadleigh Offshore	79	0.0000438	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
ExxonMobil #51367	80	0.0001369	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
LCR-M Plumbing Supp	81	0.0000066	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Summer Justification							
DATA TYPE 24 - WASTELOAD DATA FOR FLOW, TEMPERATURE, SALINITY, AND CONSERVATIVES							
Wasteload / Withdrawal Name	EL #	Flow, cms	Temperature, deg C	Salinity	Conductivity	Chlorides	Data Source
Baker-Ellis-Shamrock	83	0.0000230	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Northshore Chemical	84	0.0000030	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Manheim Auto Auction	85	0.0000000	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Wadleigh Fitness	87	0.0000164	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Jubilee #4815	102	0.0000931	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Johnson-Bldg 2	107	0.0000767	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Charter-John's Auto	119	0.0000096	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
I-12 Shell	125	0.0000088	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
St Tam Par Sch Maint	135	0.0000055	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
J&D-Vets Health/Omni	136	0.0000416	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Good Shepherd Church	183	0.0000602	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Jolly Apartments	221	0.0003122	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Piney Ridge MHP	222	0.0005093	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Summer Justification							
DATA TYPE 24 - WASTELOAD DATA FOR FLOW, TEMPERATURE, SALINITY, AND CONSERVATIVES							
Wasteload / Withdrawal Name	EL #	Flow, cms	Temperature, deg C	Salinity	Conductivity	Chlorides	Data Source
Starling Plaza	223	0.0001566	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Po Folks Seafood	224	0.0000268	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
South Seas Rstrmt	227	0.0001068	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Shady Pines MHP	228	0.0005750	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
1421Hwy190- ArmaCoat	230	0.0000351	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
FacDir-StTamBrakeTag	231	0.0000044	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
New Life Ministries	232	0.0000268	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Peace Luth Church	233	0.0001298	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Ernest Wakder	234	0.0000197	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Stor N Lock-Tymeless	235	0.0000077	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Bonfouca Supfnd Site	260	0.0006309	30.00	0.22	437.3	23.5	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
DOTD Bnfca Bridge	281	0.0000011	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Slidell Marine	282	0.0002026	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Summer Justification							
DATA TYPE 24 - WASTELOAD DATA FOR FLOW, TEMPERATURE, SALINITY, AND CONSERVATIVES							
Wasteload / Withdrawal Name	EL #	Flow, cms	Temperature, deg C	Salinity	Conductivity	Chlorides	Data Source
ARC Mech Contractors	284	0.0000055	30.00	0.39	753.6	200.0	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Pearl River Nav	289	0.0001917	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
STP Const Building	295	0.0000438	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Acadian Grdns Condos	346	0.0004107	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Oakwood Estates	351	0.0006791	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Coin du Lestin Sub	389	0.0043813	30.00	0.32	628.1	54.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Northshore Squadron	439	0.0000014	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Andy Knight	442	0.0000022	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
The Meadows Sub	470	0.0151154	30.00	0.55	1053.0	150.0	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Royal Golf Club	482	0.0002377	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
NatFinance-Textron	494	0.0002191	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Guardian Angels	495	0.0000509	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Oakmont Subdivisio	498	0.0038665	30.00	0.32	619.5	47.0	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Summer Justification							
DATA TYPE 24 - WASTELOAD DATA FOR FLOW, TEMPERATURE, SALINITY, AND CONSERVATIVES							
Wasteload / Withdrawal Name	EL #	Flow, cms	Temperature, deg C	Salinity	Conductivity	Chlorides	Data Source
Assunta's Restaurant	536	0.0001588	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Indian Hills RV Park	544	0.0004313	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
J&J Auto Brokers	546	0.0000022	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
7thDay & Dollar Gen	548	0.0000750	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Omni Storage VI	550	0.0000164	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
ABC Supply Co	551	0.0000077	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Lion Consulting	552	0.0000022	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Chill Rite	553	0.0000120	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Herron-2315/17/19	555	0.0000312	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
ThomGroc-ST Pol Jury	556	0.0000055	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
PitStop3-ReflectMir	557	0.0000767	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
All Am Elks Lodge	576	0.0000876	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Lake Castle School	585	0.0004765	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Summer Justification							
DATA TYPE 24 - WASTELOAD DATA FOR FLOW, TEMPERATURE, SALINITY, AND CONSERVATIVES							
Wasteload / Withdrawal Name	EL #	Flow, cms	Temperature, deg C	Salinity	Conductivity	Chlorides	Data Source
BlueBell-NuLite	601	0.0000471	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Albers AC & Heating	602	0.0000066	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Baker Sales Wrhse	611	0.0000022	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Cleco Service Center	614	0.0000110	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
G&S-United Medical	615	0.0000197	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Airgas-Hanna-Sunbelt	616	0.0008653	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
RJD Contractors	617	0.0000011	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
M&R-WagnerShopCtr	619	0.0001091	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
CalWes Center	620	0.0002270	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Beau's-La Lumber	621	0.0000296	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Advance Auto	625	0.0000055	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Huntwyck Village	633	0.0152249	30.00	0.3	582.3	52.5	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
B Liberty Water Assn	667	0.0000099	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Summer Justification							
DATA TYPE 24 - WASTELOAD DATA FOR FLOW, TEMPERATURE, SALINITY, AND CONSERVATIVES							
Wasteload / Withdrawal Name	EL #	Flow, cms	Temperature, deg C	Salinity	Conductivity	Chlorides	Data Source
Thompson Rd Baptist	680	0.0000438	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Liberty Food Store	698	0.0000312	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
A-1 Remodeling & Bld	715	0.0000110	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
St Genevieve Cath Ch	723	0.0001643	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Bayou Liberty Marina	728	0.0000011	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
A Bonfouca Marina	746	0.0000471	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Waste Mgmt of La	762	0.0000274	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
AcAlign-AllAm-CT-M&D	763	0.0000099	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
K-Bar-B Youth Ranch	767	0.0001260	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Bayou Paquet headwater	776	0.0028320	33.80	0.26	520.9	7.2	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Acts 1 Tax Service	797	0.0000033	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Timber Ridge Sub	819	0.0024316	30.00	0.45	864.7	41.6	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Summer Justification					
DATA TYPE 25 - WASTELOAD DATA FOR DO, BOD, AND NITROGEN					
Wasteload / Withdrawal Name	EL #	DO, mg/l	CBOD, mg/l	UNBOD, mg/l	Data Source
V H Seal Apartments	1	2.00	23.0000	21.5000	Permit Limit to meet 5.0/4.0 DO Criteria
Groundwater	40	6.00	2.7000	1.1900	BV01
Eagle Lake MHP	48	5.00	11.5000	8.6000	Permit Limit to meet 5.0/4.0 DO Criteria
J&K Management LLC	63	2.00	23.0000	21.5000	Permit Limit to meet 5.0/4.0 DO Criteria
Stones Throw Apts	67	2.00	23.0000	8.6000	Permit Limit to meet 5.0/4.0 DO Criteria
Good Value Auto Sale	73	2.00	23.0000	21.5000	Permit Limit to meet 5.0/4.0 DO Criteria
Adams MHP	74	2.00	23.0000	21.5000	Permit Limit to meet 5.0/4.0 DO Criteria
Wadleigh Offshore	79	2.00	23.0000	21.5000	Permit Limit to meet 5.0/4.0 DO Criteria
ExxonMobil #51367	80	2.00	23.0000	21.5000	Permit Limit to meet 5.0/4.0 DO Criteria
LCR-M Plumbing Supp	81	2.00	23.0000	21.5000	Permit Limit to meet 5.0/4.0 DO Criteria
Baker-Ellis-Shamrock	83	2.00	23.0000	21.5000	Permit Limit to meet 5.0/4.0 DO Criteria
Northshore Chemical	84	2.00	23.0000	21.5000	Permit Limit to meet 5.0/4.0 DO Criteria

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Summer Justification					
DATA TYPE 25 - WASTELOAD DATA FOR DO, BOD, AND NITROGEN					
Wasteload / Withdrawal Name	EL #	DO, mg/l	CBOD, mg/l	UNBOD, mg/l	Data Source
Manheim Auto Auction	85	2.00	23.0000	21.5000	Permit Limit to meet 5.0/4.0 DO Criteria
Wadleigh Fitness	87	2.00	23.0000	21.5000	Permit Limit to meet 5.0/4.0 DO Criteria
Jubilee #4815	102	2.00	23.0000	21.5000	Permit Limit to meet 5.0/4.0 DO Criteria
Johnson-Bldg 2	107	2.00	23.0000	21.5000	Permit Limit to meet 5.0/4.0 DO Criteria
Charter-John's Auto	119	2.00	23.0000	21.5000	Permit Limit to meet 5.0/4.0 DO Criteria
I-12 Shell	125	2.00	23.0000	21.5000	Permit Limit to meet 5.0/4.0 DO Criteria
St Tam Par Sch Maint	135	2.00	23.0000	21.5000	Permit Limit to meet 5.0/4.0 DO Criteria
J&D-Vets Health/Omni	136	2.00	23.0000	21.5000	Permit Limit to meet 5.0/4.0 DO Criteria
Good Shepherd Church	183	2.00	23.0000	21.5000	Permit Limit to meet 5.0/4.0 DO Criteria
Jolly Apartments	221	2.00	23.0000	8.6000	Permit Limit to meet 5.0/4.0 DO Criteria
Piney Ridge MHP	222	2.00	23.0000	8.6000	Permit Limit to meet 5.0/4.0 DO Criteria
Starling Plaza	223	2.00	23.0000	21.5000	Permit Limit to meet 5.0/4.0 DO Criteria
Po Folks Seafood	224	2.00	23.0000	21.5000	Permit Limit to meet 5.0/4.0 DO Criteria
South Seas Rstrmt	227	2.00	23.0000	21.5000	Permit Limit to meet 5.0/4.0 DO Criteria
Shady Pines MHP	228	2.00	23.0000	8.6000	Permit Limit to meet 5.0/4.0 DO Criteria

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Summer Justification					
DATA TYPE 25 - WASTELOAD DATA FOR DO, BOD, AND NITROGEN					
Wasteload / Withdrawal Name	EL #	DO, mg/l	CBOD, mg/l	UNBOD, mg/l	Data Source
1421Hwy190-ArmaCoat	230	2.00	23.0000	21.5000	Permit Limit to meet 5.0/4.0 DO Criteria
FacDir-StTamBrakeTag	231	2.00	23.0000	21.5000	Permit Limit to meet 5.0/4.0 DO Criteria
New Life Ministries	232	2.00	23.0000	21.5000	Permit Limit to meet 5.0/4.0 DO Criteria
Peace Luth Church	233	2.00	23.0000	21.5000	Permit Limit to meet 5.0/4.0 DO Criteria
Ernest Walder	234	2.00	23.0000	21.5000	Permit Limit to meet 5.0/4.0 DO Criteria
Stor N Lock-Tymeless	235	2.00	23.0000	21.5000	Permit Limit to meet 5.0/4.0 DO Criteria
Bonfouca Supfnd Site	260	2.00	1.3300	1.7400	Permit Limit to meet 5.0/4.0 DO Criteria
DOTD Bnfca Bridge	281	2.00	46.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria
Slidell Marine	282	2.00	46.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria
ARC Mech Contractors	284	2.00	69.0000	64.5000	Permit Limit to meet 5.0/4.0 DO Criteria
Pearl River Nav	289	2.00	69.0000	64.5000	Permit Limit to meet 5.0/4.0 DO Criteria
STP Const Building	295	2.00	69.0000	64.5000	Permit Limit to meet 5.0/4.0 DO Criteria
Acadian Grdns Condos	346	2.00	69.0000	64.5000	Permit Limit to meet 5.0/4.0 DO Criteria
Oakwood Estates	351	2.00	23.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria
Coin du Lestin Sub	389	2.00	23.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Summer Justification					
DATA TYPE 25 - WASTELOAD DATA FOR DO, BOD, AND NITROGEN					
Wasteload / Withdrawal Name	EL #	DO, mg/l	CBOD, mg/l	UNBOD, mg/l	Data Source
Northshore Squadron	439	2.00	23.0000	21.5000	Permit Limit to meet 5.0/4.0 DO Criteria
Andy Knight	442	2.00	23.0000	21.5000	Permit Limit to meet 5.0/4.0 DO Criteria
The Meadows Sub	470	2.00	11.5000	8.6000	Permit Limit to meet 5.0/4.0 DO Criteria
Royal Golf Club	482	2.00	23.0000	21.5000	Permit Limit to meet 5.0/4.0 DO Criteria
NatFinance-Textron	494	2.00	23.0000	21.5000	Permit Limit to meet 5.0/4.0 DO Criteria
Guardian Angels	495	2.00	23.0000	21.5000	Permit Limit to meet 5.0/4.0 DO Criteria
Oakmont Subdivisio	498	2.00	11.5000	8.6000	Permit Limit to meet 5.0/4.0 DO Criteria
Assunta's Restaurant	536	2.00	23.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria
Indian Hills RV Park	544	2.00	23.0000	21.5000	Permit Limit to meet 5.0/4.0 DO Criteria
J&J Auto Brokers	546	2.00	23.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria
7thDay & Dollar Gen	548	2.00	23.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria
Omni Storage VI	550	2.00	23.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria
ABC Supply Co	551	2.00	23.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria
Lion Consulting	552	2.00	23.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria
Chill Rite	553	2.00	23.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Summer Justification					
DATA TYPE 25 - WASTELOAD DATA FOR DO, BOD, AND NITROGEN					
Wasteload / Withdrawal Name	EL #	DO, mg/l	CBOD, mg/l	UNBOD, mg/l	Data Source
Herron-2315/17/19	555	2.00	23.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria
ThomGroc-ST Pol Jury	556	2.00	23.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria
PitStop3-ReflectMir	557	2.00	23.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria
All Am Elks Lodge	576	2.00	23.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria
Lake Castle School	585	2.00	23.0000	21.5000	Permit Limit to meet 5.0/4.0 DO Criteria
BlueBell-NuLite	601	2.00	23.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria
Albers AC & Heating	602	2.00	23.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria
Baker Sales Wrhse	611	2.00	23.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria
Cleco Service Center	614	2.00	23.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria
G&S-United Medical	615	2.00	23.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria
Airgas-Hanna-Sunbelt	616	2.00	23.0000	25.3000	Permit Limit to meet 5.0/4.0 DO Criteria
RJD Contractors	617	2.00	23.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria
M&R-WagnerShopCtr	619	2.00	23.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria
CalWes Center	620	2.00	23.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria
Beau's-La Lumber	621	2.00	23.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria

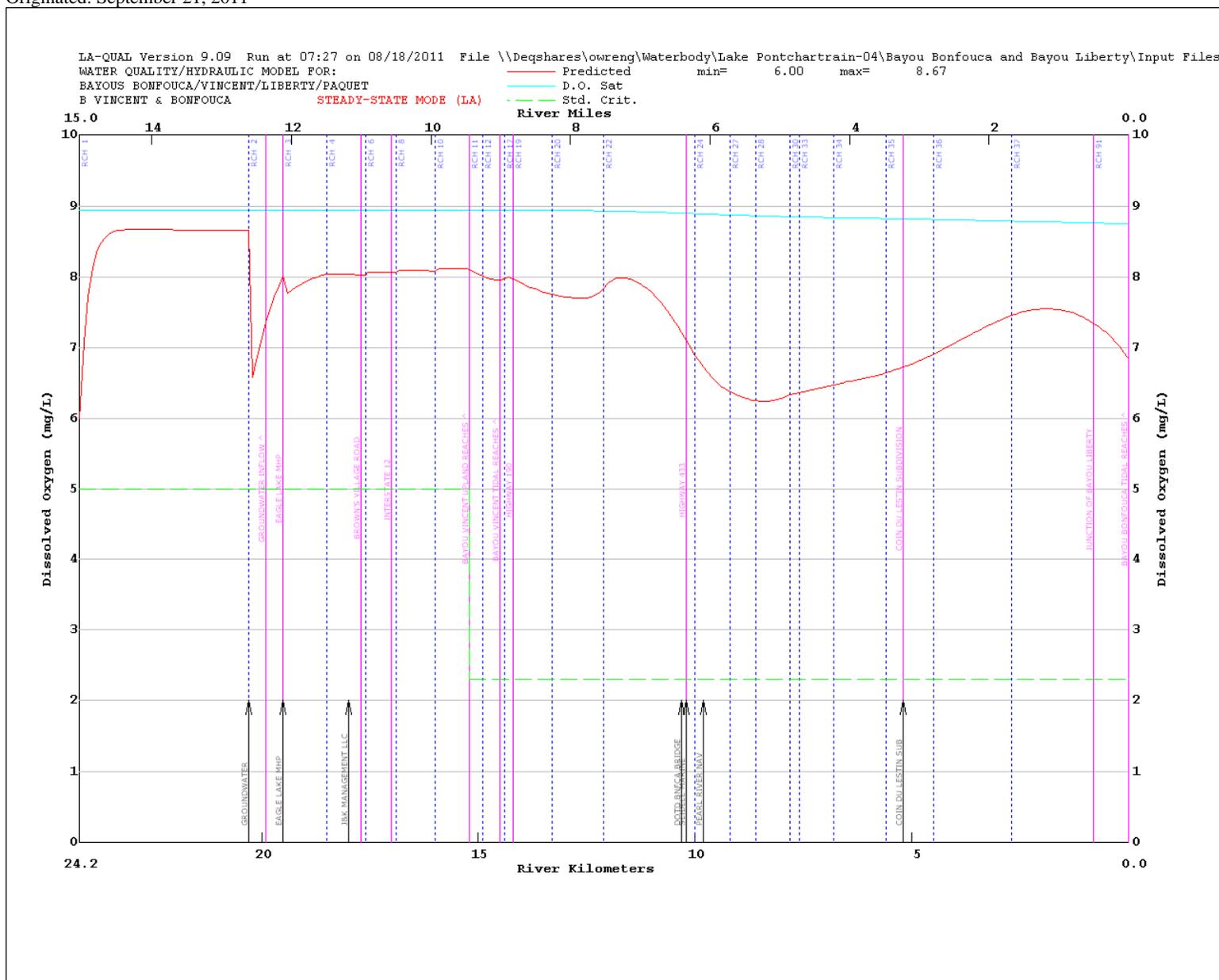
Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Summer Justification					
DATA TYPE 25 - WASTELOAD DATA FOR DO, BOD, AND NITROGEN					
Wasteload / Withdrawal Name	EL #	DO, mg/l	CBOD, mg/l	UNBOD, mg/l	Data Source
Advance Auto	625	2.00	23.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria
Huntwyck Village	633	2.00	23.0000	8.6000	Permit Limit to meet 5.0/4.0 DO Criteria
B Liberty Water Assn	667	2.00	23.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria
Thompson Rd Baptist	680	2.00	23.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria
Liberty Food Store	698	2.00	23.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria
A-1 Remodeling & Bld	715	2.00	23.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria
St Genevieve Cath Ch	723	2.00	23.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria
Bayou Liberty Marina	728	2.00	23.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria
A Bonfouca Marina	746	2.00	23.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria
Waste Mgmt of La	762	2.00	23.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria
AcAlign-AllAm-CT-M&D	763	2.00	23.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria
K-Bar-B Youth Ranch	767	2.00	23.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria
Bayou Paquet headwater	776	6.00	1.7600	0.7700	Permit Limit to meet 5.0/4.0 DO Criteria
Acts 1 Tax Service	797	2.00	23.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria
Timber Ridge Sub	819	2.00	23.0000	8.6000	Permit Limit to meet 5.0/4.0 DO Criteria

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Summer Justification

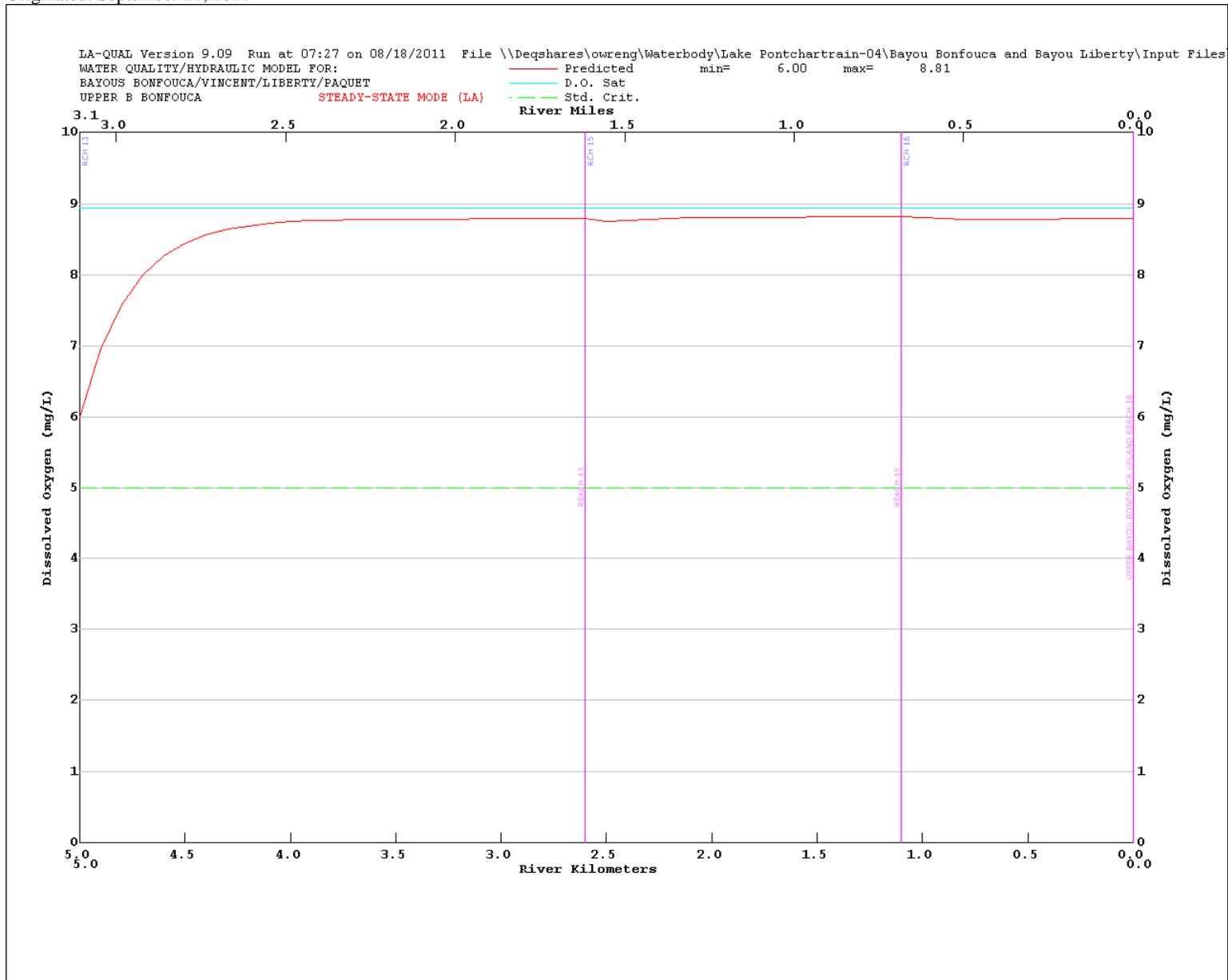
DATA TYPE 27 - LOWER BOUND MIDY CONDITIONS

PMIDameter	Value	Units	Data Source
TEMPERATURE	29.9800	°C	BB07
SALINITY	3.9400	ppt	BB07
CHLORIDES	7096.0000	ppm	BB07
CONDUCTIVITY	2200.0000	umhos/cm	BB07
DISSOLVED OXYGEN	6.8000	mg/L	BB07
CBOD1	7.8200	mg/L	BB07
CBOD2	0.0000	mg/L	BB07
CHLOROPHYLL A	5.5500	ug/L	BB07
NBOD	1.8000	mg/L	BB07

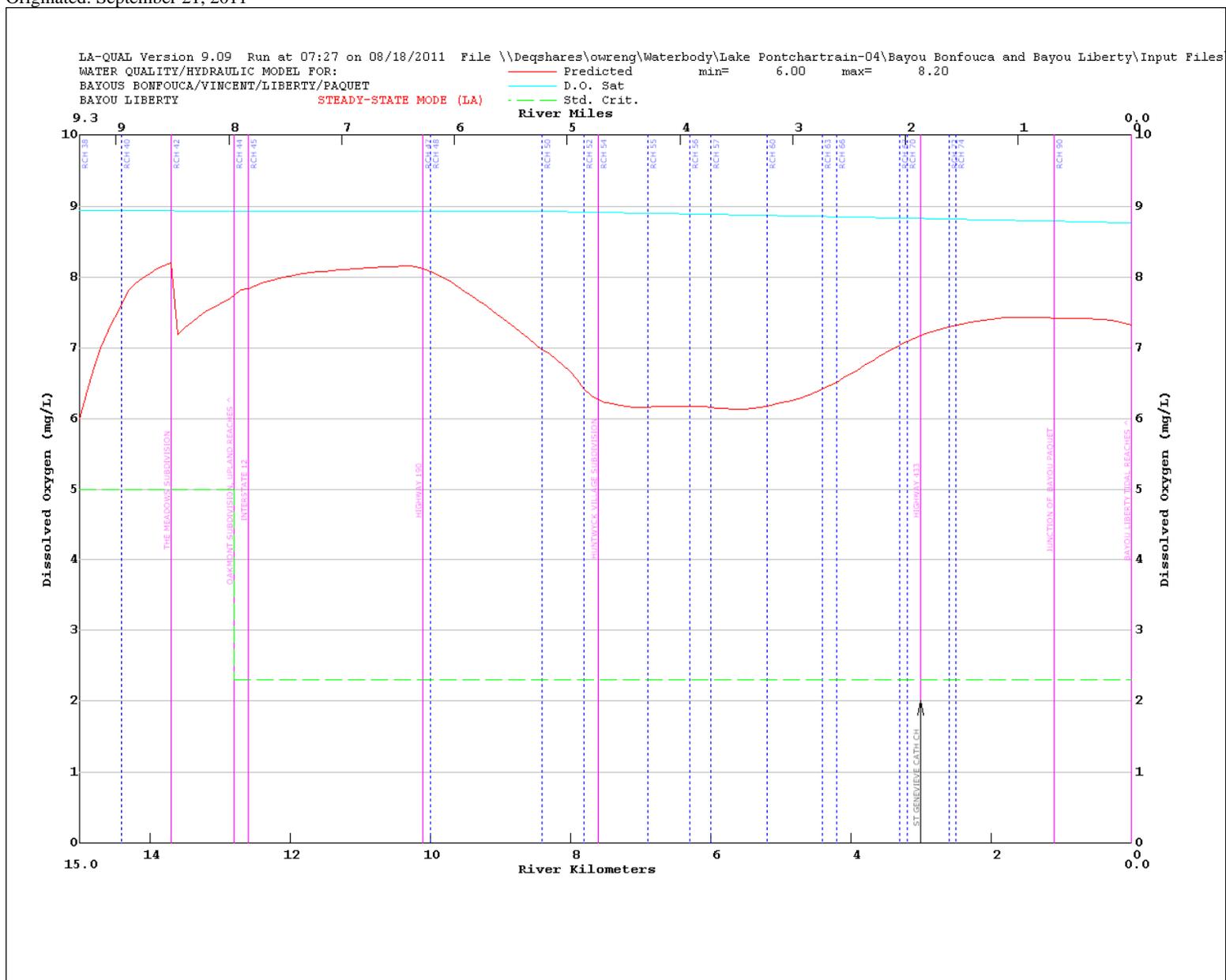
Appendix D3 –Winter Output Graphs and Input, Overlay, and Output Files



Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011



Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011



Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

BAYOU BONFOUCA AND BAYOU LIBERTY WINTER PROJECTION INPUT DATA SET

! DATA TYPE 01 -- TITLES AND CONTROL DATA

TITLE01 WATER QUALITY/HYDRAULIC MODEL FOR:
TITLE02 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET
CONTROL YES METRIC UNITS
CONTROL YES USE EFFECTIVE CONCENTRATIONS
ENDATA01

! DATA TYPE 02 -- Model Options

MODOPT01 NO TEMPERATURE
MODOPT02 YES SALINITY
MODOPT03 YES CONSERVATIVE MATERIAL I = CONDUCTIVITY IN COND
MODOPT04 YES CONSERVATIVE MATERIAL II = CHLORIDES IN CL
MODOPT05 YES DISSOLVED OXYGEN
MODOPT06 YES BOD1 BIOCHEMICAL OXYGEN DEMAND
MODOPT07 NO BOD2 BIOCHEMICAL OXYGEN DEMAND
MODOPT08 YES NBOD
MODOPT09 NO PHOSPHORUS SERIES
MODOPT10 NO PHYTOPLANKTON
MODOPT11 NO PERIPHYTON
MODOPT12 NO COLIFORM
MODOPT13 NO NONCONSERVATIVE MATERIAL
ENDATA02

! DATA TYPE 03 -- PROGRAM CONSTANTS

PROGRAM K2 MAXIMUM = 25
PROGRAM DISPERSION EQUATION = 3
PROGRAM TIDE HEIGHT = 0.1
PROGRAM TIDAL PERIOD = 19.75
PROGRAM PERIOD OF TIDAL RISE = 10.5
PROGRAM S OXYGEN DEPENDENCE THRESHOLD = 1
PROGRAM SOD MAXIMUM RATE = 50
PROGRAM PHYTOPLANKTON OXYGEN PROD = 0.05
PROGRAM PERIPHYTON OXYGEN PROD = 0

ENDATA03

! DATA TYPE 04 -- TEMPERATURE CORRECTION CONSTANTS

ENDATA04

! DATA TYPE 05 -- TEMPERATURE DATA

ENDATA05

! DATA TYPE 06 -- ALGAE CONSTANTS

ENDATA06

! DATA TYPE 07 -- MACROPHYTE CONSTANTS

ENDATA07

! DATA TYPE 08 -- REACH IDENTIFICATION DATA

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

! - - - -1- - - -2- - - -3- - - -4- - - -5- - - -6- - - -7- - - -8- - - -9- - - -0- - - -1
 !234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890

! *** -- *****-----*****-----

!	R#	ID	SITE NAME	RKM	RKM	LENGTH
REACH ID	1	DD	DRAINAGE DITCH 1	24.2	20.3	0.1
REACH ID	2	BV	VINCENT FROM RKM 20.0 TO BV01	20.3	19.5	0.1
REACH ID	3	BV	VINCENT FROM BV01 RKM 18.5	19.5	18.5	0.1
REACH ID	4	BV	VINCENT FROM RKM 18.5 TO BV02	18.5	17.6	0.1
REACH ID	5	DD	DRAINAGE DITCH 2	2.1	0	0.1
REACH ID	6	BV	VINCENT FROM BV02 TO DD 8	17.6	16.9	0.05
REACH ID	7	DD	DRAINAGE DITCH 8	0.8	0	0.1
REACH ID	8	BV	VINCENT FROM DD 8 TO DD 9	16.9	16	0.1
REACH ID	9	DD	DRAINAGE DITCH 9	2.1	0	0.1
REACH ID	10	BV	VINCENT FROM DD 9 TO RKM 15.2	16	15.2	0.1
REACH ID	11	BV	VINCENT FROM RKM 15.2 TO BV03	15.2	14.9	0.05
REACH ID	12	BV	VINCENT FROM BV03 TO BONFOUCA	14.9	14.4	0.1
REACH ID	13	UB	UB FROM RKM 5.0 TO DD 23	5	2.6	0.1
REACH ID	14	DD	DRAINAGE DITCH 23	1	0	0.1
REACH ID	15	UB	UB FROM DD 23 TO BB01	2.6	1.1	0.1
REACH ID	16	UB	UB FROM BB01 TO BAYOU VINCENT	1.1	0	0.1
REACH ID	17	BB	BONFOUCA FROM BV TO HWY 190	14.4	14.2	0.1
REACH ID	18	DD	HWY 190 (DRAINAGE DITCH 5)	1.8	0	0.1
REACH ID	19	BB	BONFOUCA FROM HWY 190 TO BB02	14.2	13.3	0.1
REACH ID	20	BB	BONFOUCA FROM BB02 TO WD	13.3	12.1	0.1
REACH ID	21	WD	WEST DRAINAGE CANAL	0.3	0	0.1
REACH ID	22	BB	BONFOUCA FROM WD TO DD6	12.1	10	0.1
REACH ID	23	DD	DRAINAGE DITCH 6	0.3	0	0.1
REACH ID	24	BB	BONFOUCA FROM DD 6 TO TRIB 2	10	9.2	0.1
REACH ID	25	DD	DRAINAGE DITCH 7 - UPLAND	1.5	0.5	0.1
REACH ID	26	TR	TRIBUTARY 2 - TIDAL	0.5	0	0.1
REACH ID	27	BB	BONFOUCA FROM TRIB 2 TO BB03	9.2	8.6	0.1
REACH ID	28	BB	BONFOUCA FROM BB03 TO CANAL 26	8.6	7.8	0.1
REACH ID	29	C	CANAL 26	2	0	0.1
REACH ID	30	BB	BONFOUCA FROM CANAL 26 TO TRIB 47.8	47.8	7.6	0.1
REACH ID	31	TR	TRIBUTARY 10 - UPLAND	1.9	0.8	0.1
REACH ID	32	TR	TRIBUTARY 4 - TIDAL	0.8	0	0.1
REACH ID	33	BB	BONFOUCA FROM TRIB 4 TO BB04	7.6	6.8	0.1
REACH ID	34	BB	BONFOUCA FROM BB04 TO RKM 5.6	6.8	5.6	0.1
REACH ID	35	BB	BONFOUCA FROM RKM 5.6 TO BB05	5.6	4.5	0.1
REACH ID	36	BB	BONFOUCA FROM BB05 TO RKM 2.7	4.5	2.7	0.1
REACH ID	37	BB	BONFOUCA FROM RKM 2.7 TO LIBERTY2.7	2.7	0.8	0.1
REACH ID	38	BL	LIBERTY FROM RKM 15.0 TO TRIB 1 15	15	14.4	0.1

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

REACH ID	39	TR TRIBUTARY 1	2.4	0	0.1
REACH ID	40	BL LIBERTY FROM RKM 14.4 TO DD22	14.4	13.7	0.1
REACH ID	41	DD DD22	0.3	0	0.1
REACH ID	42	BL LIBERTY FROM DD22 TO DD20	13.7	12.8	0.1
REACH ID	43	DD DD20	2.7	0	0.1
REACH ID	44	BL LIBERTY FROM DD20 TO BL03	12.8	12.6	0.1
REACH ID	45	BL LIBERTY FROM BL03 TO HWY 190	12.6	10.1	0.1
REACH ID	46	DD HWY 190 (DRAINAGE DITCH 14)	2.3	0	0.1
REACH ID	47	BL LIBERTY FROM HWY 190 TO BL04	10.1	10	0.1
REACH ID	48	BL LIBERTY FROM BL04 TO DD18	10	8.4	0.1
REACH ID	49	DD DD18	0.3	0	0.1
REACH ID	50	BL LIBERTY FROM DD18 TO DD19	8.4	7.8	0.1
REACH ID	51	DD DD19	1.4	0	0.1
REACH ID	52	BL LIBERTY FROM DD19 TO DD04	7.8	7.6	0.1
REACH ID	53	DD DD04	4.2	0	0.1
REACH ID	54	BL LIBERTY FROM DD04 TO BL05	7.6	6.9	0.1
REACH ID	55	BL LIBERTY FROM BL05 TO RKM 6.3	6.9	6.3	0.1
REACH ID	56	BL LIBERTY FROM RKM 6.3 TO RKM 6.0	6.3	6	0.1
REACH ID	57	BL LIBERTY FROM RKM 6.0 TO TRIB 9	6	5.2	0.1
REACH ID	58	DD DRAINAGE DITCH 3 - UPLAND	0.5	0.3	0.1
REACH ID	59	TR TRIBUTARY 9 - TIDAL	0.3	0	0.1
REACH ID	60	BL LIBERTY FROM TRIB 9 TO TRIB 6	5.2	4.4	0.1
REACH ID	61	DD DRAINAGE DITCH 11 - UPLAND	1.6	0.6	0.1
REACH ID	62	TR TRIBUTARY 6 - TIDAL	0.6	0	0.1
REACH ID	63	BL LIBERTY FROM TRIB 6 TO TRIB 10	4.4	4.2	0.1
REACH ID	64	TR TRIBUTARY 10 - UPLAND	0.7	0.2	0.1
REACH ID	65	TR TRIBUTARY 10 - TIDAL	0.2	0	0.1
REACH ID	66	BL LIBERTY FROM TRIB 10 TO BL07	4.2	3.3	0.1
REACH ID	67	BL LIBERTY FROM BL07 TO TRIB 8	3.3	3.2	0.1
REACH ID	68	TR TRIBUTARY 8 - UPLAND	0.6	0.1	0.1
REACH ID	69	TR TRIBUTARY 8 - TIDAL	0.1	0	0.1
REACH ID	70	BL LIBERTY FROM TRIB 8 TO M1	3.2	2.6	0.1
REACH ID	71	M MARINA 1 - TIDAL	0.2	0	0.1
REACH ID	72	BL LIBERTY FROM M1 TO M2	2.6	2.5	0.1
REACH ID	73	M MARINA02 - TIDAL	1.8	0	0.1
REACH ID	74	BL LIBERTY FROM M2 TO B PAQUET	2.5	1.1	0.1
REACH ID	75	DD HWY 190 (DD13-PAQUET HEADWATERS)	8.6	7.2	0.1
REACH ID	76	BP PAQUET FROM HWY 190 TO DD16	7.2	5.1	0.1
REACH ID	77	DD DD16	0.9	0	0.1
REACH ID	78	BP PAQUET FROM RKM 5.1 TO DD17	5.1	3.8	0.1
REACH ID	79	DD DD17	1.7	0	0.1
REACH ID	80	BP PAQUET FROM DD17 TO TIDAL REACH	3.8	3.4	0.1

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

REACH ID	81	BP PAQUET TIDAL REACH TO BP02	3.4	2.4	0.1
REACH ID	82	BP PAQUET FROM BP02 TO BP03	2.4	1.6	0.1
REACH ID	83	BP PAQUET FROM BP03 TO TRIB 24	1.6	1.3	0.1
REACH ID	84	C TRIB 24 FROM TOP TO PAQUET	0.4	0	0.1
REACH ID	85	BP PAQUET FROM TRIB 24 TO TRIB 25	1.3	1	0.1
REACH ID	86	C TRIB 25 FROM TOP TO RKM 0.3	1	0.3	0.1
REACH ID	87	C TRIB 25 FROM RKM 0.3 TO PAQUET	0.3	0	0.1
REACH ID	88	BP PAQUET FROM TRIB 25 TO BP04	1	0.2	0.1
REACH ID	89	BP PAQUET FROM BP04 TO LIBERTY	0.2	0	0.1
REACH ID	90	BL LIBERTY FROM PAQUET TO BONFOUCA	1.1	0	0.1
REACH ID	91	BB BONFOUCA FROM LIBERTY TO BB06	0.8	0	0.1

ENDATA08

! DATA TYPE 09 -- ADVECTIVE HYDRAULIC COEFFICIENTS

! - - - -1- - - - -2- - - - -3- - - - -4- - - - -5- - - - -6- - - - -7- - - - -8- - - - -9- - - - -0- - - - -1

! 234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890

! *** -----*****-----*****-----*****-----*****

!		a	b	c	d	e	f		
!		WIDTH	WIDTH	WIDTH	DEPTH	DEPTH	DEPTH		
!	R#	COEFF	EXP	CONST	COEFF	EXP	CONST	SLOPE	MANNING
HYDR-1	1	11.59770	0.3	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	2	4.765	0.3	0	0.3255	0.36	0	0.00001	0.03
HYDR-1	3	4.765	0.3	0	0.3255	0.36	0	0.00001	0.03
HYDR-1	4	4.765	0.3	0	0.3255	0.36	0	0.00001	0.03
HYDR-1	5	11.59770	0.3	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	6	4.765	0.3	0	0.3255	0.36	0	0.00001	0.03
HYDR-1	7	11.59770	0.3	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	8	4.765	0.3	0	0.3255	0.36	0	0.00001	0.03
HYDR-1	9	11.59770	0.3	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	10	4.765	0.3	0	0.3255	0.36	0	0.00001	0.03
HYDR-1	11	0	0	4.724	0	0	0.271	0.00001	0.03
HYDR-1	12	0	0	4.724	0	0	0.271	0.00001	0.03
HYDR-1	13	5.813	0.3	0	0.413	0.36	0	0.00001	0.03
HYDR-1	14	11.59770	0.3	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	15	5.813	0.3	0	0.413	0.36	0	0.00001	0.03
HYDR-1	16	8.719	0.3	0	0.62	0.36	0	0.00001	0.03
HYDR-1	17	0	0	10.84	0	0	0.87	0.00001	0.03
HYDR-1	18	11.59770	0.3	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	19	0	0	10.84	0	0	0.87	0.00001	0.03
HYDR-1	20	0	0	10.84	0	0	0.87	0.00001	0.03
HYDR-1	21	0	0	3	0	0	0.15	0.00001	0.03
HYDR-1	22	0	0	54.25	0	0	1.24	0.00001	0.03
HYDR-1	23	11.59770	0.3	0	0.9468	0.36	0	0.00001	0.03

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

HYDR-1	24	0	0	93.08	0	0	1.603	0.00001	0.03
HYDR-1	25	11.59770.3	0	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	26	0	0	12	0	0	0.6	0.00001	0.03
HYDR-1	27	0	0	93.08	0	0	1.603	0.00001	0.03
HYDR-1	28	0	0	93.08	0	0	1.603	0.00001	0.03
HYDR-1	29	0	0	114	0	0	1	0.00001	0.03
HYDR-1	30	0	0	76.51	0	0	1.87	0.00001	0.03
HYDR-1	31	11.59770.3	0	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	32	0	0	18	0	0	0.9	0.00001	0.03
HYDR-1	33	0	0	76.51	0	0	1.87	0.00001	0.03
HYDR-1	34	0	0	91.4	0	0	1.89	0.00001	0.03
HYDR-1	35	0	0	114.3	0	0	1.67	0.00001	0.03
HYDR-1	36	0	0	77.7	0	0	1.44	0.00001	0.03
HYDR-1	37	0	0	88	0	0	1.6	0.00001	0.03
HYDR-1	38	8.72	0.3	0	0.62	0.36	0	0.00001	0.03
HYDR-1	39	11.59770.3	0	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	40	8.72	0.3	0	0.62	0.36	0	0.00001	0.03
HYDR-1	41	11.59770.3	0	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	42	17.43760.3	0	0	0.992	0.36	0	0.00001	0.03
HYDR-1	43	11.59770.3	0	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	44	0	0	8.84	0	0	0.472	0.00001	0.03
HYDR-1	45	0	0	8.84	0	0	0.472	0.00001	0.03
HYDR-1	46	11.59770.3	0	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	47	0	0	18.6	0	0	1.4	0.00001	0.03
HYDR-1	48	0	0	18.6	0	0	1.4	0.00001	0.03
HYDR-1	49	11.59770.3	0	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	50	0	0	18.6	0	0	1.4	0.00001	0.03
HYDR-1	51	11.59770.3	0	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	52	0	0	42.67	0	0	2.28	0.00001	0.03
HYDR-1	53	11.59770.3	0	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	54	0	0	42.67	0	0	2.28	0.00001	0.03
HYDR-1	55	0	0	42.67	0	0	2.28	0.00001	0.03
HYDR-1	56	0	0	39.69	0	0	1.7	0.00001	0.03
HYDR-1	57	0	0	47.55	0	0	2.08	0.00001	0.03
HYDR-1	58	11.59770.3	0	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	59	0	0	16	0	0	0.8	0.00001	0.03
HYDR-1	60	0	0	47.55	0	0	2.08	0.00001	0.03
HYDR-1	61	11.59770.3	0	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	62	0	0	12	0	0	0.6	0.00001	0.03
HYDR-1	63	0	0	52.73	0	0	2.09	0.00001	0.03
HYDR-1	64	11.59770.3	0	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	65	0	0	13	0	0	0.65	0.00001	0.03

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

HYDR-1	66	0	0	52.12	0	0	2.14	0.00001	0.03
HYDR-1	67	0	0	52.12	0	0	2.14	0.00001	0.03
HYDR-1	68	11.59770.3	0	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	69	0	0	10	0	0	0.5	0.00001	0.03
HYDR-1	70	0	0	52.12	0	0	2.14	0.00001	0.03
HYDR-1	71	0	0	32	0	0	1.2	0.00001	0.03
HYDR-1	72	0	0	56.54	0	0	2.14	0.00001	0.03
HYDR-1	73	0	0	32	0	0	1.2	0.00001	0.03
HYDR-1	74	0	0	60.96	0	0	2.13	0.00001	0.03
HYDR-1	75	11.59770.3	0	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	76	8.72	0.3	0	0.62	0.36	0	0.00001	0.03
HYDR-1	77	11.59770.3	0	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	78	8.72	0.3	0	0.62	0.36	0	0.00001	0.03
HYDR-1	79	11.59770.3	0	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	80	8.72	0.3	0	0.62	0.36	0	0.00001	0.03
HYDR-1	81	0	0	18.9	0	0	1.1	0.00001	0.03
HYDR-1	82	0	0	18.29	0	0	1	0.00001	0.03
HYDR-1	83	0	0	21.34	0	0	1.5	0.00001	0.03
HYDR-1	84	0	0	20.1	0	0	0.74	0.00001	0.03
HYDR-1	85	0	0	21.34	0	0	1.5	0.00001	0.03
HYDR-1	86	0	0	16.46	0	0	0.94	0.00001	0.03
HYDR-1	87	0	0	32	0	0	0.77	0.00001	0.03
HYDR-1	88	0	0	30.48	0	0	1.5	0.00001	0.03
HYDR-1	89	0	0	30.48	0	0	1.5	0.00001	0.03
HYDR-1	90	0	0	60.96	0	0	2.13	0.00001	0.03
HYDR-1	91	0	0	105.59	0	0	1.96	0.00001	0.03

ENDATA09

! DATA TYPE 10 -- DISPERSIVE HYDRAULIC COEFFICIENTS

! - - - -1- - - - -2- - - - -3- - - - -4- - - - -5- - - - -6- - - - -7- - - - -8- - - - -9- - - - -0- - - - -1

! 234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890

! *** -----*****-----*****-----

!	TIDAL					
!	R#	RANGE	a	b	c	d
HYDR-2	1	0	0	0.833	0	1
HYDR-2	2	0	0	0.833	0	1
HYDR-2	3	0	0	0.833	0	1
HYDR-2	4	0	0	0.833	0	1
HYDR-2	5	0	0	0.833	0	1
HYDR-2	6	0	0	0.833	0	1
HYDR-2	7	0	0	0.833	0	1
HYDR-2	8	0	0	0.833	0	1
HYDR-2	9	0	0	0.833	0	1

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

HYDR-2	10	0	0	0.833	0	1
HYDR-2	11	1	200	0.833	0	1
HYDR-2	12	1	200	0.833	0	1
HYDR-2	13	0	0	0.833	0	1
HYDR-2	14	0	0	0.833	0	1
HYDR-2	15	0	0	0.833	0	1
HYDR-2	16	0	0	0.833	0	1
HYDR-2	17	1	200	0.833	0	1
HYDR-2	18	0	0	0.833	0	1
HYDR-2	19	1	200	0.833	0	1
HYDR-2	20	1	200	0.833	0	1
HYDR-2	21	1	200	0.833	0	1
HYDR-2	22	1	200	0.833	0	1
HYDR-2	23	0	0	0.833	0	1
HYDR-2	24	1	200	0.833	0	1
HYDR-2	25	0	0	0.833	0	1
HYDR-2	26	1	200	0.833	0	1
HYDR-2	27	1	200	0.833	0	1
HYDR-2	28	1	200	0.833	0	1
HYDR-2	29	1	200	0.833	0	1
HYDR-2	30	1	200	0.833	0	1
HYDR-2	31	0	0	0.833	0	1
HYDR-2	32	1	200	0.833	0	1
HYDR-2	33	1	200	0.833	0	1
HYDR-2	34	1	200	0.833	0	1
HYDR-2	35	1	200	0.833	0	1
HYDR-2	36	1	200	0.833	0	1
HYDR-2	37	1	200	0.833	0	1
HYDR-2	38	0	0	0.833	0	1
HYDR-2	39	0	0	0.833	0	1
HYDR-2	40	0	0	0.833	0	1
HYDR-2	41	0	0	0.833	0	1
HYDR-2	42	0	0	0.833	0	1
HYDR-2	43	0	0	0.833	0	1
HYDR-2	44	1	100	0.833	0	1
HYDR-2	45	1	100	0.833	0	1
HYDR-2	46	0	0	0.833	0	1
HYDR-2	47	1	100	0.833	0	1
HYDR-2	48	1	100	0.833	0	1
HYDR-2	49	0	0	0.833	0	1
HYDR-2	50	1	150	0.833	0	1
HYDR-2	51	0	0	0.833	0	1

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

HYDR-2	52	1	200	0.833	0	1
HYDR-2	53	0	0	0.833	0	1
HYDR-2	54	1	250	0.833	0	1
HYDR-2	55	1	300	0.833	0	1
HYDR-2	56	1	300	0.833	0	1
HYDR-2	57	1	300	0.833	0	1
HYDR-2	58	0	0	0.833	0	1
HYDR-2	59	1	200	0.833	0	1
HYDR-2	60	1	300	0.833	0	1
HYDR-2	61	0	0	0.833	0	1
HYDR-2	62	1	200	0.833	0	1
HYDR-2	63	1	300	0.833	0	1
HYDR-2	64	0	0	0.833	0	1
HYDR-2	65	1	200	0.833	0	1
HYDR-2	66	1	300	0.833	0	1
HYDR-2	67	1	300	0.833	0	1
HYDR-2	68	0	0	0.833	0	1
HYDR-2	69	1	200	0.833	0	1
HYDR-2	70	1	300	0.833	0	1
HYDR-2	71	1	200	0.833	0	1
HYDR-2	72	1	300	0.833	0	1
HYDR-2	73	1	200	0.833	0	1
HYDR-2	74	1	300	0.833	0	1
HYDR-2	75	0	0	0.833	0	1
HYDR-2	76	0	0	0.833	0	1
HYDR-2	77	0	0	0.833	0	1
HYDR-2	78	0	0	0.833	0	1
HYDR-2	79	0	0	0.833	0	1
HYDR-2	80	0	0	0.833	0	1
HYDR-2	81	1	200	0.833	0	1
HYDR-2	82	1	200	0.833	0	1
HYDR-2	83	1	200	0.833	0	1
HYDR-2	84	1	200	0.833	0	1
HYDR-2	85	1	200	0.833	0	1
HYDR-2	86	1	200	0.833	0	1
HYDR-2	87	1	200	0.833	0	1
HYDR-2	88	1	200	0.833	0	1
HYDR-2	89	1	200	0.833	0	1
HYDR-2	90	1	300	0.833	0	1
HYDR-2	91	1	200	0.833	0	1

ENDATA10

! DATA TYPE 11 -- INITIAL CONDITIONS

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

! - - - -1- - - -2- - - -3- - - -4- - - -5- - - -6- - - -7- - - -8- - - -9- - - -0- - - -1

! 23456789012345678901234567890123456789012345678901234567890123456789012345678901234567890

! *** -----*****-----*****-----*****-----*****

!	R#	TEMP	SALINITY	DO	NH3	N	NIT	NIT	I	PHOS	CHL	A	MACROPHYTES
INITIAL	1	20.8	0.26	3	0		0				0		0
INITIAL	2	20.8	0.26	3	0		0				0		0
INITIAL	3	20.8	0.26	3	0		0				0		0
INITIAL	4	20.8	0.39	3	0		0				0		0
INITIAL	5	20.8	0.3	3	0		0				0		0
INITIAL	6	20.8	0.39	3	0		0				0		0
INITIAL	7	20.8	0.3	3	0		0				0		0
INITIAL	8	20.8	0.28	3	0		0				0		0
INITIAL	9	20.8	0.3	3	0		0				0		0
INITIAL	10	20.8	0.17	3	0		0				0		0
INITIAL	11	20.8	0.17	3	0		0				10		0
INITIAL	12	20.8	0.17	3	0		0				10		0
INITIAL	13	20.8	0.17	3	0		0				0		0
INITIAL	14	20.8	0.3	3	0		0				0		0
INITIAL	15	20.8	0.17	3	0		0				0		0
INITIAL	16	20.8	0.17	3	0		0				0		0
INITIAL	17	20.8	0.24	3	0		0				10		0
INITIAL	18	20.8	0.27	3	0		0				0		0
INITIAL	19	20.8	0.27	3	0		0				10		0
INITIAL	20	20.8	0.45	3	0		0				10		0
INITIAL	21	20.8	0.3	3	0		0				0		0
INITIAL	22	20.8	1.15	3	0		0				8.8		0
INITIAL	23	20.8	0.3	3	0		0				0		0
INITIAL	24	20.8	2.1	3	0		0				8.8		0
INITIAL	25	20.8	0.3	3	0		0				0		0
INITIAL	26	20.8	0.3	3	0		0				0		0
INITIAL	27	20.8	2.4	3	0		0				8.8		0
INITIAL	28	20.8	2.68	3	0		0				8.8		0
INITIAL	29	20.8	0.3	3	0		0				0		0
INITIAL	30	20.8	3	3	0		0				10		0
INITIAL	31	20.8	0.3	3	0		0				0		0
INITIAL	32	20.8	0.3	3	0		0				10		0
INITIAL	33	20.8	3.1	3	0		0				10		0
INITIAL	34	20.8	3.3	3	0		0				10		0
INITIAL	35	20.8	3.3	3	0		0				10		0
INITIAL	36	20.8	3.62	3	0		0				10		0
INITIAL	37	20.8	3.82	3	0		0				10		0
INITIAL	38	20.8	0.3	3	0		0				0		0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

INITIAL	39	20.8	0.3	3	0	0	0	0
INITIAL	40	20.8	0.3	3	0	0	0	0
INITIAL	41	20.8	0.3	3	0	0	0	0
INITIAL	42	20.8	0.3	3	0	0	0	0
INITIAL	43	20.8	0.3	3	0	0	0	0
INITIAL	44	20.8	0.48	3	0	0	10	0
INITIAL	45	20.8	0.48	3	0	0	10	0
INITIAL	46	20.8	0.3	3	0	0	0	0
INITIAL	47	20.8	0.54	3	0	0	10	0
INITIAL	48	20.8	0.54	3	0	0	10	0
INITIAL	49	20.8	0.3	3	0	0	0	0
INITIAL	50	20.8	1.7	3	0	0	3.2	0
INITIAL	51	20.8	0.3	3	0	0	0	0
INITIAL	52	20.8	2.9	3	0	0	3.2	0
INITIAL	53	20.8	0.3	3	0	0	0	0
INITIAL	54	20.8	3.09	3	0	0	3.2	0
INITIAL	55	20.8	3.09	3	0	0	3.2	0
INITIAL	56	20.8	3.09	3	0	0	3.2	0
INITIAL	57	20.8	3.09	3	0	0	3.2	0
INITIAL	58	20.8	0.3	3	0	0	0	0
INITIAL	59	20.8	0.3	3	0	0	0	0
INITIAL	60	20.8	2.8	3	0	0	3.2	0
INITIAL	61	20.8	0.3	3	0	0	0	0
INITIAL	62	20.8	0.3	3	0	0	0	0
INITIAL	63	20.8	2.4	3	0	0	3.2	0
INITIAL	64	20.8	0.3	3	0	0	0	0
INITIAL	65	20.8	0.3	3	0	0	0	0
INITIAL	66	20.8	2.12	3	0	0	3.2	0
INITIAL	67	20.8	2.12	3	0	0	10	0
INITIAL	68	20.8	0.3	3	0	0	0	0
INITIAL	69	20.8	0.3	3	0	0	0	0
INITIAL	70	20.8	2.8	3	0	0	10	0
INITIAL	71	20.8	0.3	3	0	0	0	0
INITIAL	72	20.8	3.5	3	0	0	6.8	0
INITIAL	73	20.8	0.3	3	0	0	0	0
INITIAL	74	20.8	4.16	3	0	0	6.8	0
INITIAL	75	20.8	0.3	3	0	0	0	0
INITIAL	76	20.8	0.3	3	0	0	0	0
INITIAL	77	20.8	0.3	3	0	0	0	0
INITIAL	78	20.8	0.3	3	0	0	0	0
INITIAL	79	20.8	0.3	3	0	0	0	0
INITIAL	80	20.8	1.6	3	0	0	0	0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

INITIAL	81	20.8	3.17	3	0	0	10	0
INITIAL	82	20.8	3.32	3	0	0	10	0
INITIAL	83	20.8	3.47	3	0	0	10	0
INITIAL	84	20.8	0.3	3	0	0	0	0
INITIAL	85	20.8	3.7	3	0	0	10	0
INITIAL	86	20.8	0.3	3	0	0	0	0
INITIAL	87	20.8	0.3	3	0	0	0	0
INITIAL	88	20.8	3.94	3	0	0	10	0
INITIAL	89	20.8	3.94	3	0	0	10	0
INITIAL	90	20.8	4.16	3	0	0	6.8	0
INITIAL	91	20.8	4	3	0	0	7.4	0

ENDATA11

! DATA TYPE 12 -- REAERATION, SEDIMENT OXYGEN DEMAND AND BOD COEFFICIENTS

!-----1-----2-----3-----4-----5-----6-----7-----8-----9

!234567890123456789012345678901234567890123456789012345678901234567890

! *** -----*****----- *****-----*****-----*****-----*****-----*****

!	R#	REA	KL	MIN		BOD 1		BOD 1		BOD 2		BOD 2	
!						SOD	DECAY	SETT		DECAY	SETT		
COEF-1	1	15	0	0	0	0.144	0.08	0.05	1	0	0	0	0
COEF-1	2	15	0	0	0	0.086	0.08	0.05	1	0	0	0	0
COEF-1	3	15	0	0	0	1.725	0.08	0.05	1	0	0	0	0
COEF-1	4	15	0	0	0	2.013	0.08	0.05	1	0	0	0	0
COEF-1	5	15	0	0	0	0.144	0.08	0.05	1	0	0	0	0
COEF-1	6	15	0	0	0	2.013	0.08	0.05	1	0	0	0	0
COEF-1	7	15	0	0	0	0.144	0.08	0.05	1	0	0	0	0
COEF-1	8	15	0	0	0	2.013	0.08	0.05	1	0	0	0	0
COEF-1	9	15	0	0	0	0.144	0.08	0.05	1	0	0	0	0
COEF-1	10	15	0	0	0	2.013	0.08	0.05	1	0	0	0	0
COEF-1	11	15	0	0	0	1.208	0.08	0.05	1	0	0	0	0
COEF-1	12	15	0	0	0	1.208	0.08	0.05	1	0	0	0	0
COEF-1	13	15	0	0	0	0.144	0.08	0.05	1	0	0	0	0
COEF-1	14	15	0	0	0	0.144	0.08	0.05	1	0	0	0	0
COEF-1	15	15	0	0	0	0.144	0.08	0.05	1	0	0	0	0
COEF-1	16	15	0	0	0	0.144	0.08	0.05	1	0	0	0	0
COEF-1	17	15	0	0	0	0.805	0.08	0.05	1	0	0	0	0
COEF-1	18	15	0	0	0	0.144	0.08	0.05	1	0	0	0	0
COEF-1	19	15	0	0	0	1.035	0.08	0.05	1	0	0	0	0
COEF-1	20	15	0	0	0	1.035	0.08	0.05	1	0	0	0	0
COEF-1	21	15	0	0	0	0.144	0.08	0.05	1	0	0	0	0
COEF-1	22	11	0	0	0	0.661	0.08	0.05	1	0	0	0	0
COEF-1	23	15	0	0	0	0.144	0.08	0.05	1	0	0	0	0
COEF-1	24	1	0.504	0	0	0.625	0.08	0.05	1	0	0	0	0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

COEF-1	25	15	0	0	0	0.625	0.08	0.05	1	0	0	0	0	0
COEF-1	26	11	0	0	0	0.625	0.08	0.05	1	0	0	0	0	0
COEF-1	27	1	0.504	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	28	1	0.504	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	29	11	0	0	0	0.625	0.08	0.05	1	0	0	0	0	0
COEF-1	30	1	0.477	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	31	15	0	0	0	0.625	0.08	0.05	1	0	0	0	0	0
COEF-1	32	11	0	0	0	0.625	0.08	0.05	1	0	0	0	0	0
COEF-1	33	1	0.477	0	0	0.25	0.08	0.05	1	0	0	0	0	0
COEF-1	34	1	0.477	0	0	0	0.08	0.05	1	0	0	0	0	0
COEF-1	35	1	0.542	0	0	0	0.08	0.05	1	0	0	0	0	0
COEF-1	36	1	0.658	0	0	0.063	0.08	0.05	1	0	0	0	0	0
COEF-1	37	1	0.58	0	0	0	0.08	0.05	1	0	0	0	0	0
COEF-1	38	15	0	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	39	15	0	0	0	0.125	0.08	0.05	1	0	0	0	0	0
COEF-1	40	15	0	0	0	0.625	0.08	0.05	1	0	0	0	0	0
COEF-1	41	15	0	0	0	0.125	0.08	0.05	1	0	0	0	0	0
COEF-1	42	15	0	0	0	0.675	0.08	0.05	1	0	0	0	0	0
COEF-1	43	15	0	0	0	0.125	0.08	0.05	1	0	0	0	0	0
COEF-1	44	15	0	0	0	0.625	0.08	0.05	1	0	0	0	0	0
COEF-1	45	15	0	0	0	0.425	0.08	0.05	1	0	0	0	0	0
COEF-1	46	15	0	0	0	0.125	0.08	0.05	1	0	0	0	0	0
COEF-1	47	11	0	0	0	0.31	0.08	0.05	1	0	0	0	0	0
COEF-1	48	11	0	0	0	0.256	0.08	0.05	1	0	0	0	0	0
COEF-1	49	15	0	0	0	0.388	0.08	0.05	1	0	0	0	0	0
COEF-1	50	11	0	0	0	0.078	0.08	0.05	1	0	0	0	0	0
COEF-1	51	15	0	0	0	0.388	0.08	0.05	1	0	0	0	0	0
COEF-1	52	11	0	0	0	0	0.08	0.05	1	0	0	0	0	0
COEF-1	53	15	0	0	0	0.388	0.08	0.05	1	0	0	0	0	0
COEF-1	54	11	0	0	0	0.031	0.08	0.05	0.4	0	0	0	0	0
COEF-1	55	1	0.355	0	0	0.078	0.08	0.05	0.4	0	0	0	0	0
COEF-1	56	1	0.469	0	0	0.031	0.08	0.05	1	0	0	0	0	0
COEF-1	57	1	0.389	0	0	0	0.08	0.05	1	0	0	0	0	0
COEF-1	58	15	0	0	0	0.388	0.08	0.05	1	0	0	0	0	0
COEF-1	59	11	0	0	0	0.388	0.08	0.05	1	0	0	0	0	0
COEF-1	60	1	0.438	0	0	0	0.08	0.05	1	0	0	0	0	0
COEF-1	61	15	0	0	0	0.388	0.08	0.05	1	0	0	0	0	0
COEF-1	62	11	0	0	0	0.388	0.08	0.05	1	0	0	0	0	0
COEF-1	63	1	0.426	0	0	0	0.08	0.05	1	0	0	0	0	0
COEF-1	64	15	0	0	0	0.388	0.08	0.05	1	0	0	0	0	0
COEF-1	65	11	0	0	0	0.388	0.08	0.05	1	0	0	0	0	0
COEF-1	66	1	0.426	0	0	0.163	0.08	0.05	0.4	0	0	0	0	0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

COEF-1	67	1	0.426	0	0	0.171	0.08	0.05	0	0	0	0	0	0
COEF-1	68	15	0	0	0	0.388	0.08	0.05	1	0	0	0	0	0
COEF-1	69	11	0	0	0	0.388	0.08	0.05	1	0	0	0	0	0
COEF-1	70	1	0.426	0	0	0.155	0.08	0.05	0	0	0	0	0	0
COEF-1	71	11	0	0	0	0.388	0.08	0.05	1	0	0	0	0	0
COEF-1	72	1	0.426	0	0	0	0.08	0.05	0	0	0	0	0	0
COEF-1	73	11	0	0	0	0.388	0.08	0.05	1	0	0	0	0	0
COEF-1	74	1	0.426	0	0	0	0.08	0.05	0	0	0	0	0	0
COEF-1	75	15	0	0	0	0.406	0.08	0.05	1	0	0	0	0	0
COEF-1	76	15	0	0	0	0.406	0.08	0.05	1	0	0	0	0	0
COEF-1	77	15	0	0	0	0.406	0.08	0.05	1	0	0	0	0	0
COEF-1	78	15	0	0	0	0.406	0.08	0.05	1	0	0	0	0	0
COEF-1	79	15	0	0	0	0.406	0.08	0.05	1	0	0	0	0	0
COEF-1	80	15	0	0	0	0.406	0.08	0.05	1	0	0	0	0	0
COEF-1	81	15	0	0	0	0.26	0.08	0.05	1	0	0	0	0	0
COEF-1	82	1	0.801	0	0	0.618	0.08	0.05	1	0	0	0	0	0
COEF-1	83	1	0.606	0	0	0.488	0.08	0.05	1	0	0	0	0	0
COEF-1	84	15	0	0	0	0.406	0.08	0.05	1	0	0	0	0	0
COEF-1	85	1	0.606	0	0	0.244	0.08	0.05	1	0	0	0	0	0
COEF-1	86	15	0	0	0	0.406	0.08	0.05	1	0	0	0	0	0
COEF-1	87	15	0	0	0	0.406	0.08	0.05	1	0	0	0	0	0
COEF-1	88	1	0.606	0	0	0	0.08	0.05	1	0	0	0	0	0
COEF-1	89	1	0.606	0	0	0	0.08	0.05	1	0	0	0	0	0
COEF-1	90	1	0.426	0	0	0	0.08	0.05	0	0	0	0	0	0
COEF-1	91	1	0.503	0	0	0	0.08	0.05	0	0	0	0	0	0

ENDATA12

! DATA TYPE 13 -- NITROGEN AND PHOSPHOURS COEFFICIENTS

! - - - -1- - - - -2- - - - -3- - - - -4- - - - -5- - - - -6- - - - -7- - - - -8- - - - -9- - - - -0- - - - -1

! 234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890

! *** -----*****-----*****-----*****-----

! NBOD NBOD

! R# DECAAY SETT

COEF-2	1	0.03	0.05	0	0	0	0	0	0	0	0	0	0	0
COEF-2	2	0.03	0.05	0	0	0	0	0	0	0	0	0	0	0
COEF-2	3	0.03	0.05	0	0	0	0	0	0	0	0	0	0	0
COEF-2	4	0.03	0.05	0	0	0	0	0	0	0	0	0	0	0
COEF-2	5	0.03	0.05	0	0	0	0	0	0	0	0	0	0	0
COEF-2	6	0.03	0.1	0	0	0	0	0	0	0	0	0	0	0
COEF-2	7	0.03	0.05	0	0	0	0	0	0	0	0	0	0	0
COEF-2	8	0.03	0.1	0	0	0	0	0	0	0	0	0	0	0
COEF-2	9	0.03	0.05	0	0	0	0	0	0	0	0	0	0	0
COEF-2	10	0.03	0.05	0	0	0	0	0	0	0	0	0	0	0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

COEF-2	11	0.03	0.15	0	0	0	0	0	0
COEF-2	12	0.03	0.15	0	0	0	0	0	0
COEF-2	13	0.03	0.05	0	0	0	0	0	0
COEF-2	14	0.03	0.05	0	0	0	0	0	0
COEF-2	15	0.03	0.05	0	0	0	0	0	0
COEF-2	16	0.03	0.05	0	0	0	0	0	0
COEF-2	17	0.03	0.15	0	0	0	0	0	0
COEF-2	18	0.03	0.05	0	0	0	0	0	0
COEF-2	19	0.03	0.15	0	0	0	0	0	0
COEF-2	20	0.03	0.05	0	0	0	0	0	0
COEF-2	21	0.03	0.05	0	0	0	0	0	0
COEF-2	22	0.03	0.05	0	0	0	0	0	0
COEF-2	23	0.03	0.05	0	0	0	0	0	0
COEF-2	24	0.03	0.05	0	0	0	0	0	0
COEF-2	25	0.03	0.05	0	0	0	0	0	0
COEF-2	26	0.03	0.05	0	0	0	0	0	0
COEF-2	27	0.03	0.05	0	0	0	0	0	0
COEF-2	28	0.03	0.05	0	0	0	0	0	0
COEF-2	29	0.03	0.05	0	0	0	0	0	0
COEF-2	30	0.03	0.05	0	0	0	0	0	0
COEF-2	31	0.03	0.05	0	0	0	0	0	0
COEF-2	32	0.03	0.05	0	0	0	0	0	0
COEF-2	33	0.03	0.05	0	0	0	0	0	0
COEF-2	34	0.03	0.05	0	0	0	0	0	0
COEF-2	35	0.03	0.05	0	0	0	0	0	0
COEF-2	36	0.03	0.05	0	0	0	0	0	0
COEF-2	37	0.03	0.05	0	0	0	0	0	0
COEF-2	38	0.03	0.05	0	0	0.1	0	0	0
COEF-2	39	0.03	0.05	0	0	0.1	0	0	0
COEF-2	40	0.03	0.05	0	0	0.1	0	0	0
COEF-2	41	0.03	0.05	0	0	0.1	0	0	0
COEF-2	42	0.03	0.05	0	0	0.1	0	0	0
COEF-2	43	0.03	0.05	0	0	0.1	0	0	0
COEF-2	44	0.03	0.05	0	0	0.1	0	0	0
COEF-2	45	0.03	0.05	0	0	0.1	0	0	0
COEF-2	46	0.03	0.05	0	0	0.1	0	0	0
COEF-2	47	0.03	0.05	0	0	0.1	0	0	0
COEF-2	48	0.03	0.05	0	0	0.1	0	0	0
COEF-2	49	0.03	0.05	0	0	0.1	0	0	0
COEF-2	50	0.03	0.05	0	0	0.1	0	0	0
COEF-2	51	0.03	0.05	0	0	0.1	0	0	0
COEF-2	52	0.03	0.05	0	0	0.1	0	0	0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

COEF-2	53	0.03	0.05	0	0	0.1	0	0	0
COEF-2	54	0.03	0.05	0	0	0.1	0	0	0
COEF-2	55	0.03	0.05	0	0	0.1	0	0	0
COEF-2	56	0.03	0.05	0	0	0.1	0	0	0
COEF-2	57	0.03	0.05	0	0	0.1	0	0	0
COEF-2	58	0.03	0.05	0	0	0.1	0	0	0
COEF-2	59	0.03	0.05	0	0	0.1	0	0	0
COEF-2	60	0.03	0.05	0	0	0.1	0	0	0
COEF-2	61	0.03	0.05	0	0	0.1	0	0	0
COEF-2	62	0.03	0.05	0	0	0.1	0	0	0
COEF-2	63	0.03	0.05	0	0	0.1	0	0	0
COEF-2	64	0.03	0.05	0	0	0.1	0	0	0
COEF-2	65	0.03	0.05	0	0	0.1	0	0	0
COEF-2	66	0.03	0.05	0	0	0.1	0	0	0
COEF-2	67	0.03	0.05	0	0	0.1	0	0	0
COEF-2	68	0.03	0.05	0	0	0.1	0	0	0
COEF-2	69	0.03	0.05	0	0	0.1	0	0	0
COEF-2	70	0.03	0.05	0	0	0.1	0	0	0
COEF-2	71	0.03	0.05	0	0	0.1	0	0	0
COEF-2	72	0.03	0.05	0	0	0.1	0	0	0
COEF-2	73	0.03	0.05	0	0	0.1	0	0	0
COEF-2	74	0.03	0.05	0	0	0.1	0	0	0
COEF-2	75	0.03	0.05	0	0	0.1	0	0	0
COEF-2	76	0.03	0.05	0	0	0.1	0	0	0
COEF-2	77	0.03	0.05	0	0	0.1	0	0	0
COEF-2	78	0.03	0.05	0	0	0.1	0	0	0
COEF-2	79	0.03	0.05	0	0	0.1	0	0	0
COEF-2	80	0.03	0.05	0	0	0.1	0	0	0
COEF-2	81	0.03	0.05	0	0	0.1	0	0	0
COEF-2	82	0.03	0.05	0	0	0.1	0	0	0
COEF-2	83	0.03	0.05	0	0	0.1	0	0	0
COEF-2	84	0.03	0.05	0	0	0.1	0	0	0
COEF-2	85	0.03	0.05	0	0	0.1	0	0	0
COEF-2	86	0.03	0.05	0	0	0.1	0	0	0
COEF-2	87	0.03	0.05	0	0	0.1	0	0	0
COEF-2	88	0.03	0.05	0	0	0.1	0	0	0
COEF-2	89	0.03	0.05	0	0	0.1	0	0	0
COEF-2	90	0.03	0.05	0	0	0.1	0	0	0
COEF-2	91	0.03	0.05	0	0	0	0	0	0

ENDATA13

! DATA TYPE 14 -- ALGAE AND MACROPHYTE COEFFICIENTS

ENDATA14

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

```
! DATA TYPE 15 -- COLIFORM AND NONCONSERVATIVE COEFFICIENTS
! - - - -1- - - - -2- - - - -3- - - - -4- - - - -5- - - - -6- - - - -7- - - - -8- - - - -9- - - - -0- - - - -1
! 234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
!
!          *** -----*****-----*****
!
ENDATA15
```

```
! DATA TYPE 16 -- INCREMENTAL DATA FOR FLOW, TEMPERATURE, SALINITY, AND CONSERVATIVES
! - - - -1- - - - -2- - - - -3- - - - -4- - - - -5- - - - -6- - - - -7- - - - -8- - - - -9- - - - -0- - - - -1
! 234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
!
!          *** -----*****-----*****-----*****-----*****
!
!          R#    OUTFLOW    INFLOW    TEMP        SALINITY CHLORIDE    COND
!
ENDATA16
```

```
! DATA TYPE 17 -- INCREMENTAL DATA FOR DO, BOD, AND NITROGEN
! - - - -1- - - - -2- - - - -3- - - - -4- - - - -5- - - - -6- - - - -7- - - - -8- - - - -9- - - - -0- - - - -1
! 234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
!
!          *** -----*****-----*****-----*****-----*****
!
!          R#    DO        BOD 1    NBOD    NH3 N    NIT NIT    BOD 2
!
ENDATA17
```

```
! DATA TYPE 18 -- Incremental Data
! - - - -1- - - - -2- - - - -3- - - - -4- - - - -5- - - - -6- - - - -7- - - - -8- - - - -9- - - - -0- - - - -1
! 234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
!
!          *** -----*****-----*****-----*****
!
!          R#    PHOSPH    CHL A    COLIFORM NONCONSERVATIVE
!
ENDATA18
```

```
! DATA TYPE 19 -- NONPOINT SOURCE DATA
! - - - -1- - - - -2- - - - -3- - - - -4- - - - -5- - - - -6- - - - -7- - - - -8- - - - -9- - - - -0- - - - -1
! 234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
!
!          *** -----*****-----*****-----*****-----*****
!
!          R#    BOD 1    NBOD    COLIFORM NONCONS    DO    BOD 2
```

	R#	BOD 1	NBOD	COLIFORM NONCONS	DO	BOD 2
NONPOINT	1	0.722	0.300	0	0	0
NONPOINT	2	0.063	0.024	0	0	0
NONPOINT	3	0.611	0.022	0	0	0
NONPOINT	4	0.611	0.022	0	0	0
NONPOINT	5	0.111	0.048	0	0	0
NONPOINT	6	0.594	0.059	0	0	0
NONPOINT	7	0.058	0.026	0	0	0
NONPOINT	8	0.731	0.06	0	0	0
NONPOINT	9	0.169	0.075	0	0	0
NONPOINT	10	0.044	0.022	0	0	0
NONPOINT	11	0.230	0.043	0	0	0
NONPOINT	12	0.403	0.259	0	0	0
NONPOINT	13	0.106	0.046	0	0	0
NONPOINT	14	0.082	0.036	0	0	0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

NONPOINT	15	0.086	0.035	0	0	0	0
NONPOINT	16	0.096	0.038	0	0	0	0
NONPOINT	17	0.029	0	0	0	0	0
NONPOINT	18	0.093	0.042	0	0	0	0
NONPOINT	19	3.364	1.093	0	0	0	0
NONPOINT	20	6.469	0.604	0	0	0	0
NONPOINT	21	0.049	0.018	0	0	0	0
NONPOINT	22	38.813	4.888	0	0	0	0
NONPOINT	23	0.026	0.012	0	0	0	0
NONPOINT	24	200	22.5	0	0	0	0
NONPOINT	25	0.356	0.156	0	0	0	0
NONPOINT	26	2.313	0.768	0	0	0	0
NONPOINT	27	157.5	19.996	0	0	0	0
NONPOINT	28	182.5	18.746	0	0	0	0
NONPOINT	29	122.5	35	0	0	0	0
NONPOINT	30	125	15	0	0	0	0
NONPOINT	31	0.295	0.127	0	0	0	0
NONPOINT	32	7.125	2.15	0	0	0	0
NONPOINT	33	175.023	18.752	0	0	0	0
NONPOINT	34	350.153	37.516	0	0	0	0
NONPOINT	35	406.25	50	0	0	0	0
NONPOINT	36	406.25	6.25	0	0	0	0
NONPOINT	37	0	0	0	0	0	0
NONPOINT	38	0.997	0.698	0	0	0	0
NONPOINT	39	0.176	0.077	0	0	0	0
NONPOINT	40	1.0	0.950	0	0	0	0
NONPOINT	41	0.007	0.003	0	0	0	0
NONPOINT	42	3.42	3.8	0	0	0	0
NONPOINT	43	0.124	0.054	0	0	0	0
NONPOINT	44	0.85	1	0	0	0	0
NONPOINT	45	10	0.875	0	0	0	0
NONPOINT	46	0.131	0.057	0	0	0	0
NONPOINT	47	4.65	1.55	0	0	0	0
NONPOINT	48	49.6	3.875	0	0	0	0
NONPOINT	49	0.064	0.028	0	0	0	0
NONPOINT	50	19.375	2.325	0	0	0	0
NONPOINT	51	0.252	0.112	0	0	0	0
NONPOINT	52	29.45	2.325	0	0	0	0
NONPOINT	53	0.556	0.243	0	0	0	0
NONPOINT	54	75.95	2.325	0	0	0	0
NONPOINT	55	58.125	2.325	0	0	0	0
NONPOINT	56	31	1.55	0	0	0	0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

NONPOINT	57	93	1.55	0	0	0	0
NONPOINT	58	0.046	0.20	0	0	0	0
NONPOINT	59	1.395	0.426	0	0	0	0
NONPOINT	60	170.5	27.125	0	0	0	0
NONPOINT	61	0.221	0.097	0	0	0	0
NONPOINT	62	1.783	0.574	0	0	0	0
NONPOINT	63	31	9.3	0	0	0	0
NONPOINT	64	0.111	0.050	0	0	0	0
NONPOINT	65	0.667	0.217	0	0	0	0
NONPOINT	66	170.5	27.9	0	0	0	0
NONPOINT	67	0	13.175	0	0	0	0
NONPOINT	68	0.114	0.051	0	0	0	0
NONPOINT	69	0.225	0.077	0	0	0	0
NONPOINT	70	19.375	10.075	0	0	0	0
NONPOINT	71	2.596	0.69	0	0	0	0
NONPOINT	72	35.940	8.626	0	0	0	0
NONPOINT	73	22.475	6.2	0	0	0	0
NONPOINT	74	116.25	0	0	0	0	0
NONPOINT	75	0.316	0.145	0	0	0	0
NONPOINT	76	0.963	0.409	0	0	0	0
NONPOINT	77	0.224	0.098	0	0	0	0
NONPOINT	78	0.642	0.225	0	0	0	0
NONPOINT	79	0.227	0.100	0	0	0	0
NONPOINT	80	0.120	0.071	0	0	0	0
NONPOINT	81	67.844	11.781	0	0	0	0
NONPOINT	82	31.065	3.358	0	0	0	0
NONPOINT	83	17.875	3.25	0	0	0	0
NONPOINT	84	2.438	0.731	0	0	0	0
NONPOINT	85	28.438	6.906	0	0	0	0
NONPOINT	86	3.738	1.081	0	0	0	0
NONPOINT	87	2.925	0.894	0	0	0	0
NONPOINT	88	121.875	28.438	0	0	0	0
NONPOINT	89	130	24.375	0	0	0	0
NONPOINT	90	121.875	0	0	0	0	0
NONPOINT	91	0	0	0	0	0	0

ENDATA19

! DATA TYPE 20 -- HEADWATER DATA FOR FLOW, TEMPERATURE, SAALINITY, AND CONSERVATIVES

! - - - -1- - - -2- - - -3- - - -4- - - -5- - - -6- - - -7- - - -8- - - -9- - - -0- - - -1

! 234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890

! **** ----- *** -----*****-----*****-----

!	E#	NAME	FLOW	TEMP	SALIN	CHLORIDE	COND
HDWTR-1	1	B VINCENT & BONFOUCA	0.00283220.8	0.26	520.9	7.23	

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

HDWTR-1	67	BROWNS VILL RD (DD2)	0.00283220.8	0.26	520.9	7.23
HDWTR-1	102	DRAINAGE DITCH 8	0.00283220.8	0.26	520.9	7.23
HDWTR-1	119	DRAINAGE DITCH 9	0.00283220.8	0.26	520.9	7.23
HDWTR-1	159	UPPER B BONFOUCA	0.00283220.8	0.26	520.9	7.23
HDWTR-1	183	DRAINAGE DITCH 23	0.00283220.8	0.26	520.9	7.23
HDWTR-1	221	HIGHWAY 190(DD 5)	0.00283220.8	0.26	520.9	7.23
HDWTR-1	260	WEST DRAINAGE CANAL	0.00283220.8	0.26	520.9	7.23
HDWTR-1	284	DRAINAGE DITCH 6	0.00283220.8	0.26	520.9	7.23
HDWTR-1	295	TRIBUTARY 2	0.00283220.8	0.26	520.9	7.23
HDWTR-1	324	CANAL 26	0.00283220.8	0.26	520.9	7.23
HDWTR-1	346	TRIBUTARY 4	0.00283220.8	0.26	520.9	7.23
HDWTR-1	433	BAYOU LIBERTY	0.02832 20.8	0.26	520.9	7.23
HDWTR-1	439	TRIBUTARY 1	0.00283220.8	0.26	520.9	7.23
HDWTR-1	470	DRAINAGE DITCH 22	0.00283220.8	0.26	520.9	7.23
HDWTR-1	482	DRAINAGE DITCH 20	0.00283220.8	0.26	520.9	7.23
HDWTR-1	536	HIGHWAY 190	0.00283220.8	0.26	520.9	7.23
HDWTR-1	576	DRAINAGE DITCH 18	0.00283220.8	0.26	520.9	7.23
HDWTR-1	585	DRAINAGE DITCH 19	0.00283220.8	0.26	520.9	7.23
HDWTR-1	601	DRAINAGE DITCH 4	0.00283220.8	0.26	520.9	7.23
HDWTR-1	667	TRIBUTARY 9	0.00283220.8	0.26	520.9	7.23
HDWTR-1	680	TRIBUTARY 6	0.00283220.8	0.26	520.9	7.23
HDWTR-1	698	TRIBUTARY 10	0.00283220.8	0.26	520.9	7.23
HDWTR-1	715	TRIBUTARY 8	0.00283220.8	0.26	520.9	7.23
HDWTR-1	727	MARINA 1	0.00283220.8	0.26	520.9	7.23
HDWTR-1	730	MARINA 2	0.00283220.8	0.26	520.9	7.23
HDWTR-1	762	HWY 190	0.00283220.8	0.26	520.9	7.23
HDWTR-1	797	DRAINAGE DITCH 16	0.00283220.8	0.26	520.9	7.23
HDWTR-1	819	DRAINAGE DITCH 17	0.00283220.8	0.26	520.9	7.23
HDWTR-1	861	TRIBUTARY 24	0.00283220.8	0.26	520.9	7.23
HDWTR-1	868	TRIBUTARY 25	0.00283220.8	0.26	520.9	7.23

ENDATA20

! DATA TYPE 21 -- HEADWATER DATA FOR DO, BOD, AND NITROGEN

! - - - -1- - - - -2- - - - -3- - - - -4- - - - -5- - - - -6- - - - -7- - - - -8- - - - -9- - - - -0- - - - -1

!234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890

! **** -----*****-----*****-----*****

!	E#	DO	BOD 1	NBOD	NH3 N	NIT NIT	BOD 2
HDWTR-2	1	6	0.633	0.29			
HDWTR-2	67	6	0.621	0.29			
HDWTR-2	102	6	0.633	0.29			
HDWTR-2	119	6	0.633	0.29			
HDWTR-2	159	6	0.633	0.29			
HDWTR-2	183	6	0.633	0.29			

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

HDWTR-2	221	6	0.633	0.29
HDWTR-2	260	6	0.633	0.29
HDWTR-2	284	6	2.75	1.25
HDWTR-2	295	6	2.75	1.25
HDWTR-2	324	6	2.75	1.25
HDWTR-2	346	6	2.75	1.25
HDWTR-2	433	6	0.55	0.25
HDWTR-2	439	6	0.55	0.25
HDWTR-2	470	6	0.55	0.25
HDWTR-2	482	6	0.55	0.25
HDWTR-2	536	6	0.55	0.25
HDWTR-2	576	6	1.71	0.78
HDWTR-2	585	6	1.71	0.78
HDWTR-2	601	6	1.71	0.78
HDWTR-2	667	6	1.71	0.78
HDWTR-2	680	6	1.71	0.78
HDWTR-2	698	6	1.71	0.78
HDWTR-2	715	6	1.71	0.78
HDWTR-2	727	6	1.71	0.78
HDWTR-2	730	6	1.71	0.78
HDWTR-2	762	6	1.79	0.81
HDWTR-2	797	6	1.79	0.81
HDWTR-2	819	6	1.79	0.81
HDWTR-2	861	6	1.79	0.81
HDWTR-2	868	6	1.79	0.81

ENDATA21

! DATA TYPE 22 -- HEADWATER DATA FOR PHOSPHORUS, CHLOROPHYLL, COLIFORM, AND NCM

! - - - -1- - - - -2- - - - -3- - - - -4- - - - -5- - - - -6- - - - -7- - - - -8- - - - -9- - - - -0- - - - -1

! 234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890

! **** -----*****-----*****

! E# PHOSPHOR CHL A COLIFORM NCM

HDWTR-3	1			0	0	0
HDWTR-3	67			0	0	0
HDWTR-3	102			0	0	0
HDWTR-3	119			0	0	0
HDWTR-3	159			0	0	0
HDWTR-3	183			0	0	0
HDWTR-3	221			0	0	0
HDWTR-3	260			0	0	0
HDWTR-3	284			0	0	0
HDWTR-3	295			0	0	0
HDWTR-3	324			0	0	0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

HDWTR-3	346	0	0	0
HDWTR-3	433	0	0	0
HDWTR-3	439	0	0	0
HDWTR-3	470	0	0	0
HDWTR-3	482	0	0	0
HDWTR-3	536	0	0	0
HDWTR-3	576	0	0	0
HDWTR-3	585	0	0	0
HDWTR-3	601	0	0	0
HDWTR-3	667	0	0	0
HDWTR-3	680	0	0	0
HDWTR-3	698	0	0	0
HDWTR-3	715	0	0	0
HDWTR-3	727	0	0	0
HDWTR-3	730	0	0	0
HDWTR-3	762	0	0	0
HDWTR-3	797	0	0	0
HDWTR-3	819	0	0	0
HDWTR-3	861	0	0	0
HDWTR-3	868	0	0	0

ENDATA22

! DATA TYPE 23 -- JUNCTION DATA

JUNCTION	88	66	DRAINAGE DITCH	2
JUNCTION	110	101	DRAINAGE DITCH	8
JUNCTION	140	118	DRAINAGE DITCH	9
JUNCTION	193	182	DRAINAGE DITCH	23
JUNCTION	219	158	UPPER BAYOU BONFOUCA	
JUNCTION	239	220	HIGHWAY 190 (DRAINAGE DITCH	5)
JUNCTION	263	259	WEST DRAINAGE CANAL	
JUNCTION	287	283	DRAINAGE DITCH	6
JUNCTION	310	294	TRIBUTARY	2
JUNCTION	344	323	CANAL	26
JUNCTION	365	345	TRIBUTARY	4
JUNCTION	463	438	TRIBUTARY	1
JUNCTION	473	469	DRAINAGE DITCH	22
JUNCTION	509	481	DRAINAGE DITCH	20
JUNCTION	559	535	HIGHWAY 190 (DRAINAGE DITCH	14)
JUNCTION	579	575	DRAINAGE DITCH	18
JUNCTION	599	584	DRAINAGE DITCH	19
JUNCTION	643	600	DRAINAGE DITCH	4
JUNCTION	672	666	TRIBUTARY	9
JUNCTION	696	679	TRIBUTARY	6

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

JUNCTION 705 697 TRIBUTARY 10
 JUNCTION 721 714 TRIBUTARY 8
 JUNCTION 729 726 MARINA 1
 JUNCTION 748 729 MARINA 2
 JUNCTION 806 796 DRAINAGE DITCH 16
 JUNCTION 836 818 DRAINAGE DITCH 17
 JUNCTION 865 860 CHANNEL 1
 JUNCTION 878 867 CHANNEL 2
 JUNCTION 888 761 BAYOU PAQUET
 JUNCTION 899 432 BAYOU LIBERTY

ENDATA23

! DATA TYPE 24

! - - - -1- - - - -2- - - - -3- - - - -4- - - - -5- - - - -6- - - - -7- - - - -8- - - - -9- - - - -0- - - - -1

! 234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890

! **** -----*****-----*****-----*****

!	E#	NAME	FLOW	TEMP	SALINITY	CHLORIDE	COND
WSTLD-1	1	V H SEAL APARTMENTS	0.000041030		0.39	753.6	63.3
WSTLD-1	40	GROUNDWATER	0.02832	20.8	0.26	520.9	7.23
WSTLD-1	48	EAGLE LAKE MHP	0.003450230		0.4	774	34.4
WSTLD-1	63	J&K MANAGEMENT LLC	0.000009830		0.39	753.6	63.3
WSTLD-1	67	STONES THROW APTS	0.001051530		0.39	753.6	63.3
WSTLD-1	73	GOOD VALUE AUTO SALE	0.000003230		0.39	753.6	63.3
WSTLD-1	74	ADAMS MHP	0.000115030		0.39	753.6	63.3
WSTLD-1	79	WADLEIGH OFFSHORE	0.000043830		0.39	753.6	63.3
WSTLD-1	80	EXXONMOBIL #51367	0.000136930		0.39	753.6	63.3
WSTLD-1	81	LCR-M PLUMBING SUPP	0.000006530		0.39	753.6	63.3
WSTLD-1	83	BAKER-ELLIS-SHAMROCK	0.000023030		0.39	753.6	63.3
WSTLD-1	84	NORTHSHORE CHEMICAL	0.000003030		0.39	753.6	63.3
WSTLD-1	85	MANHEIM AUTO AUCTION	0	30	0.39	753.6	63.3
WSTLD-1	87	WADLEIGH FITNESS	0.000016430		0.39	753.6	63.3
WSTLD-1	102	JUBILEE #4815	0.000093130		0.39	753.6	63.3
WSTLD-1	107	JOHNSON-BLDG 2	0.000076630		0.39	753.6	63.3
WSTLD-1	119	CHARTER-JOHN'S AUTO	0.000009530		0.39	753.6	63.3
WSTLD-1	125	I-12 SHELL	0.000008730		0.39	753.6	63.3
WSTLD-1	135	ST TAM PAR SCH MAINT	0.000005430		0.39	753.6	63.3
WSTLD-1	136	J&D-VETS HEALTH/OMNI	0.000041630		0.39	753.6	63.3
WSTLD-1	183	GOOD SHEPHERD CHURCH	0.000060230		0.39	753.6	63.3
WSTLD-1	221	JOLLY APARTMENTS	0.000312130		0.39	753.6	63.3
WSTLD-1	222	PINEY RIDGE MHP	0.000509330		0.39	753.6	63.3
WSTLD-1	223	STARLING PLAZA	0.000156630		0.39	753.6	63.3
WSTLD-1	224	PO FOLKS SEAFOOD	0.000026830		0.39	753.6	63.3
WSTLD-1	227	SOUTH SEAS RSTRNT	0.000106730		0.39	753.6	63.3

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

WSTLD-1	228	SHADY PINES MHP	0.000575030	0.39	753.6	63.3
WSTLD-1	230	1421HWY190-ARMACOAT	0.000035030	0.39	753.6	63.3
WSTLD-1	231	FACDIR-STTAMBRACKETAG0	0.000004330	0.39	753.6	63.3
WSTLD-1	232	NEW LIFE MINISTRIES	0.000026830	0.39	753.6	63.3
WSTLD-1	233	PEACE LUTH CHURCH	0.000129730	0.39	753.6	63.3
WSTLD-1	234	ERNEST WALDER	0.000019730	0.39	753.6	63.3
WSTLD-1	235	STOR N LOCK-TYMELESS0	0.000007630	0.39	753.6	63.3
WSTLD-1	260	BONFOUCA SUPFND SITE0	0.000630930	0.22	437.3	23.5
WSTLD-1	281	DOTD BNFCA BRIDGE	0.000001030	0.39	753.6	63.3
WSTLD-1	282	SLIDELL MARINE	0.000202630	0.39	753.6	63.3
WSTLD-1	284	ARC MECH CONTRACTORS0	0.000005430	0.39	753.6	200
WSTLD-1	289	PEARL RIVER NAV	0.000191630	0.39	753.6	63.3
WSTLD-1	295	STP CONST BUILDING	0.000043830	0.39	753.6	63.3
WSTLD-1	346	ACADIAN GRDNS CONDOS0	0.000410730	0.39	753.6	63.3
WSTLD-1	351	OAKWOOD ESTATES	0.000679030	0.39	753.6	63.3
WSTLD-1	389	COIN DU LESTIN SUB	0.004381230	0.32	628.1	54.3
WSTLD-1	439	NORTHSHORE SQUADRON	0.000001330	0.39	753.6	63.3
WSTLD-1	442	ANDY KNIGHT	0.000002130	0.39	753.6	63.3
WSTLD-1	470	THE MEADOWS SUB	0.015115330	0.55	1053	150
WSTLD-1	482	ROYAL GOLF CLUB	0.000237630	0.39	753.6	63.3
WSTLD-1	494	NATFINANCE-TEXTRON	0.000219030	0.39	753.6	63.3
WSTLD-1	495	GUARDIAN ANGELS	0.000050930	0.39	753.6	63.3
WSTLD-1	498	OAKMONT SUBDIVISIO	0.003866430	0.32	619.5	47
WSTLD-1	536	ASSUNTA'S RESTAURANT0	0.000158830	0.39	753.6	63.3
WSTLD-1	544	INDIAN HILLS RV PARK0	0.000431230	0.39	753.6	63.3
WSTLD-1	546	J&J AUTO BROKERS	0.000002130	0.39	753.6	63.3
WSTLD-1	548	7THDAY & DOLLAR GEN	0.000075030	0.39	753.6	63.3
WSTLD-1	550	OMNI STORAGE VI	0.000016430	0.39	753.6	63.3
WSTLD-1	551	ABC SUPPLY CO	0.000007630	0.39	753.6	63.3
WSTLD-1	552	LION CONSULTING	0.000002130	0.39	753.6	63.3
WSTLD-1	553	CHILL RITE	0.000012030	0.39	753.6	63.3
WSTLD-1	555	HERRON-2315/17/19	0.000031230	0.39	753.6	63.3
WSTLD-1	556	THOMGROC-ST POL JURY0	0.000005430	0.39	753.6	63.3
WSTLD-1	557	PITSTOP3-REFLECTMIR	0.000076630	0.39	753.6	63.3
WSTLD-1	576	ALL AM ELKS LODGE	0.000087630	0.39	753.6	63.3
WSTLD-1	585	LAKE CASTLE SCHOOL	0.000476430	0.39	753.6	63.3
WSTLD-1	601	BLUEBELL-NULITE	0.000047030	0.39	753.6	63.3
WSTLD-1	602	ALBERS AC & HEATING	0.000006530	0.39	753.6	63.3
WSTLD-1	611	BAKER SALES WRHSE	0.000002130	0.39	753.6	63.3
WSTLD-1	614	CLECO SERVICE CENTER0	0.000010930	0.39	753.6	63.3
WSTLD-1	615	G&S-UNITED MEDICAL	0.000019730	0.39	753.6	63.3
WSTLD-1	616	AIRGAS-HANNA-SUNBELT0	0.000865230	0.39	753.6	63.3

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

WSTLD-1	617	AVC ELECTRIC	0.000001030	0.39	753.6	63.3
WSTLD-1	619	M&R-WAGNERSHOPCTR	0.000109030	0.39	753.6	63.3
WSTLD-1	620	CALWES CENTER	0.000227030	0.39	753.6	63.3
WSTLD-1	621	BEAU'S-LA LUMBER	0.000029530	0.39	753.6	63.3
WSTLD-1	625	ADVANCE AUTO	0.000005430	0.39	753.6	63.3
WSTLD-1	633	HUNTWYCK VILLAGE	0.015224830	0.3	582.3	52.5
WSTLD-1	667	B LIBERTY WATER ASSN	0.000009830	0.39	753.6	63.3
WSTLD-1	680	THOMPSON RD BAPTIST	0.000043830	0.39	753.6	63.3
WSTLD-1	698	LIBERTY FOOD STORE	0.000031230	0.39	753.6	63.3
WSTLD-1	715	A-1 REMODELING & BLD	0.000010930	0.39	753.6	63.3
WSTLD-1	723	ST GENEVIEVE CATH CH	0.000164230	0.39	753.6	63.3
WSTLD-1	728	BAYOU LIBERTY MARINA	0.000001030	0.39	753.6	63.3
WSTLD-1	746	A BONFOUCA MARINA	0.000047030	0.39	753.6	63.3
WSTLD-1	762	WASTE MGMT OF LA	0.000027330	0.39	753.6	63.3
WSTLD-1	763	ACALIGN-ALLAM-CT-M&D	0.000009830	0.39	753.6	63.3
WSTLD-1	767	K-BAR-B YOUTH RANCH	0.000125930	0.39	753.6	63.3
WSTLD-1	776	BAYOU PAQUET HEADWAT	0.02832 20.8	0.26	520.9	7.23
WSTLD-1	797	ACTS 1 TAX SERVICE	0.000003230	0.39	753.6	63.3
WSTLD-1	819	TIMBER RIDGE SUB	0.002431630	0.45	864.7	41.6

ENDATA24

! DATA TYPE 25

! - - - -1- - - - -2- - - - -3- - - - -4- - - - -5- - - - -6- - - - -7- - - - -8- - - - -9- - - - -0- - - - -1

! 234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890

! *****

!	E#	DO	BOD 1	NBOD	NH3 N	NIT NIT	BOD 2
WSTLD-2	1	2	23	0	21.5		
WSTLD-2	40	6	0.621	0	0.273		
WSTLD-2	48	5	11.5	0	8.6		
WSTLD-2	63	2	23	0	21.5		
WSTLD-2	67	2	23	0	8.6		
WSTLD-2	73	2	23	0	21.5		
WSTLD-2	74	2	23	0	21.5		
WSTLD-2	79	2	23	0	21.5		
WSTLD-2	80	2	23	0	21.5		
WSTLD-2	81	2	23	0	21.5		
WSTLD-2	83	2	23	0	21.5		
WSTLD-2	84	2	23	0	21.5		
WSTLD-2	85	2	23	0	21.5		
WSTLD-2	87	2	23	0	21.5		
WSTLD-2	102	2	23	0	21.5		
WSTLD-2	107	2	23	0	21.5		
WSTLD-2	119	2	23	0	21.5		

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

WSTLD-2	125	2	23	0	21.5
WSTLD-2	135	2	23	0	21.5
WSTLD-2	136	2	23	0	21.5
WSTLD-2	183	2	23	0	21.5
WSTLD-2	221	2	23	0	8.6
WSTLD-2	222	2	23	0	8.6
WSTLD-2	223	2	23	0	21.5
WSTLD-2	224	2	23	0	21.5
WSTLD-2	227	2	23	0	21.5
WSTLD-2	228	2	23	0	8.6
WSTLD-2	230	2	23	0	21.5
WSTLD-2	231	2	23	0	21.5
WSTLD-2	232	2	23	0	21.5
WSTLD-2	233	2	23	0	21.5
WSTLD-2	234	2	23	0	21.5
WSTLD-2	235	2	23	0	21.5
WSTLD-2	260	2	1.33	0	1.74
WSTLD-2	281	2	46	0	43
WSTLD-2	282	2	46	0	43
WSTLD-2	284	2	69	0	64.5
WSTLD-2	289	2	69	0	64.5
WSTLD-2	295	2	69	0	64.5
WSTLD-2	346	2	69	0	64.5
WSTLD-2	351	2	23	0	43.0
WSTLD-2	389	2	23	0	43.0
WSTLD-2	439	2	23	0	21.5
WSTLD-2	442	2	23	0	21.5
WSTLD-2	470	2	11.5	0	8.6
WSTLD-2	482	2	23	0	21.5
WSTLD-2	494	2	23	0	21.5
WSTLD-2	495	2	23	0	21.5
WSTLD-2	498	2	11.5	0	8.6
WSTLD-2	536	2	23	0	43
WSTLD-2	544	2	23	0	21.5
WSTLD-2	546	2	23	0	43
WSTLD-2	548	2	23	0	43
WSTLD-2	550	2	23	0	43
WSTLD-2	551	2	23	0	43
WSTLD-2	552	2	23	0	43
WSTLD-2	553	2	23	0	43
WSTLD-2	555	2	23	0	43
WSTLD-2	556	2	23	0	43

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

WSTLD-2	557	2	23	0	43
WSTLD-2	576	2	23	0	43
WSTLD-2	585	2	23	0	21.5
WSTLD-2	601	2	23	0	43
WSTLD-2	602	2	23	0	43
WSTLD-2	611	2	23	0	43
WSTLD-2	614	2	23	0	43
WSTLD-2	615	2	23	0	43
WSTLD-2	616	2	23	0	25.3
WSTLD-2	617	2	23	0	43
WSTLD-2	619	2	23	0	43
WSTLD-2	620	2	23	0	43
WSTLD-2	621	2	23	0	43
WSTLD-2	625	2	23	0	43
WSTLD-2	633	2	23	0	8.6
WSTLD-2	667	2	23	0	43
WSTLD-2	680	2	23	0	43
WSTLD-2	698	2	23	0	43
WSTLD-2	715	2	23	0	43
WSTLD-2	723	2	23	0	43
WSTLD-2	728	2	23	0	43
WSTLD-2	746	2	23	0	43
WSTLD-2	762	2	23	0	43
WSTLD-2	763	2	23	0	43
WSTLD-2	767	2	23	0	43
WSTLD-2	776	6	1.76	0	0.77
WSTLD-2	797	2	23	0	43
WSTLD-2	819	2	23	0	8.6

ENDATA25

! DATA TYPE 26 -- WASTELOAD DATA FOR PHOSPHORUS, CHLOROPHYLL, COLIFORM, AND NCM

! - - - -1- - - - -2- - - - -3- - - - -4- - - - -5- - - - -6- - - - -7- - - - -8- - - - -9- - - - -0- - - - -1

! 234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890

! **** -----*****-----*****

! E# PHOSPHOR CHL A COLIFORM NONCONSERVATIVE

WSTLD-3	1
WSTLD-3	40
WSTLD-3	48
WSTLD-3	63
WSTLD-3	67
WSTLD-3	73
WSTLD-3	74
WSTLD-3	79

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

WSTLD-3 80
WSTLD-3 81
WSTLD-3 83
WSTLD-3 84
WSTLD-3 85
WSTLD-3 87
WSTLD-3 102
WSTLD-3 107
WSTLD-3 119
WSTLD-3 125
WSTLD-3 135
WSTLD-3 136
WSTLD-3 183
WSTLD-3 221
WSTLD-3 222
WSTLD-3 223
WSTLD-3 224
WSTLD-3 227
WSTLD-3 228
WSTLD-3 230
WSTLD-3 231
WSTLD-3 232
WSTLD-3 233
WSTLD-3 234
WSTLD-3 235
WSTLD-3 260
WSTLD-3 281
WSTLD-3 282
WSTLD-3 284
WSTLD-3 289
WSTLD-3 295
WSTLD-3 346
WSTLD-3 351
WSTLD-3 389
WSTLD-3 439
WSTLD-3 442
WSTLD-3 470
WSTLD-3 482
WSTLD-3 494
WSTLD-3 495
WSTLD-3 498
WSTLD-3 536

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

WSTLD-3 544
WSTLD-3 546
WSTLD-3 548
WSTLD-3 550
WSTLD-3 551
WSTLD-3 552
WSTLD-3 553
WSTLD-3 555
WSTLD-3 556
WSTLD-3 557
WSTLD-3 576
WSTLD-3 585
WSTLD-3 601
WSTLD-3 602
WSTLD-3 611
WSTLD-3 614
WSTLD-3 615
WSTLD-3 616
WSTLD-3 617
WSTLD-3 619
WSTLD-3 620
WSTLD-3 621
WSTLD-3 625
WSTLD-3 633
WSTLD-3 667
WSTLD-3 680
WSTLD-3 698
WSTLD-3 715
WSTLD-3 723
WSTLD-3 728
WSTLD-3 746
WSTLD-3 762
WSTLD-3 763
WSTLD-3 767
WSTLD-3 776
WSTLD-3 797
WSTLD-3 819
ENDATA26

! DATA TYPE 27 -- Lower Boundary Conditions

LOWER BC TEMPERATURE = 20.8
LOWER BC SALINITY = 3.94
LOWER BC CONSERVATIVE MATERIAL I = 7096

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

LOWER BC CONSERVATIVE MATERIAL II = 2200
LOWER BC DISSOLVED OXYGEN = 6.8
LOWER BC BOD1 BIOCHEMICAL OXYGEN DEMAND = 7.82
LOWER BC BOD2 BIOCHEMICAL OXYGEN DEMAND = 0
LOWER BC PHYTOPLANKTON = 5.55
LOWER BC COLIFORM = 0
LOWER BC NONCONSERVATIVE MATERIAL = 0
LOWER BC NBOD = 1.8

ENDATA27

! DATA TYPE 28 -- Dam Data

! - - - -1- - - - -2- - - - -3- - - - -4- - - - -5- - - - -6- - - - -7- - - - -8- - - - -9- - - - -0- - - - -1
!234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
! *****

ENDATA28

! DATA TYPE 29 -- SENSITIVITY ANALYSIS DATA

SENSITIV BASEFLOW 30 -30

ENDATA29

! DATA TYPE 30 -- Plot Control Data

! - - - -1- - - - -2- - - - -3- - - - -4- - - - -5- - - - -6- - - - -7- - - - -8- - - - -9- - - - -0- - - - -1
!234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
! ** ** ** **

PLOT1 BAYOU VINCENT-BONFOUCA

RCH 1 2 3 4 6 8 10 11 12 17 19 20 22 24 27 28 30 33 34 35 36 37 91

PLOT2 UPPER BAYOU BONFOUCA

RCH 13 15 16

PLOT3 BAYOU LIBERTY

RCH 38 40 42 44 45 47 48 50 52 54 55 56 57 60 63 66 67 70 72 74 90

PLOT4 BAYOU PAQUET & HEADWATERS

RCH 75 76 78 80 81 82 83 85 88 89

ENDATA30

!

! DATA TYPE 31 -- Overlay Plot Data

!

! - - - -1- - - - -2- - - - -3- - - - -4- - - - -5- - - - -6- - - - -7- - - - -8- - - - -9- - - - -0- - - - -1
!234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890

OVERLAY1 VINCENT-BONFOUCA.OVL

OVERLAY2 UPPER_BONFOUCA.OVL

OVERLAY3 LIBERTY.OVL

OVERLAY4 PAQUET.OVL

ENDATA31

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

BAYOU LIBERTY 040905 and 040906 85% REDUCTION WINTER PROJECTION OUTPUT DATA SET

LA-QUAL Version 9.09
Louisiana Department of Environmental Quality

Input file is \\Degshares\owreng\Waterbody\Lake Pontchartrain-04\Bayou Bonfouca and Bayou Liberty\Input Files\Projection\NoRedBayou_Bonfouca_win5and4D0.in
Running in steady-state mode using LA defaults
Output produced at 10:54 on 08/23/2011

\$\$\$ DATA TYPE 1 (TITLES AND CONTROL CARDS) \$\$\$

CARD TYPE	CONTROL TITLES
TITLE01	WATER QUALITY/HYDRAULIC MODEL FOR:
TITLE02	BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET
CONTROL YES	METRIC UNITS
CONTROL YES	USE EFFECTIVE CONCENTRATION
ENDATA01	

\$\$\$ DATA TYPE 2 (MODEL OPTIONS) \$\$\$

CARD TYPE	MODEL OPTION		
MODOPT01	NO	TEMPERATURE	
MODOPT02	YES	SALINITY	
MODOPT03	YES	CONSERVATIVE MATERIAL I = CONDUCTIVITY	IN COND
MODOPT04	YES	CONSERVATIVE MATERIAL II = CHLORIDES	IN CL
MODOPT05	YES	DISSOLVED OXYGEN	
MODOPT06	YES	BOD1 BIOCHEMICAL OXYGEN DEMAND	
MODOPT07	NO	BOD2 BIOCHEMICAL OXYGEN DEMAND	
MODOPT08	YES	NBOD	
MODOPT09	NO	PHOSPHORUS SERIES	
MODOPT10	NO	PHYTOPLANKTON	
MODOPT11	NO	PERIPHYTON	
MODOPT12	NO	COLIFORM	
MODOPT13	NO	NONCONSERVATIVE MATERIAL	
ENDATA02			

\$\$\$ DATA TYPE 3 (PROGRAM CONSTANTS) \$\$\$

CARD TYPE	DESCRIPTION OF CONSTANT	VALUE
PROGRAM	K2 MAXIMUM	= 25.00000 per day
PROGRAM	DISPERSION EQUATION	= 3.00000 (values entered as a function of D,Q,Vmean)
PROGRAM	TIDE HEIGHT	= 0.10000 meters
PROGRAM	TIDAL PERIOD	= 19.75000 hours
PROGRAM	PERIOD OF TIDAL RISE	= 10.50000 hours
PROGRAM	S OXYGEN DEPENDENCE THRESHOLD	= 1.00000 mg/L
PROGRAM	SOD MAXIMUM RATE	= 50.00000 gm/sq m/day
PROGRAM	PHYTOPLANKTON OXYGEN PROD	= 0.05000 mg O/ug chl a/day
PROGRAM	PERIPHYTON OXYGEN PROD	= 0.00000 mg O/mg periphyton/day
ENDATA03		

\$\$\$ DATA TYPE 4 (TEMPERATURE CORRECTION CONSTANTS FOR RATE COEFFICIENTS) \$\$\$

CARD TYPE	RATE CODE	THETA VALUE
ENDATA04		

\$\$\$ CONSTANTS TYPE 5 (TEMPERATURE DATA) \$\$\$

CARD TYPE	DESCRIPTION OF CONSTANT	VALUE
ENDATA05		

\$\$\$ DATA TYPE 6 (PHYTOPLANKTON CONSTANTS) \$\$\$

CARD TYPE	DESCRIPTION OF CONSTANT	VALUE
ENDATA06		

\$\$\$ DATA TYPE 7 (PERIPHYTON CONSTANTS) \$\$\$

CARD TYPE	DESCRIPTION OF CONSTANT	VALUE
ENDATA07		

\$\$\$ DATA TYPE 8 (REACH IDENTIFICATION DATA) \$\$\$

CARD TYPE	REACH ID	NAME	BEGIN REACH km	END REACH km	ELEM LENGTH km	REACH LENGTH km	ELEMS PER RCH	BEGIN ELEM NUM	END ELEM NUM
REACH ID	1	DD DRAINAGE DITCH 1	24.20	TO 20.30	0.1000	3.90	39	1	39

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

REACH ID	2	BV	VINCENT FROM RKM 20.0 TO BV01	20.30	TO	19.50	0.1000	0.80	8	40	47
REACH ID	3	BV	VINCENT FROM BV01 RKM 18.5	19.50	TO	18.50	0.1000	1.00	10	48	57
REACH ID	4	BV	VINCENT FROM RKM 18.5 TO BV02	18.50	TO	17.60	0.1000	0.90	9	58	66
REACH ID	5	DD	DRAINAGE DITCH 2	2.10	TO	0.00	0.1000	2.10	21	67	87
REACH ID	6	BV	VINCENT FROM BV02 TO DD 8	17.60	TO	16.90	0.0500	0.70	14	88	101
REACH ID	7	DD	DRAINAGE DITCH 8	0.80	TO	0.00	0.1000	0.80	8	102	109
REACH ID	8	BV	VINCENT FROM DD 8 TO DD 9	16.90	TO	16.00	0.1000	0.90	9	110	118
REACH ID	9	DD	DRAINAGE DITCH 9	2.10	TO	0.00	0.1000	2.10	21	119	139
REACH ID	10	BV	VINCENT FROM DD 9 TO RKM 15.2	16.00	TO	15.20	0.1000	0.80	8	140	147
REACH ID	11	BV	VINCENT FROM RKM 15.2 TO BV03	15.20	TO	14.90	0.0500	0.30	6	148	153
REACH ID	12	BV	VINCENT FROM BV03 TO BONFOUCA	14.90	TO	14.40	0.1000	0.50	5	154	158
REACH ID	13	UB	UB FROM RKM 5.0 TO DD 23	5.00	TO	2.60	0.1000	2.40	24	159	182
REACH ID	14	DD	DRAINAGE DITCH 23	1.00	TO	0.00	0.1000	1.00	10	183	192
REACH ID	15	UB	UB FROM DD 23 TO BB01	2.60	TO	1.10	0.1000	1.50	15	193	207
REACH ID	16	UB	UB FROM BB01 TO BAYOU VINCENT	1.10	TO	0.00	0.1000	1.10	11	208	218
REACH ID	17	BB	BONFOUCA FROM BV TO HWY 190	14.40	TO	14.20	0.1000	0.20	2	219	220
REACH ID	18	DD	HWY 190 (DRAINAGE DITCH 5)	1.80	TO	0.00	0.1000	1.80	18	221	238
REACH ID	19	BB	BONFOUCA FROM HWY 190 TO BB02	14.20	TO	13.30	0.1000	0.90	9	239	247
REACH ID	20	BB	BONFOUCA FROM BB02 TO WD	13.30	TO	12.10	0.1000	1.20	12	248	259
REACH ID	21	WD	WEST DRAINAGE CANAL	0.30	TO	0.00	0.1000	0.30	3	260	262
REACH ID	22	BB	BONFOUCA FROM WD TO DD6	12.10	TO	10.00	0.1000	2.10	21	263	283
REACH ID	23	DD	DRAINAGE DITCH 6	0.30	TO	0.00	0.1000	0.30	3	284	286
REACH ID	24	BB	BONFOUCA FROM DD 6 TO TRIB 2	10.00	TO	9.20	0.1000	0.80	8	287	294
REACH ID	25	DD	DRAINAGE DITCH 7 - UPLAND	1.50	TO	0.50	0.1000	1.00	10	295	304
REACH ID	26	TR	TRIBUTARY 2 - TIDAL	0.50	TO	0.00	0.1000	0.50	5	305	309
REACH ID	27	BB	BONFOUCA FROM TRIB 2 TO BB03	9.20	TO	8.60	0.1000	0.60	6	310	315
REACH ID	28	BB	BONFOUCA FROM BB03 TO CANAL 26	8.60	TO	7.80	0.1000	0.80	8	316	323
REACH ID	29	C	CANAL 26	2.00	TO	0.00	0.1000	2.00	20	324	343
REACH ID	30	BB	BONFOUCA FROM CANAL 26 TO TRIB 4	7.80	TO	7.60	0.1000	0.20	2	344	345
REACH ID	31	TR	TRIBUTARY 10 - UPLAND	1.90	TO	0.80	0.1000	1.10	11	346	356
REACH ID	32	TR	TRIBUTARY 4 - TIDAL	0.80	TO	0.00	0.1000	0.80	8	357	364
REACH ID	33	BB	BONFOUCA FROM TRIB 4 TO BB04	7.60	TO	6.80	0.1000	0.80	8	365	372
REACH ID	34	BB	BONFOUCA FROM BB04 TO RKM 5.6	6.80	TO	5.60	0.1000	1.20	12	373	384
REACH ID	35	BB	BONFOUCA FROM RKM 5.6 TO BB05	5.60	TO	4.50	0.1000	1.10	11	385	395
REACH ID	36	BB	BONFOUCA FROM BB05 TO RKM 2.7	4.50	TO	2.70	0.1000	1.80	18	396	413
REACH ID	37	BB	BONFOUCA FROM RKM 2.7 TO LIBERTY	2.70	TO	0.80	0.1000	1.90	19	414	432
REACH ID	38	BL	LIBERTY FROM RKM 15.0 TO TRIB 1	15.00	TO	14.40	0.1000	0.60	6	433	438
REACH ID	39	TR	TRIBUTARY 1	2.40	TO	0.00	0.1000	2.40	24	439	462
REACH ID	40	BL	LIBERTY FROM RKM 14.4 TO DD22	14.40	TO	13.70	0.1000	0.70	7	463	469
REACH ID	41	DD	DD22	0.30	TO	0.00	0.1000	0.30	3	470	472
REACH ID	42	BL	LIBERTY FROM DD22 TO DD20	13.70	TO	12.80	0.1000	0.90	9	473	481
REACH ID	43	DD	DD20	2.70	TO	0.00	0.1000	2.70	27	482	508
REACH ID	44	BL	LIBERTY FROM DD20 TO BL03	12.80	TO	12.60	0.1000	0.20	2	509	510
REACH ID	45	BL	LIBERTY FROM BL03 TO HWY 190	12.60	TO	10.10	0.1000	2.50	25	511	535
REACH ID	46	DD	HWY 190 (DRAINAGE DITCH 14)	2.30	TO	0.00	0.1000	2.30	23	536	558
REACH ID	47	BL	LIBERTY FROM HWY 190 TO BL04	10.10	TO	10.00	0.1000	0.10	1	559	559
REACH ID	48	BL	LIBERTY FROM BL04 TO DD18	10.00	TO	8.40	0.1000	1.60	16	560	575
REACH ID	49	DD	DD18	0.30	TO	0.00	0.1000	0.30	3	576	578
REACH ID	50	BL	LIBERTY FROM DD18 TO DD19	8.40	TO	7.80	0.1000	0.60	6	579	584
REACH ID	51	DD	DD19	1.40	TO	0.00	0.1000	1.40	14	585	598
REACH ID	52	BL	LIBERTY FROM DD19 TO DD04	7.80	TO	7.60	0.1000	0.20	2	599	600
REACH ID	53	DD	DD04	4.20	TO	0.00	0.1000	4.20	42	601	642
REACH ID	54	BL	LIBERTY FROM DD04 TO BL05	7.60	TO	6.90	0.1000	0.70	7	643	649
REACH ID	55	BL	LIBERTY FROM BL05 TO RKM 6.3	6.90	TO	6.30	0.1000	0.60	6	650	655
REACH ID	56	BL	LIBERTY FROM RKM 6.3 TO RKM 6.0	6.30	TO	6.00	0.1000	0.30	3	656	658
REACH ID	57	BL	LIBERTY FROM RKM 6.0 TO TRIB 9	6.00	TO	5.20	0.1000	0.80	8	659	666
REACH ID	58	DD	DRAINAGE DITCH 3 - UPLAND	0.50	TO	0.30	0.1000	0.20	2	667	668
REACH ID	59	TR	TRIBUTARY 9 - TIDAL	0.30	TO	0.00	0.1000	0.30	3	669	671
REACH ID	60	BL	LIBERTY FROM TRIB 9 TO TRIB 6	5.20	TO	4.40	0.1000	0.80	8	672	679
REACH ID	61	DD	DRAINAGE DITCH 11 - UPLAND	1.60	TO	0.60	0.1000	1.00	10	680	689
REACH ID	62	TR	TRIBUTARY 6 - TIDAL	0.60	TO	0.00	0.1000	0.60	6	690	695
REACH ID	63	BL	LIBERTY FROM TRIB 6 TO TRIB 10	4.40	TO	4.20	0.1000	0.20	2	696	697
REACH ID	64	TR	TRIBUTARY 10 - UPLAND	0.70	TO	0.20	0.1000	0.50	5	698	702
REACH ID	65	TR	TRIBUTARY 10 - TIDAL	0.20	TO	0.00	0.1000	0.20	2	703	704
REACH ID	66	BL	LIBERTY FROM TRIB 10 TO BL07	4.20	TO	3.30	0.1000	0.90	9	705	713
REACH ID	67	BL	LIBERTY FROM BL07 TO TRIB 8	3.30	TO	3.20	0.1000	0.10	1	714	714
REACH ID	68	TR	TRIBUTARY 8 - UPLAND	0.60	TO	0.10	0.1000	0.50	5	715	719
REACH ID	69	TR	TRIBUTARY 8 - TIDAL	0.10	TO	0.00	0.1000	0.10	1	720	720
REACH ID	70	BL	LIBERTY FROM TRIB 8 TO M1	3.20	TO	2.60	0.1000	0.60	6	721	726
REACH ID	71	M	MARINA 1 - TIDAL	0.20	TO	0.00	0.1000	0.20	2	727	728
REACH ID	72	BL	LIBERTY FROM M1 TO M2	2.60	TO	2.50	0.1000	0.10	1	729	729
REACH ID	73	M	MARINA02 - TIDAL	1.80	TO	0.00	0.1000	1.80	18	730	747
REACH ID	74	BL	LIBERTY FROM M2 TO B PAQUET	2.50	TO	1.10	0.1000	1.40	14	748	761
REACH ID	75	DD	HWY 190 (DD13-PAQUET HEADWATERS)	8.60	TO	7.20	0.1000	1.40	14	762	775
REACH ID	76	BP	PAQUET FROM HWY 190 TO DD16	7.20	TO	5.10	0.1000	2.10	21	776	796
REACH ID	77	DD	DD16	0.90	TO	0.00	0.1000	0.90	9	797	805
REACH ID	78	BP	PAQUET FROM RKM 5.1 TO DD17	5.10	TO	3.80	0.1000	1.30	13	806	818
REACH ID	79	DD	DD17	1.70	TO	0.00	0.1000	1.70	17	819	835
REACH ID	80	BP	PAQUET FROM DD17 TO TIDAL REACH	3.80	TO	3.40	0.1000	0.40	4	836	839
REACH ID	81	BP	PAQUET TIDAL REACH TO BP02	3.40	TO	2.40	0.1000	1.00	10	840	849
REACH ID	82	BP	PAQUET FROM BP02 TO BP03	2.40	TO	1.60	0.1000	0.80	8	850	857
REACH ID	83	BP	PAQUET FROM BP03 TO TRIB 24	1.60	TO	1.30	0.1000	0.30	3	858	860
REACH ID	84	C	TRIB 24 FROM TOP TO PAQUET	0.40	TO	0.00	0.1000	0.40	4	861	864
REACH ID	85	BP	PAQUET FROM TRIB 24 TO TRIB 25	1.30	TO	1.00	0.1000	0.30	3	865	867

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

REACH ID	86	C	TRIB 25 FROM TOP TO RKM 0.3	1.00	TO	0.30	0.1000	0.70	7	868	874
REACH ID	87	C	TRIB 25 FROM RKM 0.3 TO PAQUET	0.30	TO	0.00	0.1000	0.30	3	875	877
REACH ID	88	BP	PAQUET FROM TRIB 25 TO BP04	1.00	TO	0.20	0.1000	0.80	8	878	885
REACH ID	89	BP	PAQUET FROM BP04 TO LIBERTY	0.20	TO	0.00	0.1000	0.20	2	886	887
REACH ID	90	BL	LIBERTY FROM PAQUET TO BONFOUCA	1.10	TO	0.00	0.1000	1.10	11	888	898
REACH ID	91	BB	BONFOUCA FROM LIBERTY TO BB06	0.80	TO	0.00	0.1000	0.80	8	899	906

\$\$\$ DATA TYPE 9 (ADVECTIVE HYDRAULIC COEFFICIENTS) \$\$\$

CARD TYPE	REACH	ID	WIDTH "A"	WIDTH "B"	WIDTH "C"	DEPTH "D"	DEPTH "E"	DEPTH "F"	SLOPE	MANNINGS "N"
HYDR-1	1	DD	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	2	BV	4.765	0.300	0.000	0.326	0.360	0.000	0.00001	0.030
HYDR-1	3	BV	4.765	0.300	0.000	0.326	0.360	0.000	0.00001	0.030
HYDR-1	4	BV	4.765	0.300	0.000	0.326	0.360	0.000	0.00001	0.030
HYDR-1	5	DD	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	6	BV	4.765	0.300	0.000	0.326	0.360	0.000	0.00001	0.030
HYDR-1	7	DD	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	8	BV	4.765	0.300	0.000	0.326	0.360	0.000	0.00001	0.030
HYDR-1	9	DD	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	10	BV	4.765	0.300	0.000	0.326	0.360	0.000	0.00001	0.030
HYDR-1	11	BV	0.000	0.000	4.724	0.000	0.000	0.271	0.00001	0.030
HYDR-1	12	BV	0.000	0.000	4.724	0.000	0.000	0.271	0.00001	0.030
HYDR-1	13	UB	5.813	0.300	0.000	0.413	0.360	0.000	0.00001	0.030
HYDR-1	14	DD	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	15	UB	5.813	0.300	0.000	0.413	0.360	0.000	0.00001	0.030
HYDR-1	16	UB	8.719	0.300	0.000	0.620	0.360	0.000	0.00001	0.030
HYDR-1	17	BB	0.000	0.000	10.840	0.000	0.000	0.870	0.00001	0.030
HYDR-1	18	DD	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	19	BB	0.000	0.000	10.840	0.000	0.000	0.870	0.00001	0.030
HYDR-1	20	BB	0.000	0.000	10.840	0.000	0.000	0.870	0.00001	0.030
HYDR-1	21	WD	0.000	0.000	3.000	0.000	0.000	0.150	0.00001	0.030
HYDR-1	22	BB	0.000	0.000	54.250	0.000	0.000	1.240	0.00001	0.030
HYDR-1	23	DD	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	24	BB	0.000	0.000	93.080	0.000	0.000	1.603	0.00001	0.030
HYDR-1	25	DD	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	26	TR	0.000	0.000	12.000	0.000	0.000	0.600	0.00001	0.030
HYDR-1	27	BB	0.000	0.000	93.080	0.000	0.000	1.603	0.00001	0.030
HYDR-1	28	BB	0.000	0.000	93.080	0.000	0.000	1.603	0.00001	0.030
HYDR-1	29	C	0.000	0.000	114.000	0.000	0.000	1.000	0.00001	0.030
HYDR-1	30	BB	0.000	0.000	76.510	0.000	0.000	1.870	0.00001	0.030
HYDR-1	31	TR	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	32	TR	0.000	0.000	18.000	0.000	0.000	0.900	0.00001	0.030
HYDR-1	33	BB	0.000	0.000	76.510	0.000	0.000	1.870	0.00001	0.030
HYDR-1	34	BB	0.000	0.000	91.400	0.000	0.000	1.890	0.00001	0.030
HYDR-1	35	BB	0.000	0.000	114.300	0.000	0.000	1.670	0.00001	0.030
HYDR-1	36	BB	0.000	0.000	77.700	0.000	0.000	1.440	0.00001	0.030
HYDR-1	37	BB	0.000	0.000	88.000	0.000	0.000	1.600	0.00001	0.030
HYDR-1	38	BL	8.720	0.300	0.000	0.620	0.360	0.000	0.00001	0.030
HYDR-1	39	TR	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	40	BL	8.720	0.300	0.000	0.620	0.360	0.000	0.00001	0.030
HYDR-1	41	DD	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	42	BL	17.438	0.300	0.000	0.992	0.360	0.000	0.00001	0.030
HYDR-1	43	DD	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	44	BL	0.000	0.000	8.840	0.000	0.000	0.472	0.00001	0.030
HYDR-1	45	BL	0.000	0.000	8.840	0.000	0.000	0.472	0.00001	0.030
HYDR-1	46	DD	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	47	BL	0.000	0.000	18.600	0.000	0.000	1.400	0.00001	0.030
HYDR-1	48	BL	0.000	0.000	18.600	0.000	0.000	1.400	0.00001	0.030
HYDR-1	49	DD	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	50	BL	0.000	0.000	18.600	0.000	0.000	1.400	0.00001	0.030
HYDR-1	51	DD	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	52	BL	0.000	0.000	42.670	0.000	0.000	2.280	0.00001	0.030
HYDR-1	53	DD	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	54	BL	0.000	0.000	42.670	0.000	0.000	2.280	0.00001	0.030
HYDR-1	55	BL	0.000	0.000	42.670	0.000	0.000	2.280	0.00001	0.030
HYDR-1	56	BL	0.000	0.000	39.690	0.000	0.000	1.700	0.00001	0.030
HYDR-1	57	BL	0.000	0.000	47.550	0.000	0.000	2.080	0.00001	0.030
HYDR-1	58	DD	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	59	TR	0.000	0.000	16.000	0.000	0.000	0.800	0.00001	0.030
HYDR-1	60	BL	0.000	0.000	47.550	0.000	0.000	2.080	0.00001	0.030
HYDR-1	61	DD	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	62	TR	0.000	0.000	12.000	0.000	0.000	0.600	0.00001	0.030
HYDR-1	63	BL	0.000	0.000	52.730	0.000	0.000	2.090	0.00001	0.030
HYDR-1	64	TR	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	65	TR	0.000	0.000	13.000	0.000	0.000	0.650	0.00001	0.030
HYDR-1	66	BL	0.000	0.000	52.120	0.000	0.000	2.140	0.00001	0.030
HYDR-1	67	BL	0.000	0.000	52.120	0.000	0.000	2.140	0.00001	0.030
HYDR-1	68	TR	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	69	TR	0.000	0.000	10.000	0.000	0.000	0.500	0.00001	0.030
HYDR-1	70	BL	0.000	0.000	52.120	0.000	0.000	2.140	0.00001	0.030
HYDR-1	71	M	0.000	0.000	32.000	0.000	0.000	1.200	0.00001	0.030

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

HYDR-1	72	BL	0.000	0.000	56.540	0.000	0.000	2.140	0.00001	0.030
HYDR-1	73	M	0.000	0.000	32.000	0.000	0.000	1.200	0.00001	0.030
HYDR-1	74	BL	0.000	0.000	60.960	0.000	0.000	2.130	0.00001	0.030
HYDR-1	75	DD	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	76	BP	8.720	0.300	0.000	0.620	0.360	0.000	0.00001	0.030
HYDR-1	77	DD	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	78	BP	8.720	0.300	0.000	0.620	0.360	0.000	0.00001	0.030
HYDR-1	79	DD	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	80	BP	8.720	0.300	0.000	0.620	0.360	0.000	0.00001	0.030
HYDR-1	81	BP	0.000	0.000	18.900	0.000	0.000	1.100	0.00001	0.030
HYDR-1	82	BP	0.000	0.000	18.290	0.000	0.000	1.000	0.00001	0.030
HYDR-1	83	BP	0.000	0.000	21.340	0.000	0.000	1.500	0.00001	0.030
HYDR-1	84	C	0.000	0.000	20.100	0.000	0.000	0.740	0.00001	0.030
HYDR-1	85	BP	0.000	0.000	21.340	0.000	0.000	1.500	0.00001	0.030
HYDR-1	86	C	0.000	0.000	16.460	0.000	0.000	0.940	0.00001	0.030
HYDR-1	87	C	0.000	0.000	32.000	0.000	0.000	0.770	0.00001	0.030
HYDR-1	88	BP	0.000	0.000	30.480	0.000	0.000	1.500	0.00001	0.030
HYDR-1	89	BP	0.000	0.000	30.480	0.000	0.000	1.500	0.00001	0.030
HYDR-1	90	BL	0.000	0.000	60.960	0.000	0.000	2.130	0.00001	0.030
HYDR-1	91	BB	0.000	0.000	105.590	0.000	0.000	1.960	0.00001	0.030

ENDATA09

\$\$\$ DATA TYPE 10 (DISPERSIVE HYDRAULIC COEFFICIENTS) \$\$\$

CARD	TYPE	REACH	ID	TIDAL RANGE	DISPERSION "A"	DISPERSION "B"	DISPERSION "C"	DISPERSION "D"
HYDR		1	DD	0.00	0.000	0.833	0.000	1.000
HYDR		2	BV	0.00	0.000	0.833	0.000	1.000
HYDR		3	BV	0.00	0.000	0.833	0.000	1.000
HYDR		4	BV	0.00	0.000	0.833	0.000	1.000
HYDR		5	DD	0.00	0.000	0.833	0.000	1.000
HYDR		6	BV	0.00	0.000	0.833	0.000	1.000
HYDR		7	DD	0.00	0.000	0.833	0.000	1.000
HYDR		8	BV	0.00	0.000	0.833	0.000	1.000
HYDR		9	DD	0.00	0.000	0.833	0.000	1.000
HYDR		10	BV	0.00	0.000	0.833	0.000	1.000
HYDR		11	BV	1.00	200.000	0.833	0.000	1.000
HYDR		12	BV	1.00	200.000	0.833	0.000	1.000
HYDR		13	UB	0.00	0.000	0.833	0.000	1.000
HYDR		14	DD	0.00	0.000	0.833	0.000	1.000
HYDR		15	UB	0.00	0.000	0.833	0.000	1.000
HYDR		16	UB	0.00	0.000	0.833	0.000	1.000
HYDR		17	BB	1.00	200.000	0.833	0.000	1.000
HYDR		18	DD	0.00	0.000	0.833	0.000	1.000
HYDR		19	BB	1.00	200.000	0.833	0.000	1.000
HYDR		20	BB	1.00	200.000	0.833	0.000	1.000
HYDR		21	WB	1.00	200.000	0.833	0.000	1.000
HYDR		22	BB	1.00	200.000	0.833	0.000	1.000
HYDR		23	DD	0.00	0.000	0.833	0.000	1.000
HYDR		24	BB	1.00	200.000	0.833	0.000	1.000
HYDR		25	DD	0.00	0.000	0.833	0.000	1.000
HYDR		26	TR	1.00	200.000	0.833	0.000	1.000
HYDR		27	BB	1.00	200.000	0.833	0.000	1.000
HYDR		28	BB	1.00	200.000	0.833	0.000	1.000
HYDR		29	C	1.00	200.000	0.833	0.000	1.000
HYDR		30	BB	1.00	200.000	0.833	0.000	1.000
HYDR		31	TR	0.00	0.000	0.833	0.000	1.000
HYDR		32	TR	1.00	200.000	0.833	0.000	1.000
HYDR		33	BB	1.00	200.000	0.833	0.000	1.000
HYDR		34	BB	1.00	200.000	0.833	0.000	1.000
HYDR		35	BB	1.00	200.000	0.833	0.000	1.000
HYDR		36	BB	1.00	200.000	0.833	0.000	1.000
HYDR		37	BB	1.00	200.000	0.833	0.000	1.000
HYDR		38	BL	0.00	0.000	0.833	0.000	1.000
HYDR		39	TR	0.00	0.000	0.833	0.000	1.000
HYDR		40	BL	0.00	0.000	0.833	0.000	1.000
HYDR		41	DD	0.00	0.000	0.833	0.000	1.000
HYDR		42	BL	0.00	0.000	0.833	0.000	1.000
HYDR		43	DD	0.00	0.000	0.833	0.000	1.000
HYDR		44	BL	1.00	100.000	0.833	0.000	1.000
HYDR		45	BL	1.00	100.000	0.833	0.000	1.000
HYDR		46	DD	0.00	0.000	0.833	0.000	1.000
HYDR		47	BL	1.00	100.000	0.833	0.000	1.000
HYDR		48	BL	1.00	100.000	0.833	0.000	1.000
HYDR		49	DD	0.00	0.000	0.833	0.000	1.000
HYDR		50	BL	1.00	150.000	0.833	0.000	1.000
HYDR		51	DD	0.00	0.000	0.833	0.000	1.000
HYDR		52	BL	1.00	200.000	0.833	0.000	1.000
HYDR		53	DD	0.00	0.000	0.833	0.000	1.000
HYDR		54	BL	1.00	250.000	0.833	0.000	1.000
HYDR		55	BL	1.00	300.000	0.833	0.000	1.000
HYDR		56	BL	1.00	300.000	0.833	0.000	1.000
HYDR		57	BL	1.00	300.000	0.833	0.000	1.000

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

HYDR	58	DD	0.00	0.000	0.833	0.000	1.000
HYDR	59	TR	1.00	200.000	0.833	0.000	1.000
HYDR	60	BL	1.00	300.000	0.833	0.000	1.000
HYDR	61	DD	0.00	0.000	0.833	0.000	1.000
HYDR	62	TR	1.00	200.000	0.833	0.000	1.000
HYDR	63	BL	1.00	300.000	0.833	0.000	1.000
HYDR	64	TR	0.00	0.000	0.833	0.000	1.000
HYDR	65	TR	1.00	200.000	0.833	0.000	1.000
HYDR	66	BL	1.00	300.000	0.833	0.000	1.000
HYDR	67	BL	1.00	300.000	0.833	0.000	1.000
HYDR	68	TR	0.00	0.000	0.833	0.000	1.000
HYDR	69	TR	1.00	200.000	0.833	0.000	1.000
HYDR	70	BL	1.00	300.000	0.833	0.000	1.000
HYDR	71	M	1.00	200.000	0.833	0.000	1.000
HYDR	72	BL	1.00	300.000	0.833	0.000	1.000
HYDR	73	M	1.00	200.000	0.833	0.000	1.000
HYDR	74	BL	1.00	300.000	0.833	0.000	1.000
HYDR	75	DD	0.00	0.000	0.833	0.000	1.000
HYDR	76	BP	0.00	0.000	0.833	0.000	1.000
HYDR	77	DD	0.00	0.000	0.833	0.000	1.000
HYDR	78	BP	0.00	0.000	0.833	0.000	1.000
HYDR	79	DD	0.00	0.000	0.833	0.000	1.000
HYDR	80	BP	0.00	0.000	0.833	0.000	1.000
HYDR	81	BP	1.00	200.000	0.833	0.000	1.000
HYDR	82	BP	1.00	200.000	0.833	0.000	1.000
HYDR	83	BP	1.00	200.000	0.833	0.000	1.000
HYDR	84	C	1.00	200.000	0.833	0.000	1.000
HYDR	85	BP	1.00	200.000	0.833	0.000	1.000
HYDR	86	C	1.00	200.000	0.833	0.000	1.000
HYDR	87	C	1.00	200.000	0.833	0.000	1.000
HYDR	88	BP	1.00	200.000	0.833	0.000	1.000
HYDR	89	BP	1.00	200.000	0.833	0.000	1.000
HYDR	90	BL	1.00	300.000	0.833	0.000	1.000
HYDR	91	BB	1.00	200.000	0.833	0.000	1.000

ENDATA10

\$\$\$ DATA TYPE 11 (INITIAL CONDITIONS) \$\$\$

CARD TYPE	REACH	ID	TEMP deg C	SALIN ppt	DO mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	PERIP g/m²	BOD1 mg/L	BOD2 mg/L	ORG-N mg/L	ORG-P mg/L	COLI #/100mL	NCM	COND	CL
INITIAL	1	DD	20.80	0.26	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	2	BV	20.80	0.26	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	3	BV	20.80	0.26	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	4	BV	20.80	0.39	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	5	DD	20.80	0.30	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	6	BV	20.80	0.39	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	7	DD	20.80	0.30	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	8	BV	20.80	0.28	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	9	DD	20.80	0.30	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	10	BV	20.80	0.17	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	11	BV	20.80	0.17	3.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	12	BV	20.80	0.17	3.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	13	UB	20.80	0.17	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	14	DD	20.80	0.30	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	15	UB	20.80	0.17	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	16	UB	20.80	0.17	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	17	BB	20.80	0.24	3.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	18	DD	20.80	0.27	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	19	BB	20.80	0.27	3.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	20	BB	20.80	0.45	3.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	21	WD	20.80	0.30	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	22	BB	20.80	1.15	3.00	0.00	0.00	0.00	8.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	23	DD	20.80	0.30	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	24	BB	20.80	2.10	3.00	0.00	0.00	0.00	8.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	25	DD	20.80	0.30	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	26	TR	20.80	0.30	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	27	BB	20.80	2.40	3.00	0.00	0.00	0.00	8.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	28	BB	20.80	2.68	3.00	0.00	0.00	0.00	8.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	29	C	20.80	0.30	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	30	BB	20.80	3.00	3.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	31	TR	20.80	0.30	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	32	TR	20.80	0.30	3.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	33	BB	20.80	3.10	3.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	34	BB	20.80	3.30	3.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	35	BB	20.80	3.30	3.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	36	BB	20.80	3.62	3.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	37	BB	20.80	3.82	3.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	38	BL	20.80	0.30	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	39	TR	20.80	0.30	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	40	BL	20.80	0.30	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	41	DD	20.80	0.30	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	42	BL	20.80	0.30	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	43	DD	20.80	0.30	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

COEF-1	29	C	11 TEXAS	0.000	0.000	0.000	0.625	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	30	BB	1 K2=a	0.477	0.000	0.000	0.500	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	31	TR	15 LOUISIANA	0.000	0.000	0.000	0.625	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	32	TR	11 TEXAS	0.000	0.000	0.000	0.625	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	33	BB	1 K2=a	0.477	0.000	0.000	0.250	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	34	BB	1 K2=a	0.477	0.000	0.000	0.000	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	35	BB	1 K2=a	0.542	0.000	0.000	0.000	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	36	BB	1 K2=a	0.658	0.000	0.000	0.063	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	37	BB	1 K2=a	0.580	0.000	0.000	0.000	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	38	BL	15 LOUISIANA	0.000	0.000	0.000	0.500	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	39	TR	15 LOUISIANA	0.000	0.000	0.000	0.125	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	40	BL	15 LOUISIANA	0.000	0.000	0.000	0.625	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	41	DD	15 LOUISIANA	0.000	0.000	0.000	0.125	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	42	BL	15 LOUISIANA	0.000	0.000	0.000	0.675	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	43	DD	15 LOUISIANA	0.000	0.000	0.000	0.125	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	44	BL	15 LOUISIANA	0.000	0.000	0.000	0.625	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	45	BL	15 LOUISIANA	0.000	0.000	0.000	0.425	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	46	DD	15 LOUISIANA	0.000	0.000	0.000	0.125	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	47	BL	11 TEXAS	0.000	0.000	0.000	0.310	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	48	BL	11 TEXAS	0.000	0.000	0.000	0.256	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	49	DD	15 LOUISIANA	0.000	0.000	0.000	0.388	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	50	BL	11 TEXAS	0.000	0.000	0.000	0.078	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	51	DD	15 LOUISIANA	0.000	0.000	0.000	0.388	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	52	BL	11 TEXAS	0.000	0.000	0.000	0.000	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	53	DD	15 LOUISIANA	0.000	0.000	0.000	0.388	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	54	BL	11 TEXAS	0.000	0.000	0.000	0.031	0.080	0.050	0.400	0.000	0.000	0.000	0.000	0.000
COEF-1	55	BL	1 K2=a	0.355	0.000	0.000	0.078	0.080	0.050	0.400	0.000	0.000	0.000	0.000	0.000
COEF-1	56	BL	1 K2=a	0.469	0.000	0.000	0.031	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	57	BL	1 K2=a	0.389	0.000	0.000	0.000	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	58	DD	15 LOUISIANA	0.000	0.000	0.000	0.388	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	59	TR	11 TEXAS	0.000	0.000	0.000	0.388	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	60	BL	1 K2=a	0.438	0.000	0.000	0.000	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	61	DD	15 LOUISIANA	0.000	0.000	0.000	0.388	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	62	TR	11 TEXAS	0.000	0.000	0.000	0.388	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	63	BL	1 K2=a	0.426	0.000	0.000	0.000	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	64	TR	15 LOUISIANA	0.000	0.000	0.000	0.388	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	65	TR	11 TEXAS	0.000	0.000	0.000	0.388	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	66	BL	1 K2=a	0.426	0.000	0.000	0.163	0.080	0.050	0.400	0.000	0.000	0.000	0.000	0.000
COEF-1	67	BL	1 K2=a	0.426	0.000	0.000	0.171	0.080	0.050	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	68	TR	15 LOUISIANA	0.000	0.000	0.000	0.388	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	69	TR	11 TEXAS	0.000	0.000	0.000	0.388	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	70	BL	1 K2=a	0.426	0.000	0.000	0.155	0.080	0.050	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	71	M	11 TEXAS	0.000	0.000	0.000	0.388	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	72	BL	1 K2=a	0.426	0.000	0.000	0.000	0.080	0.050	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	73	M	11 TEXAS	0.000	0.000	0.000	0.388	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	74	BL	1 K2=a	0.426	0.000	0.000	0.000	0.080	0.050	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	75	DD	15 LOUISIANA	0.000	0.000	0.000	0.406	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	76	BP	15 LOUISIANA	0.000	0.000	0.000	0.406	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	77	DD	15 LOUISIANA	0.000	0.000	0.000	0.406	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	78	BP	15 LOUISIANA	0.000	0.000	0.000	0.406	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	79	DD	15 LOUISIANA	0.000	0.000	0.000	0.406	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	80	BP	15 LOUISIANA	0.000	0.000	0.000	0.406	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	81	BP	15 LOUISIANA	0.000	0.000	0.000	0.260	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	82	BP	1 K2=a	0.801	0.000	0.000	0.618	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	83	BP	1 K2=a	0.606	0.000	0.000	0.488	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	84	C	15 LOUISIANA	0.000	0.000	0.000	0.406	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	85	BP	1 K2=a	0.606	0.000	0.000	0.244	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	86	C	15 LOUISIANA	0.000	0.000	0.000	0.406	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	87	C	15 LOUISIANA	0.000	0.000	0.000	0.406	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	88	BP	1 K2=a	0.606	0.000	0.000	0.000	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	89	BP	1 K2=a	0.606	0.000	0.000	0.000	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	90	BL	1 K2=a	0.426	0.000	0.000	0.000	0.080	0.050	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	91	BB	1 K2=a	0.503	0.000	0.000	0.000	0.080	0.050	0.000	0.000	0.000	0.000	0.000	0.000

\$\$\$ DATA TYPE 13 (NITROGEN AND PHOSPHORUS COEFFICIENTS) \$\$\$

CARD TYPE	REACH	ID	NBOD		ORGN		NH3		PO4	DENIT	ORGP	ORGP	SETTLD	
			DECA	SETT	AVAIL	DECA	SRCE	SRCE					DECA	SETT
			per day	m/d	frac	per day	g/m ² /d	g/m ² /d	per day			m/d	frac	
COEF-2	1	DD	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	2	BV	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	3	BV	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	4	BV	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	5	DD	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	6	BV	0.030	0.100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	7	DD	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	8	BV	0.030	0.100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	9	DD	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	10	BV	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	11	BV	0.030	0.150	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	12	BV	0.030	0.150	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	13	UB	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

m frac m/d per day frac

ENDATA14

\$\$\$ DATA TYPE 15 (COLIFORM AND NONCONSERVATIVE COEFFICIENTS) \$\$\$

CARD TYPE	REACH ID	COLIFORM DIE-OFF per day	NCM DECAY per day	NCM SETT m/d
-----------	----------	--------------------------------	-------------------------	--------------------

ENDATA15

\$\$\$ DATA TYPE 16 (INCREMENTAL DATA FOR FLOW, TEMPERATURE, SALINITY, AND CONSERVATIVES) \$\$\$

CARD TYPE	REACH ID	OUTFLOW m ³ /s	INFLOW m ³ /s	TEMP deg C	SALIN ppt	COND	CL	IN/DIST	OUT/DIST
-----------	----------	------------------------------	-----------------------------	---------------	--------------	------	----	---------	----------

ENDATA16

\$\$\$ DATA TYPE 17 (INCREMENTAL DATA FOR DO, BOD, AND NITROGEN) \$\$\$

CARD TYPE	REACH ID	DO mg/L	BOD1 mg/L	NBOD mg/L	mg/L	mg/L	BOD2 mg/L
-----------	----------	------------	--------------	--------------	------	------	--------------

ENDATA17

\$\$\$ DATA TYPE 18 (INCREMENTAL DATA FOR PHOSPHORUS, PHYTOPLANKTON, COLIFORM, AND NONCONSERVATIVES) \$\$\$

CARD TYPE	REACH ID	PO4 mg/L	PHYTO CHL A µg/L	COLI #/100mL	NCM	ORGP mg/L
-----------	----------	-------------	------------------------	-----------------	-----	--------------

ENDATA18

\$\$\$ DATA TYPE 19 (NONPOINT SOURCE DATA) \$\$\$

CARD TYPE	REACH ID	BOD1 kg/d	NBOD kg/d	COLI #/day	NCM	DO kg/d	BOD2 kg/d	ORG-P kg/d
NONPOINT	1 DD	0.72	0.30	0.00	0.00	0.00	0.00	0.00
NONPOINT	2 BV	0.06	0.02	0.00	0.00	0.00	0.00	0.00
NONPOINT	3 BV	0.61	0.02	0.00	0.00	0.00	0.00	0.00
NONPOINT	4 BV	0.61	0.02	0.00	0.00	0.00	0.00	0.00
NONPOINT	5 DD	0.11	0.05	0.00	0.00	0.00	0.00	0.00
NONPOINT	6 BV	0.59	0.06	0.00	0.00	0.00	0.00	0.00
NONPOINT	7 DD	0.06	0.03	0.00	0.00	0.00	0.00	0.00
NONPOINT	8 BV	0.73	0.06	0.00	0.00	0.00	0.00	0.00
NONPOINT	9 DD	0.17	0.08	0.00	0.00	0.00	0.00	0.00
NONPOINT	10 BV	0.04	0.02	0.00	0.00	0.00	0.00	0.00
NONPOINT	11 BV	0.23	0.04	0.00	0.00	0.00	0.00	0.00
NONPOINT	12 BV	0.40	0.26	0.00	0.00	0.00	0.00	0.00
NONPOINT	13 UB	0.11	0.05	0.00	0.00	0.00	0.00	0.00
NONPOINT	14 DD	0.08	0.04	0.00	0.00	0.00	0.00	0.00
NONPOINT	15 UB	0.09	0.04	0.00	0.00	0.00	0.00	0.00
NONPOINT	16 UB	0.10	0.04	0.00	0.00	0.00	0.00	0.00
NONPOINT	17 BB	0.03	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	18 DD	0.09	0.04	0.00	0.00	0.00	0.00	0.00
NONPOINT	19 BB	3.36	1.09	0.00	0.00	0.00	0.00	0.00
NONPOINT	20 BB	6.47	0.60	0.00	0.00	0.00	0.00	0.00
NONPOINT	21 WD	0.05	0.02	0.00	0.00	0.00	0.00	0.00
NONPOINT	22 BB	38.81	4.89	0.00	0.00	0.00	0.00	0.00
NONPOINT	23 DD	0.03	0.01	0.00	0.00	0.00	0.00	0.00
NONPOINT	24 BB	200.00	22.50	0.00	0.00	0.00	0.00	0.00
NONPOINT	25 DD	0.36	0.16	0.00	0.00	0.00	0.00	0.00
NONPOINT	26 TR	2.31	0.77	0.00	0.00	0.00	0.00	0.00
NONPOINT	27 BB	157.50	20.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	28 BB	182.50	18.75	0.00	0.00	0.00	0.00	0.00
NONPOINT	29 C	122.50	35.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	30 BB	125.00	15.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	31 TR	0.29	0.13	0.00	0.00	0.00	0.00	0.00
NONPOINT	32 TR	7.12	2.15	0.00	0.00	0.00	0.00	0.00
NONPOINT	33 BB	175.02	18.75	0.00	0.00	0.00	0.00	0.00
NONPOINT	34 BB	350.15	37.52	0.00	0.00	0.00	0.00	0.00
NONPOINT	35 BB	406.25	50.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	36 BB	406.25	6.25	0.00	0.00	0.00	0.00	0.00
NONPOINT	37 BB	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	38 BL	1.00	0.70	0.00	0.00	0.00	0.00	0.00
NONPOINT	39 TR	0.18	0.08	0.00	0.00	0.00	0.00	0.00
NONPOINT	40 BL	1.00	0.95	0.00	0.00	0.00	0.00	0.00
NONPOINT	41 DD	0.01	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	42 BL	3.42	3.80	0.00	0.00	0.00	0.00	0.00
NONPOINT	43 DD	0.12	0.05	0.00	0.00	0.00	0.00	0.00
NONPOINT	44 BL	0.85	1.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	45 BL	10.00	0.88	0.00	0.00	0.00	0.00	0.00
NONPOINT	46 DD	0.13	0.06	0.00	0.00	0.00	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

NONPOINT	47	BL	4.65	1.55	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	48	BL	49.60	3.88	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	49	DD	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	50	BL	19.38	2.33	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	51	DD	0.25	0.11	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	52	BL	29.45	2.33	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	53	DD	0.56	0.24	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	54	BL	75.95	2.33	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	55	BL	58.12	2.33	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	56	BL	31.00	1.55	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	57	BL	93.00	1.55	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	58	DD	0.05	0.20	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	59	TR	1.39	0.43	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	60	BL	170.50	27.12	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	61	DD	0.22	0.10	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	62	TR	1.78	0.57	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	63	BL	31.00	9.30	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	64	TR	0.11	0.05	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	65	TR	0.67	0.22	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	66	BL	170.50	27.90	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	67	BL	0.00	13.18	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	68	TR	0.11	0.05	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	69	TR	0.22	0.08	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	70	BL	19.38	10.07	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	71	M	2.60	0.69	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	72	BL	35.94	8.63	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	73	M	22.48	6.20	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	74	BL	116.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	75	DD	0.32	0.14	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	76	BP	0.96	0.41	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	77	DD	0.22	0.10	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	78	BP	0.64	0.22	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	79	DD	0.23	0.10	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	80	BP	0.12	0.07	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	81	BP	67.84	11.78	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	82	BP	31.07	3.36	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	83	BP	17.88	3.25	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	84	C	2.44	0.73	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	85	BP	28.44	6.91	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	86	C	3.74	1.08	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	87	C	2.92	0.89	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	88	BP	121.88	28.44	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	89	BP	130.00	24.38	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	90	BL	121.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	91	BB	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ENDATA19										

\$\$\$ DATA TYPE 20 (HEADWATER FOR FLOW, TEMPERATURE, SALINITY AND CONSERVATIVES) \$\$\$

CARD TYPE	ELEMENT	NAME	UNIT	FLOW m ³ /s	FLOW cfs	TEMP deg C	SALIN ppt	COND	CL	HDW DISP EXCHG frac
HDWTR-1	1	B VINCENT & BONFOUCA	0	0.00283	0.10000	20.80	0.26	520.900	7.230	0.000
HDWTR-1	67	BROWNS VILL RD (DD2)	0	0.00283	0.10000	20.80	0.26	520.900	7.230	0.000
HDWTR-1	102	DRAINAGE DITCH 8	0	0.00283	0.10000	20.80	0.26	520.900	7.230	0.000
HDWTR-1	119	DRAINAGE DITCH 9	0	0.00283	0.10000	20.80	0.26	520.900	7.230	0.000
HDWTR-1	159	UPPER B BONFOUCA	0	0.00283	0.10000	20.80	0.26	520.900	7.230	0.000
HDWTR-1	183	DRAINAGE DITCH 23	0	0.00283	0.10000	20.80	0.26	520.900	7.230	0.000
HDWTR-1	221	HIGHWAY 190(DD 5)	0	0.00283	0.10000	20.80	0.26	520.900	7.230	0.000
HDWTR-1	260	WEST DRAINAGE CANAL	0	0.00283	0.10000	20.80	0.26	520.900	7.230	0.000
HDWTR-1	284	DRAINAGE DITCH 6	0	0.00283	0.10000	20.80	0.26	520.900	7.230	0.000
HDWTR-1	295	TRIBUTARY 2	0	0.00283	0.10000	20.80	0.26	520.900	7.230	0.000
HDWTR-1	324	CANAL 26	0	0.00283	0.10000	20.80	0.26	520.900	7.230	0.000
HDWTR-1	346	TRIBUTARY 4	0	0.00283	0.10000	20.80	0.26	520.900	7.230	0.000
HDWTR-1	433	BAYOU LIBERTY	0	0.02832	1.00000	20.80	0.26	520.900	7.230	0.000
HDWTR-1	439	TRIBUTARY 1	0	0.00283	0.10000	20.80	0.26	520.900	7.230	0.000
HDWTR-1	470	DRAINAGE DITCH 22	0	0.00283	0.10000	20.80	0.26	520.900	7.230	0.000
HDWTR-1	482	DRAINAGE DITCH 20	0	0.00283	0.10000	20.80	0.26	520.900	7.230	0.000
HDWTR-1	536	HIGHWAY 190	0	0.00283	0.10000	20.80	0.26	520.900	7.230	0.000
HDWTR-1	576	DRAINAGE DITCH 18	0	0.00283	0.10000	20.80	0.26	520.900	7.230	0.000
HDWTR-1	585	DRAINAGE DITCH 19	0	0.00283	0.10000	20.80	0.26	520.900	7.230	0.000
HDWTR-1	601	DRAINAGE DITCH 4	0	0.00283	0.10000	20.80	0.26	520.900	7.230	0.000
HDWTR-1	667	TRIBUTARY 9	0	0.00283	0.10000	20.80	0.26	520.900	7.230	0.000
HDWTR-1	680	TRIBUTARY 6	0	0.00283	0.10000	20.80	0.26	520.900	7.230	0.000
HDWTR-1	698	TRIBUTARY 10	0	0.00283	0.10000	20.80	0.26	520.900	7.230	0.000
HDWTR-1	715	TRIBUTARY 8	0	0.00283	0.10000	20.80	0.26	520.900	7.230	0.000
HDWTR-1	727	MARINA 1	0	0.00283	0.10000	20.80	0.26	520.900	7.230	0.000
HDWTR-1	730	MARINA 2	0	0.00283	0.10000	20.80	0.26	520.900	7.230	0.000
HDWTR-1	762	HWY 190	0	0.00283	0.10000	20.80	0.26	520.900	7.230	0.000
HDWTR-1	797	DRAINAGE DITCH 16	0	0.00283	0.10000	20.80	0.26	520.900	7.230	0.000
HDWTR-1	819	DRAINAGE DITCH 17	0	0.00283	0.10000	20.80	0.26	520.900	7.230	0.000
HDWTR-1	861	TRIBUTARY 24	0	0.00283	0.10000	20.80	0.26	520.900	7.230	0.000
HDWTR-1	868	TRIBUTARY 25	0	0.00283	0.10000	20.80	0.26	520.900	7.230	0.000
ENDATA20										

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

\$\$\$ DATA TYPE 21 (HEADWATER DATA FOR DO, BOD, AND NITROGEN) \$\$\$

CARD TYPE	ELEMENT	NAME	DO mg/L	BOD#1 mg/L	NBOD mg/L	mg/L	mg/L	BOD2 mg/L
HDWTR-2	1	B VINCENT & BONFOUCA	6.00	0.63	0.29	0.00	0.00	0.00
HDWTR-2	67	BROWNS VILL RD (DD2)	6.00	0.62	0.29	0.00	0.00	0.00
HDWTR-2	102	DRAINAGE DITCH 8	6.00	0.63	0.29	0.00	0.00	0.00
HDWTR-2	119	DRAINAGE DITCH 9	6.00	0.63	0.29	0.00	0.00	0.00
HDWTR-2	159	UPPER B BONFOUCA	6.00	0.63	0.29	0.00	0.00	0.00
HDWTR-2	183	DRAINAGE DITCH 23	6.00	0.63	0.29	0.00	0.00	0.00
HDWTR-2	221	HIGHWAY 190(DD 5)	6.00	0.63	0.29	0.00	0.00	0.00
HDWTR-2	260	WEST DRAINAGE CANAL	6.00	0.63	0.29	0.00	0.00	0.00
HDWTR-2	284	DRAINAGE DITCH 6	6.00	2.75	1.25	0.00	0.00	0.00
HDWTR-2	295	TRIBUTARY 2	6.00	2.75	1.25	0.00	0.00	0.00
HDWTR-2	324	CANAL 26	6.00	2.75	1.25	0.00	0.00	0.00
HDWTR-2	346	TRIBUTARY 4	6.00	2.75	1.25	0.00	0.00	0.00
HDWTR-2	433	BAYOU LIBERTY	6.00	0.55	0.25	0.00	0.00	0.00
HDWTR-2	439	TRIBUTARY 1	6.00	0.55	0.25	0.00	0.00	0.00
HDWTR-2	470	DRAINAGE DITCH 22	6.00	0.55	0.25	0.00	0.00	0.00
HDWTR-2	482	DRAINAGE DITCH 20	6.00	0.55	0.25	0.00	0.00	0.00
HDWTR-2	536	HIGHWAY 190	6.00	0.55	0.25	0.00	0.00	0.00
HDWTR-2	576	DRAINAGE DITCH 18	6.00	1.71	0.78	0.00	0.00	0.00
HDWTR-2	585	DRAINAGE DITCH 19	6.00	1.71	0.78	0.00	0.00	0.00
HDWTR-2	601	DRAINAGE DITCH 4	6.00	1.71	0.78	0.00	0.00	0.00
HDWTR-2	667	TRIBUTARY 9	6.00	1.71	0.78	0.00	0.00	0.00
HDWTR-2	680	TRIBUTARY 6	6.00	1.71	0.78	0.00	0.00	0.00
HDWTR-2	698	TRIBUTARY 10	6.00	1.71	0.78	0.00	0.00	0.00
HDWTR-2	715	TRIBUTARY 8	6.00	1.71	0.78	0.00	0.00	0.00
HDWTR-2	727	MARINA 1	6.00	1.71	0.78	0.00	0.00	0.00
HDWTR-2	730	MARINA 2	6.00	1.71	0.78	0.00	0.00	0.00
HDWTR-2	762	HWY 190	6.00	1.79	0.81	0.00	0.00	0.00
HDWTR-2	797	DRAINAGE DITCH 16	6.00	1.79	0.81	0.00	0.00	0.00
HDWTR-2	819	DRAINAGE DITCH 17	6.00	1.79	0.81	0.00	0.00	0.00
HDWTR-2	861	TRIBUTARY 24	6.00	1.79	0.81	0.00	0.00	0.00
HDWTR-2	868	TRIBUTARY 25	6.00	1.79	0.81	0.00	0.00	0.00

\$\$\$ DATA TYPE 22 (HEADWATER DATA FOR PHOSPHORUS, PHYTOPLANKTON, COLIFORM, AND NONCONSERVATIVES) \$\$\$

CARD TYPE	ELEMENT	NAME	PO4-P mg/L	PHYTO CHL A µg/L	COLI #/100mL	NCM	ORG-P mg/L
HDWTR-3	1	B VINCENT & BONFOUCA	0.00	0.00	0.00	0.00	0.00
HDWTR-3	67	BROWNS VILL RD (DD2)	0.00	0.00	0.00	0.00	0.00
HDWTR-3	102	DRAINAGE DITCH 8	0.00	0.00	0.00	0.00	0.00
HDWTR-3	119	DRAINAGE DITCH 9	0.00	0.00	0.00	0.00	0.00
HDWTR-3	159	UPPER B BONFOUCA	0.00	0.00	0.00	0.00	0.00
HDWTR-3	183	DRAINAGE DITCH 23	0.00	0.00	0.00	0.00	0.00
HDWTR-3	221	HIGHWAY 190(DD 5)	0.00	0.00	0.00	0.00	0.00
HDWTR-3	260	WEST DRAINAGE CANAL	0.00	0.00	0.00	0.00	0.00
HDWTR-3	284	DRAINAGE DITCH 6	0.00	0.00	0.00	0.00	0.00
HDWTR-3	295	TRIBUTARY 2	0.00	0.00	0.00	0.00	0.00
HDWTR-3	324	CANAL 26	0.00	0.00	0.00	0.00	0.00
HDWTR-3	346	TRIBUTARY 4	0.00	0.00	0.00	0.00	0.00
HDWTR-3	433	BAYOU LIBERTY	0.00	0.00	0.00	0.00	0.00
HDWTR-3	439	TRIBUTARY 1	0.00	0.00	0.00	0.00	0.00
HDWTR-3	470	DRAINAGE DITCH 22	0.00	0.00	0.00	0.00	0.00
HDWTR-3	482	DRAINAGE DITCH 20	0.00	0.00	0.00	0.00	0.00
HDWTR-3	536	HIGHWAY 190	0.00	0.00	0.00	0.00	0.00
HDWTR-3	576	DRAINAGE DITCH 18	0.00	0.00	0.00	0.00	0.00
HDWTR-3	585	DRAINAGE DITCH 19	0.00	0.00	0.00	0.00	0.00
HDWTR-3	601	DRAINAGE DITCH 4	0.00	0.00	0.00	0.00	0.00
HDWTR-3	667	TRIBUTARY 9	0.00	0.00	0.00	0.00	0.00
HDWTR-3	680	TRIBUTARY 6	0.00	0.00	0.00	0.00	0.00
HDWTR-3	698	TRIBUTARY 10	0.00	0.00	0.00	0.00	0.00
HDWTR-3	715	TRIBUTARY 8	0.00	0.00	0.00	0.00	0.00
HDWTR-3	727	MARINA 1	0.00	0.00	0.00	0.00	0.00
HDWTR-3	730	MARINA 2	0.00	0.00	0.00	0.00	0.00
HDWTR-3	762	HWY 190	0.00	0.00	0.00	0.00	0.00
HDWTR-3	797	DRAINAGE DITCH 16	0.00	0.00	0.00	0.00	0.00
HDWTR-3	819	DRAINAGE DITCH 17	0.00	0.00	0.00	0.00	0.00
HDWTR-3	861	TRIBUTARY 24	0.00	0.00	0.00	0.00	0.00
HDWTR-3	868	TRIBUTARY 25	0.00	0.00	0.00	0.00	0.00

\$\$\$ DATA TYPE 23 (JUNCTION DATA) \$\$\$

CARD TYPE	JUNCTION ELEMENT	UPSTRM ELEMENT	RIVER KILOM	NAME
JUNCTION	88	66	17.60	DRAINAGE DITCH 2
JUNCTION	110	101	16.90	DRAINAGE DITCH 8

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

JUNCTION	140	118	16.00	DRAINAGE DITCH 9
JUNCTION	193	182	2.60	DRAINAGE DITCH 23
JUNCTION	219	158	14.40	UPPER BAYOU BONFOUCA
JUNCTION	239	220	14.20	HIGHWAY 190 (DRAINAGE DITCH 5)
JUNCTION	263	259	12.10	WEST DRAINAGE CANAL
JUNCTION	287	283	10.00	DRAINAGE DITCH 6
JUNCTION	310	294	9.20	TRIBUTARY 2
JUNCTION	344	323	7.80	CANAL 26
JUNCTION	365	345	7.60	TRIBUTARY 4
JUNCTION	463	438	14.40	TRIBUTARY 1
JUNCTION	473	469	13.70	DRAINAGE DITCH 22
JUNCTION	509	481	12.80	DRAINAGE DITCH 20
JUNCTION	559	535	10.10	HIGHWAY 190 (DRAINAGE DITCH 14)
JUNCTION	579	575	8.40	DRAINAGE DITCH 18
JUNCTION	599	584	7.80	DRAINAGE DITCH 19
JUNCTION	643	600	7.60	DRAINAGE DITCH 4
JUNCTION	672	666	5.20	TRIBUTARY 9
JUNCTION	696	679	4.40	TRIBUTARY 6
JUNCTION	705	697	4.20	TRIBUTARY 10
JUNCTION	721	714	3.20	TRIBUTARY 8
JUNCTION	729	726	2.60	MARINA 1
JUNCTION	748	729	2.50	MARINA 2
JUNCTION	806	796	5.10	DRAINAGE DITCH 16
JUNCTION	836	818	3.80	DRAINAGE DITCH 17
JUNCTION	865	860	1.30	CHANNEL 1
JUNCTION	878	867	1.00	CHANNEL 2
JUNCTION	888	761	1.10	BAYOU PAQUET
JUNCTION	899	432	0.80	BAYOU LIBERTY
ENDATA23				

\$\$\$ DATA TYPE 24 (WASTELOAD DATA FOR FLOW, TEMPERATURE, SALINITY, AND CONSERVATIVES) \$\$\$

CARD TYPE	ELEMENT	RKIL0	NAME	FLOW m ³ /s	FLOW cfs	FLOW MGD	TEMP deg C	SALIN ppt	COND	CL
WSTLD-1	1	24.20	V H SEAL APARTMENTS	0.00004	0.00145	0.001	30.00	0.39	753.600	63.300
WSTLD-1	40	20.30	GROUNDWATER	0.02832	1.00000	0.646	20.80	0.26	520.900	7.230
WSTLD-1	48	19.50	EAGLE LAKE MHP	0.00345	0.12183	0.079	30.00	0.40	774.000	34.400
WSTLD-1	63	18.00	J&K MANAGEMENT LLC	0.00001	0.00035	0.000	30.00	0.39	753.600	63.300
WSTLD-1	67	2.10	STONES THROW APTS	0.00105	0.03713	0.024	30.00	0.39	753.600	63.300
WSTLD-1	73	1.50	GOOD VALUE AUTO SALE	0.00000	0.00011	0.000	30.00	0.39	753.600	63.300
WSTLD-1	74	1.40	ADAMS MHP	0.00012	0.00406	0.003	30.00	0.39	753.600	63.300
WSTLD-1	79	0.90	WADLEIGH OFFSHORE	0.00004	0.00155	0.001	30.00	0.39	753.600	63.300
WSTLD-1	80	0.80	EXXONMOBIL #51367	0.00014	0.00483	0.003	30.00	0.39	753.600	63.300
WSTLD-1	81	0.70	LCR-M PLUMBING SUPP	0.00001	0.00023	0.000	30.00	0.39	753.600	63.300
WSTLD-1	83	0.50	BAKER-ELLIS-SHAMROCK	0.00002	0.00081	0.001	30.00	0.39	753.600	63.300
WSTLD-1	84	0.40	NORTHSHORE CHEMICAL	0.00000	0.00011	0.000	30.00	0.39	753.600	63.300
WSTLD-1	85	0.30	MANHEIM AUTO AUCTION	0.00000	0.00000	0.000	30.00	0.39	753.600	63.300
WSTLD-1	87	0.10	WADLEIGH FITNESS	0.00002	0.00058	0.000	30.00	0.39	753.600	63.300
WSTLD-1	102	0.80	JUBILEE #4815	0.00009	0.00329	0.002	30.00	0.39	753.600	63.300
WSTLD-1	107	0.30	JOHNSON-BLDG 2	0.00008	0.00270	0.002	30.00	0.39	753.600	63.300
WSTLD-1	119	2.10	CHARTER-JOHN'S AUTO	0.00001	0.00034	0.000	30.00	0.39	753.600	63.300
WSTLD-1	125	1.50	I-12 SHELL	0.00001	0.00031	0.000	30.00	0.39	753.600	63.300
WSTLD-1	135	0.50	ST TAM PAR SCH MAINT	0.00001	0.00019	0.000	30.00	0.39	753.600	63.300
WSTLD-1	136	0.40	J&D-VETS HEALTH/OMNI	0.00004	0.00147	0.001	30.00	0.39	753.600	63.300
WSTLD-1	183	1.00	GOOD SHEPHERD CHURCH	0.00006	0.00213	0.001	30.00	0.39	753.600	63.300
WSTLD-1	221	1.80	JOLLY APARTMENTS	0.00031	0.01102	0.007	30.00	0.39	753.600	63.300
WSTLD-1	222	1.70	PINEY RIDGE MHP	0.00051	0.01798	0.012	30.00	0.39	753.600	63.300
WSTLD-1	223	1.60	STARLING PLAZA	0.00016	0.00553	0.004	30.00	0.39	753.600	63.300
WSTLD-1	224	1.50	PO FOLKS SEAFOOD	0.00003	0.00095	0.001	30.00	0.39	753.600	63.300
WSTLD-1	227	1.20	SOUTH SEAS RSTRNT	0.00011	0.00377	0.002	30.00	0.39	753.600	63.300
WSTLD-1	228	1.10	SHADY PINES MHP	0.00058	0.02030	0.013	30.00	0.39	753.600	63.300
WSTLD-1	230	0.90	1421HWY190-ARMACOAT	0.00004	0.00124	0.001	30.00	0.39	753.600	63.300
WSTLD-1	231	0.80	FACDIR-STAMBRACKETAG	0.00000	0.00015	0.000	30.00	0.39	753.600	63.300
WSTLD-1	232	0.70	NEW LIFE INDUSTRIES	0.00003	0.00095	0.001	30.00	0.39	753.600	63.300
WSTLD-1	233	0.60	PEACE LUTH CHURCH	0.00013	0.00458	0.003	30.00	0.39	753.600	63.300
WSTLD-1	234	0.50	ERNEST WALDER	0.00002	0.00070	0.000	30.00	0.39	753.600	63.300
WSTLD-1	235	0.40	STOR N LOCK-TYMELESS	0.00001	0.00027	0.000	30.00	0.39	753.600	63.300
WSTLD-1	260	0.30	BONFOUCA SUPFND SITE	0.00063	0.02228	0.014	30.00	0.22	437.300	23.500
WSTLD-1	281	10.30	DOTD BNPCA BRIDGE	0.00000	0.00004	0.000	30.00	0.39	753.600	63.300
WSTLD-1	282	10.20	SLIDELL MARINE	0.00020	0.00715	0.005	30.00	0.39	753.600	63.300
WSTLD-1	284	0.30	ARC MECH CONTRACTORS	0.00001	0.00019	0.000	30.00	0.39	753.600	200.000
WSTLD-1	289	9.80	PEARL RIVER NAV	0.00019	0.00677	0.004	30.00	0.39	753.600	63.300
WSTLD-1	295	1.50	STP CONST BUILDING	0.00004	0.00155	0.001	30.00	0.39	753.600	63.300
WSTLD-1	346	1.90	ACADIAN GRDNS CONDOS	0.00041	0.01450	0.009	30.00	0.39	753.600	63.300
WSTLD-1	351	1.40	OAKWOOD ESTATES	0.00068	0.02398	0.015	30.00	0.39	753.600	63.300
WSTLD-1	389	5.20	COIN DU LESTIN SUB	0.00438	0.15470	0.100	30.00	0.32	628.100	54.300
WSTLD-1	439	2.40	NORTHSHORE SQUADRON	0.00000	0.00005	0.000	30.00	0.39	753.600	63.300
WSTLD-1	442	2.10	ANDY KNIGHT	0.00000	0.00007	0.000	30.00	0.39	753.600	63.300
WSTLD-1	470	0.30	THE MEADOWS SUB	0.01512	0.53373	0.345	30.00	0.55	1053.000	150.000
WSTLD-1	482	2.70	ROYAL GOLF CLUB	0.00024	0.00839	0.005	30.00	0.39	753.600	63.300
WSTLD-1	494	1.50	NATFINANCE-TEXTRON	0.00022	0.00773	0.005	30.00	0.39	753.600	63.300
WSTLD-1	495	1.40	GUARDIAN ANGELS	0.00005	0.00180	0.001	30.00	0.39	753.600	63.300
WSTLD-1	498	1.10	OAKMONT SUBDIVISIO	0.00387	0.13653	0.088	30.00	0.32	619.500	47.000

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

WSTLD-1	536	2.30	ASSUNTA'S RESTAURANT	0.00016	0.00561	0.004	30.00	0.39	753.600	63.300
WSTLD-1	544	1.50	INDIAN HILLS RV PARK	0.00043	0.01523	0.010	30.00	0.39	753.600	63.300
WSTLD-1	546	1.30	J&J AUTO BROKERS	0.00000	0.00007	0.000	30.00	0.39	753.600	63.300
WSTLD-1	548	1.10	7THDAY & DOLLAR GEN	0.00008	0.00265	0.002	30.00	0.39	753.600	63.300
WSTLD-1	550	0.90	OMNI STORAGE VI	0.00002	0.00058	0.000	30.00	0.39	753.600	63.300
WSTLD-1	551	0.80	ABC SUPPLY CO	0.00001	0.00027	0.000	30.00	0.39	753.600	63.300
WSTLD-1	552	0.70	LION CONSULTING	0.00000	0.00007	0.000	30.00	0.39	753.600	63.300
WSTLD-1	553	0.60	CHILL RITE	0.00001	0.00042	0.000	30.00	0.39	753.600	63.300
WSTLD-1	555	0.40	HERRON-2315/17/19	0.00003	0.00110	0.001	30.00	0.39	753.600	63.300
WSTLD-1	556	0.30	THOMGROC-ST POL JURY	0.00001	0.00019	0.000	30.00	0.39	753.600	63.300
WSTLD-1	557	0.20	FITSTOP3-REFLECTMIR	0.00008	0.00270	0.002	30.00	0.39	753.600	63.300
WSTLD-1	576	0.30	ALL AM ELKS LODGE	0.00009	0.00309	0.002	30.00	0.39	753.600	63.300
WSTLD-1	585	1.40	LAKE CASTLE SCHOOL	0.00048	0.01682	0.011	30.00	0.39	753.600	63.300
WSTLD-1	601	4.20	BLUEBELL-NULITE	0.00005	0.00166	0.001	30.00	0.39	753.600	63.300
WSTLD-1	602	4.10	ALBERS AC & HEATING	0.00001	0.00023	0.000	30.00	0.39	753.600	63.300
WSTLD-1	611	3.20	BAKER SALES WRHSE	0.00000	0.00007	0.000	30.00	0.39	753.600	63.300
WSTLD-1	614	2.90	CLECO SERVICE CENTER	0.00001	0.00038	0.000	30.00	0.39	753.600	63.300
WSTLD-1	615	2.80	G&S-UNITED MEDICAL	0.00002	0.00070	0.000	30.00	0.39	753.600	63.300
WSTLD-1	616	2.70	AIRGAS-HANNA-SUNBELT	0.00087	0.03055	0.020	30.00	0.39	753.600	63.300
WSTLD-1	617	2.60	AVC ELECTRIC	0.00000	0.00004	0.000	30.00	0.39	753.600	63.300
WSTLD-1	619	2.40	M&R-WAGNERSHOPCTR	0.00011	0.00385	0.002	30.00	0.39	753.600	63.300
WSTLD-1	620	2.30	CALWES CENTER	0.00023	0.00802	0.005	30.00	0.39	753.600	63.300
WSTLD-1	621	2.20	BEAU'S-LA LUMBER	0.00003	0.00104	0.001	30.00	0.39	753.600	63.300
WSTLD-1	625	1.80	ADVANCE AUTO	0.00001	0.00019	0.000	30.00	0.39	753.600	63.300
WSTLD-1	633	1.00	HUNTWYCK VILLAGE	0.01522	0.53760	0.348	30.00	0.30	582.300	52.500
WSTLD-1	667	0.50	B LIBERTY WATER ASSN	0.00001	0.00035	0.000	30.00	0.39	753.600	63.300
WSTLD-1	680	1.60	THOMPSON RD BAPTIST	0.00004	0.00155	0.001	30.00	0.39	753.600	63.300
WSTLD-1	698	0.70	LIBERTY FOOD STORE	0.00003	0.00110	0.001	30.00	0.39	753.600	63.300
WSTLD-1	715	0.60	A-1 REMODELING & BLD	0.00001	0.00038	0.000	30.00	0.39	753.600	63.300
WSTLD-1	723	3.00	ST GENEVIEVE CATH CH	0.00016	0.00580	0.004	30.00	0.39	753.600	63.300
WSTLD-1	728	0.10	BAYOU LIBERTY MARINA	0.00000	0.00004	0.000	30.00	0.39	753.600	63.300
WSTLD-1	746	0.20	A BONFOUCA MARINA	0.00005	0.00166	0.001	30.00	0.39	753.600	63.300
WSTLD-1	762	8.60	WASTE MGMT OF LA	0.00003	0.00096	0.001	30.00	0.39	753.600	63.300
WSTLD-1	763	8.50	ACALIGN-ALLAM-CT-M&D	0.00001	0.00035	0.000	30.00	0.39	753.600	63.300
WSTLD-1	767	8.10	K-BAR-B YOUTH RANCH	0.00013	0.00445	0.003	30.00	0.39	753.600	63.300
WSTLD-1	776	7.20	BAYOU PAQUET HEADWAT	0.02832	1.00000	0.646	20.80	0.26	520.900	7.230
WSTLD-1	797	0.90	ACTS 1 TAX SERVICE	0.00000	0.00011	0.000	30.00	0.39	753.600	63.300
WSTLD-1	819	1.70	TIMBER RIDGE SUB	0.00243	0.08586	0.056	30.00	0.45	864.700	41.600

ENDATA24

\$\$\$ DATA TYPE 25 (WASTELOAD DATA FOR DO, BOD, AND NITROGEN) \$\$\$

CARD TYPE	ELEMENT	NAME	DO		% BOD		NBOD	% NITRIF		BOD2
			mg/L	mg/L	RMVL	mg/L		mg/L	mg/L	
WSTLD-2	1	V H SEAL APARTMENTS	2.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00
WSTLD-2	40	GROUNDWATER	6.00	0.62	0.00	0.27	0.00	0.00	0.00	0.00
WSTLD-2	48	EAGLE LAKE MHP	5.00	11.50	0.00	8.60	0.00	0.00	0.00	0.00
WSTLD-2	63	J&K MANAGEMENT LLC	2.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00
WSTLD-2	67	STONES THROW APTS	2.00	23.00	0.00	8.60	0.00	0.00	0.00	0.00
WSTLD-2	73	GOOD VALUE AUTO SALE	2.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00
WSTLD-2	74	ADAMS MHP	2.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00
WSTLD-2	79	WADLEIGH OFFSHORE	2.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00
WSTLD-2	80	EXXONMOBIL #51367	2.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00
WSTLD-2	81	LCR-M PLUMBING SUPP	2.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00
WSTLD-2	83	BAKER-ELLIS-SHAMROCK	2.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00
WSTLD-2	84	NORTHSHORE CHEMICAL	2.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00
WSTLD-2	85	MANHEIM AUTO AUCTION	2.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00
WSTLD-2	87	WADLEIGH FITNESS	2.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00
WSTLD-2	102	JUBILEE #4815	2.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00
WSTLD-2	107	JOHNSON-BLDG 2	2.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00
WSTLD-2	119	CHARTER-JOHN'S AUTO	2.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00
WSTLD-2	125	I-12 SHELL	2.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00
WSTLD-2	135	ST TAM PAR SCH MAINT	2.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00
WSTLD-2	136	J&D-VETS HEALTH/OMNI	2.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00
WSTLD-2	183	GOOD SHEPHERD CHURCH	2.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00
WSTLD-2	221	JOLLY APARTMENTS	2.00	23.00	0.00	8.60	0.00	0.00	0.00	0.00
WSTLD-2	222	PINEY RIDGE MHP	2.00	23.00	0.00	8.60	0.00	0.00	0.00	0.00
WSTLD-2	223	STARLING PLAZA	2.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00
WSTLD-2	224	PO FOLKS SEAFOOD	2.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00
WSTLD-2	227	SOUTH SEAS RSTRNT	2.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00
WSTLD-2	228	SHADY PINES MHP	2.00	23.00	0.00	8.60	0.00	0.00	0.00	0.00
WSTLD-2	230	1421HWY190-ARMACOAT	2.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00
WSTLD-2	231	FACDIR-STTAMBRACKETAG	2.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00
WSTLD-2	232	NEW LIFE MINISTRIES	2.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00
WSTLD-2	233	PEACE LUTH CHURCH	2.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00
WSTLD-2	234	ERNEST WALDER	2.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00
WSTLD-2	235	STOR N LOCK-TYMELESS	2.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00
WSTLD-2	260	BONFOUCA SUPPND SITE	2.00	1.33	0.00	1.74	0.00	0.00	0.00	0.00
WSTLD-2	281	DOTD BNPCA BRIDGE	2.00	46.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	282	SLIDELL MARINE	2.00	46.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	284	ARC MECH CONTRACTORS	2.00	69.00	0.00	64.50	0.00	0.00	0.00	0.00
WSTLD-2	289	PEARL RIVER NAV	2.00	69.00	0.00	64.50	0.00	0.00	0.00	0.00
WSTLD-2	295	STP CONST BUILDING	2.00	69.00	0.00	64.50	0.00	0.00	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

WSTLD-2	346	ACADIAN GRDNS CONDOS	2.00	69.00	0.00	64.50	0.00	0.00	0.00	0.00
WSTLD-2	351	OAKWOOD ESTATES	2.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	389	COIN DU LESTIN SUB	2.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	439	NORTHSHORE SQUADRON	2.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00
WSTLD-2	442	ANDY KNIGHT	2.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00
WSTLD-2	470	THE MEADOWS SUB	2.00	11.50	0.00	8.60	0.00	0.00	0.00	0.00
WSTLD-2	482	ROYAL GOLF CLUB	2.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00
WSTLD-2	494	NATFINANCE-TEXTRON	2.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00
WSTLD-2	495	GUARDIAN ANGELS	2.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00
WSTLD-2	498	OAKMONT SUBDIVISIO	2.00	11.50	0.00	8.60	0.00	0.00	0.00	0.00
WSTLD-2	536	ASSUNTA'S RESTAURANT	2.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	544	INDIAN HILLS RV PARK	2.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00
WSTLD-2	546	J&J AUTO BROKERS	2.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	548	7THDAY & DOLLAR GEN	2.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	550	OMNI STORAGE VI	2.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	551	ABC SUPPLY CO	2.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	552	LION CONSULTING	2.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	553	CHILL RITE	2.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	555	HERRON-2315/17/19	2.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	556	THOMGROC-ST POL JURY	2.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	557	PITSTOP3-REFLECTMIR	2.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	576	ALL AM ELKS LODGE	2.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	585	LAKE CASTLE SCHOOL	2.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00
WSTLD-2	601	BLUEBELL-NULITE	2.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	602	ALBERS AC & HEATING	2.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	611	BAKER SALES WRHSE	2.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	614	CLECO SERVICE CENTER	2.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	615	G&S-UNITED MEDICAL	2.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	616	AIRGAS-HANNA-SUNBELT	2.00	23.00	0.00	25.30	0.00	0.00	0.00	0.00
WSTLD-2	617	AVC ELECTRIC	2.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	619	M&R-WAGNERSHOPCTR	2.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	620	CALWES CENTER	2.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	621	BEAU'S-LA LUMBER	2.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	625	ADVANCE AUTO	2.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	633	HUNTWYCK VILLAGE	2.00	23.00	0.00	8.60	0.00	0.00	0.00	0.00
WSTLD-2	667	B LIBERTY WATER ASSN	2.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	680	THOMPSON RD BAPTIST	2.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	698	LIBERTY FOOD STORE	2.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	715	A-1 REMODELING & BLD	2.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	723	ST GENEVIEVE CATH CH	2.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	728	BAYOU LIBERTY MARINA	2.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	746	A BONFOUCA MARINA	2.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	762	WASTE MGMT OF LA	2.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	763	ACALIGN-ALLAM-CT-M&D	2.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	767	K-BAR-B YOUTH RANCH	2.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	776	BAYOU PAQUET HEADWAT	6.00	1.76	0.00	0.77	0.00	0.00	0.00	0.00
WSTLD-2	797	ACTS 1 TAX SERVICE	2.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00
WSTLD-2	819	TIMBER RIDGE SUB	2.00	23.00	0.00	8.60	0.00	0.00	0.00	0.00

\$\$\$ DATA TYPE 26 (WASTELOAD DATA FOR PHOSPHORUS, PHYTOPLANTON, COLIFORM, AND NONCONSERVATIVES) \$\$\$

CARD TYPE	ELEMENT	NAME	PO4-P mg/L	PHYTO		COLI #/100mL	NCM	ORG-P mg/L
				CHL A µg/L				
WSTLD-3	1	V H SEAL APARTMENTS	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	40	GROUNDWATER	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	48	EAGLE LAKE MHP	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	63	J&K MANAGEMENT LLC	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	67	STONES THROW APTS	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	73	GOOD VALUE AUTO SALE	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	74	ADAMS MHP	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	79	WADLEIGH OFFSHORE	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	80	EKKONMOBLL #51367	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	81	L&R-M PLUMBING SUPP	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	83	BAKER-ELLIS-SHAMROCK	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	84	NORTHSHORE CHEMICAL	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	85	MANHEIM AUTO AUCTION	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	87	WADLEIGH FITNESS	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	102	JUBILEE #4815	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	107	JOHNSON-BLDG 2	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	119	CHARTER-JOHN'S AUTO	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	125	I-12 SHELL	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	135	ST TAM PAR SCH MAINT	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	136	J&D-VETS HEALTH/OMNI	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	183	GOOD SHEPHERD CHURCH	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	221	JOLLY APARTMENTS	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	222	PINEY RIDGE MHP	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	223	STARLING PLAZA	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	224	PO FOLKS SEAFOOD	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	227	SOUTH SEAS RSTRNT	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	228	SHADY PINES MHP	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	230	1421HWY190-ARMACOAT	0.00	0.00	0.00	0.00	0.00	0.00
WSTLD-3	231	FACDIR-SITTAMBRACKETAG	0.00	0.00	0.00	0.00	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

WSTLD-3	232	NEW LIFE MINISTRIES	0.00	0.00	0.00	0.00	0.00
WSTLD-3	233	PEACE LUTH CHURCH	0.00	0.00	0.00	0.00	0.00
WSTLD-3	234	ERNEST WALDER	0.00	0.00	0.00	0.00	0.00
WSTLD-3	235	STOR N LOCK-TYMELESS	0.00	0.00	0.00	0.00	0.00
WSTLD-3	260	BONFOUCA SUPPND SITE	0.00	0.00	0.00	0.00	0.00
WSTLD-3	281	DOTD BNFCA BRIDGE	0.00	0.00	0.00	0.00	0.00
WSTLD-3	282	SLIDELL MARINE	0.00	0.00	0.00	0.00	0.00
WSTLD-3	284	ARC MECH CONTRACTORS	0.00	0.00	0.00	0.00	0.00
WSTLD-3	289	PEARL RIVER NAV	0.00	0.00	0.00	0.00	0.00
WSTLD-3	295	STP CONST BUILDING	0.00	0.00	0.00	0.00	0.00
WSTLD-3	346	ACADIAN GRDNS CONDOS	0.00	0.00	0.00	0.00	0.00
WSTLD-3	351	OAKWOOD ESTATES	0.00	0.00	0.00	0.00	0.00
WSTLD-3	389	COIN DU LESTIN SUB	0.00	0.00	0.00	0.00	0.00
WSTLD-3	439	NORTHSHORE SQUADRON	0.00	0.00	0.00	0.00	0.00
WSTLD-3	442	ANDY KNIGHT	0.00	0.00	0.00	0.00	0.00
WSTLD-3	470	THE MEADOWS SUB	0.00	0.00	0.00	0.00	0.00
WSTLD-3	482	ROYAL GOLF CLUB	0.00	0.00	0.00	0.00	0.00
WSTLD-3	494	NATFINANCE-TEXTRON	0.00	0.00	0.00	0.00	0.00
WSTLD-3	495	GUARDIAN ANGELS	0.00	0.00	0.00	0.00	0.00
WSTLD-3	498	OAKMONT SUBDIVISIO	0.00	0.00	0.00	0.00	0.00
WSTLD-3	536	ASSUNTA'S RESTAURANT	0.00	0.00	0.00	0.00	0.00
WSTLD-3	544	INDIAN HILLS RV PARK	0.00	0.00	0.00	0.00	0.00
WSTLD-3	546	J&J AUTO BROKERS	0.00	0.00	0.00	0.00	0.00
WSTLD-3	548	7THDAY & DOLLAR GEN	0.00	0.00	0.00	0.00	0.00
WSTLD-3	550	OMNI STORAGE VI	0.00	0.00	0.00	0.00	0.00
WSTLD-3	551	ABC SUPPLY CO	0.00	0.00	0.00	0.00	0.00
WSTLD-3	552	LION CONSULTING	0.00	0.00	0.00	0.00	0.00
WSTLD-3	553	CHILL RITE	0.00	0.00	0.00	0.00	0.00
WSTLD-3	555	HERRON-2315/17/19	0.00	0.00	0.00	0.00	0.00
WSTLD-3	556	THOMKROC-ST POL JURY	0.00	0.00	0.00	0.00	0.00
WSTLD-3	557	PITSTOP3-REFLECTMIR	0.00	0.00	0.00	0.00	0.00
WSTLD-3	576	ALL AM ELKS LODGE	0.00	0.00	0.00	0.00	0.00
WSTLD-3	585	LAKE CASTLE SCHOOL	0.00	0.00	0.00	0.00	0.00
WSTLD-3	601	BLUEBELL-NULITE	0.00	0.00	0.00	0.00	0.00
WSTLD-3	602	ALBERS AC & HEATING	0.00	0.00	0.00	0.00	0.00
WSTLD-3	611	BAKER SALES WRHSE	0.00	0.00	0.00	0.00	0.00
WSTLD-3	614	CLECO SERVICE CENTER	0.00	0.00	0.00	0.00	0.00
WSTLD-3	615	G&S-UNITED MEDICAL	0.00	0.00	0.00	0.00	0.00
WSTLD-3	616	AIRGAS-HANNA-SUNBELT	0.00	0.00	0.00	0.00	0.00
WSTLD-3	617	AVC ELECTRIC	0.00	0.00	0.00	0.00	0.00
WSTLD-3	619	M&R-WAGNERSHOPCTR	0.00	0.00	0.00	0.00	0.00
WSTLD-3	620	CALWES CENTER	0.00	0.00	0.00	0.00	0.00
WSTLD-3	621	BEAU'S-LA LUMBER	0.00	0.00	0.00	0.00	0.00
WSTLD-3	625	ADVANCE AUTO	0.00	0.00	0.00	0.00	0.00
WSTLD-3	633	HUNTWYCK VILLAGE	0.00	0.00	0.00	0.00	0.00
WSTLD-3	667	B LIBERTY WATER ASSN	0.00	0.00	0.00	0.00	0.00
WSTLD-3	680	THOMPSON RD BAPTIST	0.00	0.00	0.00	0.00	0.00
WSTLD-3	698	LIBERTY FOOD STORE	0.00	0.00	0.00	0.00	0.00
WSTLD-3	715	A-1 REMODELING & BLD	0.00	0.00	0.00	0.00	0.00
WSTLD-3	723	ST GENEVIEVE CATH CH	0.00	0.00	0.00	0.00	0.00
WSTLD-3	728	BAYOU LIBERTY MARINA	0.00	0.00	0.00	0.00	0.00
WSTLD-3	746	A BONFOUCA MARINA	0.00	0.00	0.00	0.00	0.00
WSTLD-3	762	WASTE MGMT OF LA	0.00	0.00	0.00	0.00	0.00
WSTLD-3	763	ACALIGN-ALLAM-CT-M&D	0.00	0.00	0.00	0.00	0.00
WSTLD-3	767	K-BAR-B YOUTH RANCH	0.00	0.00	0.00	0.00	0.00
WSTLD-3	776	BAYOU PAQUET HEADWAT	0.00	0.00	0.00	0.00	0.00
WSTLD-3	797	ACTS 1 TAX SERVICE	0.00	0.00	0.00	0.00	0.00
WSTLD-3	819	TIMBER RIDGE SUB	0.00	0.00	0.00	0.00	0.00

ENDATA26

\$\$\$ DATA TYPE 27 (LOWER BOUNDARY CONDITIONS) \$\$\$

CARD TYPE	CONSTITUENT	CONCENTRATION
LOWER BC	TEMPERATURE	= 20.800 deg C
LOWER BC	SALINITY	= 3.940 ppt
LOWER BC	CONSERVATIVE MATERIAL I	= 7096.000
LOWER BC	CONSERVATIVE MATERIAL II	= 2200.000
LOWER BC	DISSOLVED OXYGEN	= 6.800 mg/L
LOWER BC	BOD1 BIOCHEMICAL OXYGEN DEMAND	= 7.820 mg/L
LOWER BC	BOD2 BIOCHEMICAL OXYGEN DEMAND	= 0.000 mg/L
LOWER BC	PHYTOPLANKTON	= 5.550 µg/L
LOWER BC	COLIFORM	= 0.000 #/100 mL
LOWER BC	NONCONSERVATIVE MATERIAL	= 0.000
LOWER BC	NBOD	= 1.800 mg/L

ENDATA27

\$\$\$ DATA TYPE 28 (DAM DATA) \$\$\$

CARD TYPE	ELEMENT	NAME	EQN	"A"	"B"	"H"
ENDATA28						

\$\$\$ DATA TYPE 29 (SENSITIVITY ANALYSIS DATA) \$\$\$

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

CARD TYPE PARAMETER COL 1 COL 2 COL 3 COL 4 COL 5 COL 6 COL 7 COL 8
 SENSITIV BASEFLOW 30.0 -30.0 0.0 0.0 0.0 0.0 0.0 0.0
 ENDDATA29

\$\$\$ DATA TYPE 30 (PLOT CONTROL CARDS) \$\$\$

PLOT1
 RCH 1 2 3 4 6 8 10 11 12 17 19 20 22 24 27 28 30 33 34 35 36 37 91
 PLOT2
 RCH 13 15 16
 PLOT3
 RCH 38 40 42 44 45 47 48 50 52 54 55 56 57 60 63 66 67 70 72 74 90
 PLOT4
 RCH 75 76 78 80 81 82 83 85 88 89
 ENDDATA30

\$\$\$ DATA TYPE 31 (OVERLAY PLOT DATA) \$\$\$

OVERLAY1 VINCENT-BONFOUCA.OVL
 OVERLAY2 UPPER_BONFOUCA.OVL
 OVERLAY3 LIBERTY.OVL
 OVERLAY4 PAQUET.OVL
 ENDDATA31

.....NO ERRORS DETECTED IN INPUT DATA
HYDRAULIC CALCULATIONS COMPLETED
TRIDIAGONAL MATRIX TERMS INITIALIZED
OXYGEN DEPENDENT RATES CONVERGENT IN 2 ITERATIONS
CONSTITUENT CALCULATIONS COMPLETED
GRAPHICS DATA FOR PLOT 1 WRITTEN TO UNIT 11
GRAPHICS DATA FOR PLOT 2 WRITTEN TO UNIT 12
GRAPHICS DATA FOR PLOT 3 WRITTEN TO UNIT 13
GRAPHICS DATA FOR PLOT 4 WRITTEN TO UNIT 14

FINAL REPORT B VINCENT & BONFOUCA WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 1 DRAINAGE DITCH 1 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
1	HDWTR	0.00283	20.80	0.26	520.90	7.23	6.00	0.63	0.00	0.63	0.00	0.29	0.00	0.00	0.00	0.00	0.00	0.00
1	WSTLD	0.00004	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
1	24.20	24.10	0.00287	1.4	0.01245	0.09	0.09	0.12	2.00	23.07	200.39	0.23	0.00	0.000	0.000	0.012
2	24.10	24.00	0.00287	1.4	0.01245	0.09	0.19	0.12	2.00	23.07	200.39	0.23	0.00	0.000	0.000	0.012
3	24.00	23.90	0.00287	1.4	0.01245	0.09	0.28	0.12	2.00	23.07	200.39	0.23	0.00	0.000	0.000	0.012
4	23.90	23.80	0.00287	1.4	0.01245	0.09	0.37	0.12	2.00	23.07	200.39	0.23	0.00	0.000	0.000	0.012
5	23.80	23.70	0.00287	1.4	0.01245	0.09	0.46	0.12	2.00	23.07	200.39	0.23	0.00	0.000	0.000	0.012
6	23.70	23.60	0.00287	1.4	0.01245	0.09	0.56	0.12	2.00	23.07	200.39	0.23	0.00	0.000	0.000	0.012
7	23.60	23.50	0.00287	1.4	0.01245	0.09	0.65	0.12	2.00	23.07	200.39	0.23	0.00	0.000	0.000	0.012
8	23.50	23.40	0.00287	1.4	0.01245	0.09	0.74	0.12	2.00	23.07	200.39	0.23	0.00	0.000	0.000	0.012
9	23.40	23.30	0.00287	1.4	0.01245	0.09	0.84	0.12	2.00	23.07	200.39	0.23	0.00	0.000	0.000	0.012
10	23.30	23.20	0.00287	1.4	0.01245	0.09	0.93	0.12	2.00	23.07	200.39	0.23	0.00	0.000	0.000	0.012
11	23.20	23.10	0.00287	1.4	0.01245	0.09	1.02	0.12	2.00	23.07	200.39	0.23	0.00	0.000	0.000	0.012
12	23.10	23.00	0.00287	1.4	0.01245	0.09	1.12	0.12	2.00	23.07	200.39	0.23	0.00	0.000	0.000	0.012
13	23.00	22.90	0.00287	1.4	0.01245	0.09	1.21	0.12	2.00	23.07	200.39	0.23	0.00	0.000	0.000	0.012
14	22.90	22.80	0.00287	1.4	0.01245	0.09	1.30	0.12	2.00	23.07	200.39	0.23	0.00	0.000	0.000	0.012
15	22.80	22.70	0.00287	1.4	0.01245	0.09	1.39	0.12	2.00	23.07	200.39	0.23	0.00	0.000	0.000	0.012
16	22.70	22.60	0.00287	1.4	0.01245	0.09	1.49	0.12	2.00	23.07	200.39	0.23	0.00	0.000	0.000	0.012
17	22.60	22.50	0.00287	1.4	0.01245	0.09	1.58	0.12	2.00	23.07	200.39	0.23	0.00	0.000	0.000	0.012
18	22.50	22.40	0.00287	1.4	0.01245	0.09	1.67	0.12	2.00	23.07	200.39	0.23	0.00	0.000	0.000	0.012
19	22.40	22.30	0.00287	1.4	0.01245	0.09	1.77	0.12	2.00	23.07	200.39	0.23	0.00	0.000	0.000	0.012
20	22.30	22.20	0.00287	1.4	0.01245	0.09	1.86	0.12	2.00	23.07	200.39	0.23	0.00	0.000	0.000	0.012
21	22.20	22.10	0.00287	1.4	0.01245	0.09	1.95	0.12	2.00	23.07	200.39	0.23	0.00	0.000	0.000	0.012
22	22.10	22.00	0.00287	1.4	0.01245	0.09	2.05	0.12	2.00	23.07	200.39	0.23	0.00	0.000	0.000	0.012
23	22.00	21.90	0.00287	1.4	0.01245	0.09	2.14	0.12	2.00	23.07	200.39	0.23	0.00	0.000	0.000	0.012
24	21.90	21.80	0.00287	1.4	0.01245	0.09	2.23	0.12	2.00	23.07	200.39	0.23	0.00	0.000	0.000	0.012
25	21.80	21.70	0.00287	1.4	0.01245	0.09	2.32	0.12	2.00	23.07	200.39	0.23	0.00	0.000	0.000	0.012

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

FINAL REPORT B VINCENT & BONFOUCA
 REACH NO. 3 VINCENT FROM BV01 RKM 18.5

WATER QUALITY/HYDRAULIC MODEL FOR:
 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
48	UPR RCH	0.03119	20.80	0.26	521.21	7.30	8.01	0.70	0.00	0.70	0.00	0.31	0.00	0.00	0.00	0.00	0.00	0.00
48	WSTLD	0.00345	30.00	0.40	774.00	34.40	5.00	11.50	0.00	11.50	0.00	8.60	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
48	19.50	19.40	0.03464	91.8	0.20552	0.01	3.68	0.10	1.74	16.86	173.76	0.17	0.00	0.000	0.000	0.206
49	19.40	19.30	0.03464	91.8	0.20552	0.01	3.68	0.10	1.74	16.86	173.76	0.17	0.00	0.000	0.000	0.206
50	19.30	19.20	0.03464	91.8	0.20552	0.01	3.69	0.10	1.74	16.86	173.76	0.17	0.00	0.000	0.000	0.206
51	19.20	19.10	0.03464	91.8	0.20552	0.01	3.69	0.10	1.74	16.86	173.76	0.17	0.00	0.000	0.000	0.206
52	19.10	19.00	0.03464	91.8	0.20552	0.01	3.70	0.10	1.74	16.86	173.76	0.17	0.00	0.000	0.000	0.206
53	19.00	18.90	0.03464	91.8	0.20552	0.01	3.71	0.10	1.74	16.86	173.76	0.17	0.00	0.000	0.000	0.206
54	18.90	18.80	0.03464	91.8	0.20552	0.01	3.71	0.10	1.74	16.86	173.76	0.17	0.00	0.000	0.000	0.206
55	18.80	18.70	0.03464	91.8	0.20552	0.01	3.72	0.10	1.74	16.86	173.76	0.17	0.00	0.000	0.000	0.206
56	18.70	18.60	0.03464	91.8	0.20552	0.01	3.72	0.10	1.74	16.86	173.76	0.17	0.00	0.000	0.000	0.206
57	18.60	18.50	0.03464	91.8	0.20552	0.01	3.73	0.10	1.74	16.86	173.76	0.17	0.00	0.000	0.000	0.206
TOT AVG					0.2055	0.06			0.10	1.74	168.56	1737.59				0.17

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECAT	BOD1 SETT	ABOD1 DECAT	BOD1 HYDR	BOD2 DECAT	BOD2 SETT	ABOD2 DECAT	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECAT	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECAT	NCM DECAT	NCM SETT							
48	19.400	8.94	25.40	0.08	0.53	0.00	0.00	0.00	0.00	0.00	1.81	1.91	1.91	0.03	0.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
49	19.300	8.94	25.40	0.08	0.53	0.00	0.00	0.00	0.00	0.00	1.81	1.91	1.91	0.03	0.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
50	19.200	8.94	25.40	0.08	0.53	0.00	0.00	0.00	0.00	0.00	1.81	1.91	1.91	0.03	0.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
51	19.100	8.94	25.40	0.08	0.53	0.00	0.00	0.00	0.00	0.00	1.81	1.91	1.91	0.03	0.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
52	19.000	8.94	25.40	0.08	0.53	0.00	0.00	0.00	0.00	0.00	1.81	1.91	1.91	0.03	0.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
53	18.900	8.94	25.40	0.08	0.53	0.00	0.00	0.00	0.00	0.00	1.81	1.91	1.91	0.03	0.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
54	18.800	8.94	25.40	0.08	0.53	0.00	0.00	0.00	0.00	0.00	1.81	1.91	1.91	0.03	0.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
55	18.700	8.94	25.40	0.08	0.53	0.00	0.00	0.00	0.00	0.00	1.81	1.91	1.91	0.03	0.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
56	18.600	8.94	25.40	0.08	0.53	0.00	0.00	0.00	0.00	0.00	1.81	1.91	1.91	0.03	0.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
57	18.500	8.94	25.40	0.08	0.53	0.00	0.00	0.00	0.00	0.00	1.81	1.91	1.91	0.03	0.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
AVG 20 DEG C RATE			25.00	0.08	0.05	0.00	0.00	0.00	0.00	0.00	1.73			0.03	0.05	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00						
*	g/m²/d		**	mg/L/day																													

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL	NCM	
48	19.400	20.80	0.27	546.38	10.00	7.76	1.79	0.00	1.79	0.00	1.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
49	19.300	20.80	0.27	546.38	10.00	7.81	1.80	0.00	1.80	0.00	1.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
50	19.200	20.80	0.27	546.38	10.00	7.86	1.82	0.00	1.82	0.00	1.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
51	19.100	20.80	0.27	546.38	10.00	7.89	1.83	0.00	1.83	0.00	1.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
52	19.000	20.80	0.27	546.38	10.00	7.93	1.85	0.00	1.85	0.00	1.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
53	18.900	20.80	0.27	546.38	10.00	7.95	1.86	0.00	1.86	0.00	1.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
54	18.800	20.80	0.27	546.38	10.00	7.98	1.87	0.00	1.87	0.00	1.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
55	18.700	20.80	0.27	546.38	10.00	8.00	1.89	0.00	1.89	0.00	1.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
56	18.600	20.80	0.27	546.38	10.00	8.02	1.90	0.00	1.90	0.00	1.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
57	18.500	20.80	0.27	546.38	10.00	8.04	1.92	0.00	1.92	0.00	1.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R	PERIP g/m²
48	19.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
49	19.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
50	19.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCH DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²									
58	18.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0								
59	18.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0									
60	18.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0									
61	18.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0									
62	18.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0									
63	17.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0									
64	17.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0									
65	17.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0									
66	17.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0									
20 DEG C RATE											0.000	0.000	0.000	0.000																						

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT B VINCENT & BONFOUCA WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 6 VINCENT FROM BV02 TO DD 8 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
88	UPR RCH	0.03465	20.80	0.27	546.44	10.02	8.03	2.06	0.00	2.06	0.00	1.09	0.00	0.00	0.00	0.00	0.00	0.00
88	TRIB	0.00423	20.80	0.30	597.85	25.77	8.41	4.26	0.00	4.26	0.00	2.51	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s	
88	17.60	17.55	0.03888	85.4	0.21375	0.00	3.78	0.10	1.80	9.10	89.94	0.18	0.00	0.000	0.000	0.214	
89	17.55	17.50	0.03888	85.4	0.21375	0.00	3.78	0.10	1.80	9.10	89.94	0.18	0.00	0.000	0.000	0.214	
90	17.50	17.45	0.03888	85.4	0.21375	0.00	3.79	0.10	1.80	9.10	89.94	0.18	0.00	0.000	0.000	0.214	
91	17.45	17.40	0.03888	85.4	0.21375	0.00	3.79	0.10	1.80	9.10	89.94	0.18	0.00	0.000	0.000	0.214	
92	17.40	17.35	0.03888	85.4	0.21375	0.00	3.79	0.10	1.80	9.10	89.94	0.18	0.00	0.000	0.000	0.214	
93	17.35	17.30	0.03888	85.4	0.21375	0.00	3.80	0.10	1.80	9.10	89.94	0.18	0.00	0.000	0.000	0.214	
94	17.30	17.25	0.03888	85.4	0.21375	0.00	3.80	0.10	1.80	9.10	89.94	0.18	0.00	0.000	0.000	0.214	
95	17.25	17.20	0.03888	85.4	0.21375	0.00	3.80	0.10	1.80	9.10	89.94	0.18	0.00	0.000	0.000	0.214	
96	17.20	17.15	0.03888	85.4	0.21375	0.00	3.80	0.10	1.80	9.10	89.94	0.18	0.00	0.000	0.000	0.214	
97	17.15	17.10	0.03888	85.4	0.21375	0.00	3.81	0.10	1.80	9.10	89.94	0.18	0.00	0.000	0.000	0.214	
98	17.10	17.05	0.03888	85.4	0.21375	0.00	3.81	0.10	1.80	9.10	89.94	0.18	0.00	0.000	0.000	0.214	
99	17.05	17.00	0.03888	85.4	0.21375	0.00	3.81	0.10	1.80	9.10	89.94	0.18	0.00	0.000	0.000	0.214	
100	17.00	16.95	0.03888	85.4	0.21375	0.00	3.81	0.10	1.80	9.10	89.94	0.18	0.00	0.000	0.000	0.214	
101	16.95	16.90	0.03888	85.4	0.21375	0.00	3.82	0.10	1.80	9.10	89.94	0.18	0.00	0.000	0.000	0.214	
TOT AVG							0.04				127.34	1259.20					

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT DECAT 1/da	ABOD1 HYDR DECAT 1/da	BOD1 HYDR DECAT 1/da	BOD2 DECAT 1/da	BOD2 SETT DECAT 1/da	ABOD2 HYDR DECAT 1/da	BOD2 HYDR DECAT 1/da	BOD2 SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR DECAT 1/da	ORG-N SETT DECAT 1/da	NH3-N SRCE 1/da	NH3-N RATE 1/da	DENIT SRCE 1/da	ORG-P HYDR DECAT 1/da	ORG-P SETT DECAT 1/da	SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da
88	17.550	8.94	25.40	0.08	0.50	0.00	0.00	0.00	0.00	0.00	0.00	2.12	2.23	2.23	0.03	1.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
89	17.500	8.94	25.40	0.08	0.50	0.00	0.00	0.00	0.00	0.00	0.00	2.12	2.24	2.24	0.03	1.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90	17.450	8.94	25.40	0.08	0.50	0.00	0.00	0.00	0.00	0.00	0.00	2.12	2.24	2.24	0.03	1.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
91	17.400	8.94	25.40	0.08	0.50	0.00	0.00	0.00	0.00	0.00	0.00	2.12	2.24	2.24	0.03	1.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
92	17.350	8.94	25.40	0.08	0.50	0.00	0.00	0.00	0.00	0.00	0.00	2.12	2.24	2.24	0.03	1.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
93	17.300	8.94	25.40	0.08	0.50	0.00	0.00	0.00	0.00	0.00	0.00	2.12	2.24	2.24	0.03	1.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
94	17.250	8.94	25.40	0.08	0.50	0.00	0.00	0.00	0.00	0.00	0.00	2.12	2.24	2.24	0.03	1.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95	17.200	8.94	25.40	0.08	0.50	0.00	0.00	0.00	0.00	0.00	0.00	2.12	2.24	2.24	0.03	1.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
96	17.150	8.94	25.40	0.08	0.50	0.00	0.00	0.00	0.00	0.00	0.00	2.12	2.24	2.24	0.03	1.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
97	17.100	8.94	25.40	0.08	0.50	0.00	0.00	0.00	0.00	0.00	0.00	2.12	2.24	2.24	0.03	1.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
98	17.050	8.94	25.40	0.08	0.50	0.00	0.00	0.00	0.00	0.00	0.00	2.12	2.24	2.24	0.03	1.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
99	17.000	8.94	25.40	0.08	0.50	0.00	0.00	0.00	0.00	0.00	0.00	2.12	2.24	2.24	0.03	1.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100	16.950	8.94	25.40	0.08	0.50	0.00	0.00	0.00	0.00	0.00	0.00	2.12	2.24	2.24	0.03	1.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
101	16.900	8.94	25.40	0.08	0.50	0.00	0.00	0.00	0.00	0.00	0.00	2.12	2.24	2.24	0.03	1.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			25.00	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.00	2.01			0.03	0.07	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00

* g/m²/d ** mg/L/day

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL	NCM
88	17.550	20.80	0.28	552.04	11.73	8.07	2.31	0.00	2.31	0.00	1.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.00
89	17.500	20.80	0.28	552.04	11.73	8.07	2.32	0.00	2.32	0.00	1.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.00
90	17.450	20.80	0.28	552.04	11.73	8.07	2.33	0.00	2.33	0.00	1.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.00
91	17.400	20.80	0.28	552.04	11.73	8.07	2.34	0.00	2.34	0.00	1.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.00
92	17.350	20.80	0.28	552.04	11.73	8.07	2.35	0.00	2.35	0.00	1.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.00
93	17.300	20.80	0.28	552.04	11.73	8.06	2.36	0.00	2.36	0.00	1.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.00
94	17.250	20.80	0.28	552.04	11.73	8.06	2.37	0.00	2.37	0.00	1.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.00
95	17.200	20.80	0.28	552.04	11.73	8.06	2.37	0.00	2.37	0.00	1.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.00
96	17.150	20.80	0.28	552.04	11.73	8.06	2.38	0.00	2.38	0.00	1.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.00
97	17.100	20.80	0.28	552.04	11.73	8.06	2.39	0.00	2.39	0.00	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.00
98	17.050	20.80	0.28	552.04	11.73	8.06	2.40	0.00	2.40	0.00	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.00
99	17.000	20.80	0.28	552.04	11.73	8.06	2.41	0.00	2.41	0.00	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.00
100	16.950	20.80	0.28	552.04	11.73	8.06	2.42	0.00	2.42	0.00	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.00
101	16.900	20.80	0.28	552.04	11.73	8.06	2.43	0.00	2.43	0.00	1.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.00

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
88	17.550	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
89	17.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
90	17.450	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
91	17.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
92	17.350	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
93	17.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
94	17.250	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
95	17.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
96	17.150	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
97	17.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
98	17.050	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
99	17.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
100	16.950	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
101	16.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT B VINCENT & BONFOUCA WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 8 VINCENT FROM DD 8 TO DD 9 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
110	UPR RCH	0.03888	20.80	0.28	552.04	11.73	8.06	2.43	0.00	2.43	0.00	1.21	0.00	0.00	0.00	0.00	0.00	0.00
110	TRIB	0.00300	20.80	0.27	534.06	10.40	8.57	1.59	0.00	1.59	0.00	1.24	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
110	16.90	16.80	0.04189	79.7	0.21922	0.01	3.82	0.10	1.84	19.11	183.94	0.19	0.00	0.000	0.000	0.219
111	16.80	16.70	0.04189	79.7	0.21922	0.01	3.83	0.10	1.84	19.11	183.94	0.19	0.00	0.000	0.000	0.219
112	16.70	16.60	0.04189	79.7	0.21922	0.01	3.83	0.10	1.84	19.11	183.94	0.19	0.00	0.000	0.000	0.219
113	16.60	16.50	0.04189	79.7	0.21922	0.01	3.84	0.10	1.84	19.11	183.94	0.19	0.00	0.000	0.000	0.219
114	16.50	16.40	0.04189	79.7	0.21922	0.01	3.84	0.10	1.84	19.11	183.94	0.19	0.00	0.000	0.000	0.219
115	16.40	16.30	0.04189	79.7	0.21922	0.01	3.85	0.10	1.84	19.11	183.94	0.19	0.00	0.000	0.000	0.219
116	16.30	16.20	0.04189	79.7	0.21922	0.01	3.85	0.10	1.84	19.11	183.94	0.19	0.00	0.000	0.000	0.219
117	16.20	16.10	0.04189	79.7	0.21922	0.01	3.86	0.10	1.84	19.11	183.94	0.19	0.00	0.000	0.000	0.219
118	16.10	16.00	0.04189	79.7	0.21922	0.01	3.86	0.10	1.84	19.11	183.94	0.19	0.00	0.000	0.000	0.219
TOT AVG						0.05				171.96	1655.49		0.19			

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECA	BOD1 SETT	ABOD1 DECA	BOD1 HYDR	BOD2 DECA	BOD2 SETT	ABOD2 DECA	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N SRCE	NH3-N RATE	DENIT HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECA	NCM DECA	NCM SETT
----------	-------------	----------	------------	-----------	-----------	------------	-----------	-----------	-----------	------------	----------	----------	----------	------------	------------	------------	------------	------------	------------	----------	------------	------------	-----------	----------	----------

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

	mg/L	1/da	1/da	1/da	1/da	1/da	1/da	1/da	1/da	1/da	*	*	*	1/da	1/da	1/da	*	1/da	1/da	1/da	*	**	**	1/da	1/da	1/da	
110	16.800	8.94	25.40	0.08	0.49	0.00	0.00	0.00	0.00	0.00	2.12	2.24	2.24	0.03	0.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
111	16.700	8.94	25.40	0.08	0.49	0.00	0.00	0.00	0.00	0.00	2.12	2.24	2.24	0.03	0.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
112	16.600	8.94	25.40	0.08	0.49	0.00	0.00	0.00	0.00	0.00	2.12	2.24	2.24	0.03	0.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
113	16.500	8.94	25.40	0.08	0.49	0.00	0.00	0.00	0.00	0.00	2.12	2.24	2.24	0.03	0.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
114	16.400	8.94	25.40	0.08	0.49	0.00	0.00	0.00	0.00	0.00	2.12	2.24	2.24	0.03	0.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
115	16.300	8.94	25.40	0.08	0.49	0.00	0.00	0.00	0.00	0.00	2.12	2.24	2.24	0.03	0.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
116	16.200	8.94	25.40	0.08	0.49	0.00	0.00	0.00	0.00	0.00	2.12	2.24	2.24	0.03	0.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
117	16.100	8.94	25.40	0.08	0.49	0.00	0.00	0.00	0.00	0.00	2.12	2.24	2.24	0.03	0.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
118	16.000	8.94	25.40	0.08	0.49	0.00	0.00	0.00	0.00	0.00	2.12	2.24	2.24	0.03	0.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE	25.00	0.08	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.01			0.03	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
*	g/m ² /d		**		mg/L/day																						

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	NCM	
110	16.800	20.80	0.28	550.75	11.64	8.09	2.38	0.00	2.38	0.00	1.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
111	16.700	20.80	0.28	550.75	11.64	8.09	2.40	0.00	2.40	0.00	1.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
112	16.600	20.80	0.28	550.75	11.64	8.09	2.41	0.00	2.41	0.00	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
113	16.500	20.80	0.28	550.75	11.64	8.09	2.43	0.00	2.43	0.00	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
114	16.400	20.80	0.28	550.75	11.64	8.09	2.44	0.00	2.44	0.00	1.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
115	16.300	20.80	0.28	550.75	11.64	8.09	2.46	0.00	2.46	0.00	1.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
116	16.200	20.80	0.28	550.75	11.64	8.08	2.47	0.00	2.47	0.00	1.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
117	16.100	20.80	0.28	550.75	11.64	8.08	2.49	0.00	2.49	0.00	1.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
118	16.000	20.80	0.28	550.75	11.64	8.08	2.50	0.00	2.50	0.00	1.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R	PERIP g/m ²	
110	16.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
111	16.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
112	16.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
113	16.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
114	16.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
115	16.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
116	16.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
117	16.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
118	16.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

20 DEG C RATE 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT B VINCENT & BONFOUCA
 REACH NO. 10 VINCENT FROM DD 9 TO RKM 15.2

WATER QUALITY/HYDRAULIC MODEL FOR:
 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
140	UPR RCH	0.04189	20.80	0.28	550.75	11.64	8.08	2.50	0.00	2.50	0.00	1.18	0.00	0.00	0.00	0.00	0.00	0.00
140	TRIB	0.00290	20.80	0.26	526.14	8.49	8.67	1.01	0.00	1.01	0.00	0.66	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
140	16.00	15.90	0.04478	74.7	0.22427	0.01	3.87	0.11	1.88	19.97	187.67	0.20	0.00	0.000	0.000	0.224
141	15.90	15.80	0.04478	74.7	0.22427	0.01	3.87	0.11	1.88	19.97	187.67	0.20	0.00	0.000	0.000	0.224
142	15.80	15.70	0.04478	74.7	0.22427	0.01	3.88	0.11	1.88	19.97	187.67	0.20	0.00	0.000	0.000	0.224
143	15.70	15.60	0.04478	74.7	0.22427	0.01	3.89	0.11	1.88	19.97	187.67	0.20	0.00	0.000	0.000	0.224
144	15.60	15.50	0.04478	74.7	0.22427	0.01	3.89	0.11	1.88	19.97	187.67	0.20	0.00	0.000	0.000	0.224
145	15.50	15.40	0.04478	74.7	0.22427	0.01	3.90	0.11	1.88	19.97	187.67	0.20	0.00	0.000	0.000	0.224
146	15.40	15.30	0.04478	74.7	0.22427	0.01	3.90	0.11	1.88	19.97	187.67	0.20	0.00	0.000	0.000	0.224
147	15.30	15.20	0.04478	74.7	0.22427	0.01	3.91	0.11	1.88	19.97	187.67	0.20	0.00	0.000	0.000	0.224
TOT AVG					0.2243	0.04			1.88	159.75	1501.37	0.20				

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECATY	BOD1 SETT 1/da	ABOD1 DECATY 1/da	BOD1 HYDR 1/da	BOD2 DECATY 1/da	ABOD2 DECATY 1/da	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT 1/da	NH3-N DECATY 1/da	NH3-N SRCE	DENITR RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE	PHYTO PROD **	PERIP PROD **	COLI DECATY 1/da	NCM DECATY 1/da	NCM SETT 1/da
140	15.900	8.94	25.40	0.08	0.48	0.00	0.00	0.00	0.00	2.12	2.24	2.24	0.03	0.48	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00
141	15.800	8.94	25.40	0.08	0.48	0.00	0.00	0.00	0.00	2.12	2.24	2.24	0.03	0.48	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00
142	15.700	8.94	25.40	0.08	0.48	0.00	0.00	0.00	0.00	2.12	2.24	2.24	0.03	0.48	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.00	0.00	0.00	0.00
143	15.600	8.94	25.40	0.08	0.48	0.00	0.00	0.00	0.00	2.12	2.24	2.24	0.03	0.48	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00
144	15.500	8.94	25.40	0.08	0.48	0.00	0.00	0.00	0.00	2.12	2.24	2.24	0.03	0.48	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.00	0.00	0.00	0.00
145	15.400	8.94	25.40	0.08	0.48	0.00	0.00	0.00	0.00	2.12	2.24	2.24	0.03	0.48	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.00	0.00	0.00	0.00
146	15.300	8.94	25.40	0.08	0.48	0.00	0.00	0.00	0.00	2.12	2.24	2.24	0.03	0.48	0.00	0.00	0.00	0.00	0.00	0.00	0.45	0.00	0.00	0.00	0.00
147	15.200	8.94	25.40	0.08	0.48	0.00	0.00	0.00	0.00	2.12	2.24	2.24	0.03	0.48	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE		25.00	0.08	0.06	0.00	0.00	0.00	0.00	0.00	2.01			0.03	0.06	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00	

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	NCM
140	15.900	20.80	0.28	549.15	11.43	8.12	2.40	0.00	2.53	0.00	1.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.2	0.0	0.	0.00
141	15.800	20.80	0.28	549.15	11.43	8.12	2.40	0.00	2.66	0.00	1.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.5	0.0	0.	0.00
142	15.700	20.80	0.28	549.15	11.43	8.12	2.39	0.00	2.79	0.00	1.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.8	0.0	0.	0.00
143	15.600	20.80	0.28	549.15	11.43	8.11	2.38	0.00	2.92	0.00	1.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.0	0.0	0.	0.00
144	15.500	20.80	0.28	549.15	11.43	8.11	2.38	0.00	3.05	0.00	1.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.2	0.0	0.	0.00
145	15.400	20.80	0.28	549.15	11.43	8.11	2.37	0.00	3.17	0.00	1.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.5	0.0	0.	0.00
146	15.300	20.80	0.28	549.15	11.43	8.11	2.37	0.00	3.30	0.00	1.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.	0.00
147	15.200	20.80	0.28	549.15	11.43	8.11	2.36	0.00	3.43	0.00	1.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.	0.00

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R	PERIP g/m ²
140	15.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
141	15.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
142	15.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.8	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
143	15.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	5.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
144	15.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.2	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
145	15.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.5	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
146	15.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
147	15.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
20 DEG C RATE									0.000	0.000	0.000	0.000									0.000	0.000	0.000			

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT B VINCENT & BONFOUCA WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 11 VINCENT FROM RKM 15.2 TO BV03 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
148	UPR RCH	0.04478	20.80	0.28	549.15	11.43	8.11	2.36	0.00	3.43	0.00	1.12	0.00	0.00	0.00	10.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
148	15.20	15.15	0.04478	74.7	0.03498	0.02	3.92	0.27	4.72	64.01	236.20	1.28	23.62	0.001	2.358	0.035
149	15.15	15.10	0.04478	74.7	0.03498	0.02	3.94	0.27	4.72	64.01	236.20	1.28	47.24	0.001	2.358	0.035
150	15.10	15.05	0.04478	74.7	0.03498	0.02	3.96	0.27	4.72	64.01	236.20	1.28	70.86	0.002	2.358	0.035
151	15.05	15.00	0.04478	74.7	0.03498	0.02	3.97	0.27	4.72	64.01	236.20	1.28	94.48	0.002	2.358	0.035
152	15.00	14.95	0.04478	74.7	0.03498	0.02	3.99	0.27	4.72	64.01	236.20	1.28	118.10	0.003	2.358	0.035
153	14.95	14.90	0.04478	74.7	0.03498	0.02	4.00	0.27	4.72	64.01	236.20	1.28	141.72	0.003	2.358	0.035
TOT AVG						0.10				384.06	1417.20		1.28			

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECA	BOD1 SETT	ABOD1 DECA	BOD1 HYDR	BOD2 DECA	BOD2 SETT	ABOD2 DECA	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECA	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECA	NCM DECA	NCM SETT	
		mg/L	1/da	1/da	1/da	1/da	1/da	1/da	1/da	1/da	*	*	*	1/da	1/da	1/da	*	1/da	1/da	1/da	*	**	**	1/da	1/da	1/da	
148	15.150	8.94	4.36	0.08	0.19	0.00	0.00	0.00	0.00	0.00	1.27	1.39	1.39	0.03	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00	
149	15.100	8.94	4.36	0.08	0.19	0.00	0.00	0.00	0.00	0.00	1.27	1.39	1.39	0.03	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00	
150	15.050	8.94	4.36	0.08	0.19	0.00	0.00	0.00	0.00	0.00	1.27	1.39	1.39	0.03	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00	
151	15.000	8.94	4.36	0.08	0.19	0.00	0.00	0.00	0.00	0.00	1.27	1.39	1.39	0.03	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00	
152	14.950	8.94	4.36	0.08	0.19	0.00	0.00	0.00	0.00	0.00	1.27	1.39	1.39	0.03	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00	
153	14.900	8.94	4.36	0.08	0.19	0.00	0.00	0.00	0.00	0.00	1.27	1.39	1.39	0.03	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00	
AVG 20 DEG C RATE			4.29	0.08	0.03	0.00	0.00	0.00	0.00	0.00	1.21				0.03	0.09	0.00	0.00	0.00	0.00	0.00				0.00	0.00	0.00

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	NCM
148	15.150	20.80	0.28	549.15	11.43	8.08	2.36	0.00	3.43	0.00	1.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.	0.00
149	15.100	20.80	0.28	549.15	11.43	8.06	2.36	0.00	3.43	0.00	1.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.	0.00
150	15.050	20.80	0.28	549.15	11.43	8.05	2.36	0.00	3.43	0.00	1.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.	0.00
151	15.000	20.80	0.28	549.15	11.43	8.03	2.36	0.00	3.43	0.00	1.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.	0.00
152	14.950	20.80	0.28	549.15	11.43	8.02	2.36	0.00	3.43	0.00	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.	0.00
153	14.900	20.80	0.28	549.15	11.43	8.01	2.36	0.00	3.43	0.00	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.	0.00

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT P/R	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R	PERIP g/m ²			
148	15.150	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0			
149	15.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0			
150	15.050	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0			
151	15.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0			
152	14.950	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0			
153	14.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0			
20 DEG C RATE									0.000			0.000									0.000			0.000			0.000		

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT B VINCENT & BONFOUCA WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 12 VINCENT FROM BV03 TO BONFOUCA BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
154	UPR RCH	0.04478	20.80	0.28	549.15	11.43	8.01	2.36	0.00	3.43	0.00	1.06	0.00	0.00	0.00	10.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s	
154	14.90	14.80	0.04478	74.7	0.03498	0.03	4.04	0.27	4.72	128.02	472.40	1.28	188.96	0.004	2.358	0.035	
155	14.80	14.70	0.04478	74.7	0.03498	0.03	4.07	0.27	4.72	128.02	472.40	1.28	236.20	0.005	2.358	0.035	
156	14.70	14.60	0.04478	74.7	0.03498	0.03	4.10	0.27	4.72	128.02	472.40	1.28	283.44	0.006	2.358	0.035	
157	14.60	14.50	0.04478	74.7	0.03498	0.03	4.14	0.27	4.72	128.02	472.40	1.28	330.68	0.007	2.358	0.035	
158	14.50	14.40	0.04478	74.7	0.03498	0.03	4.17	0.27	4.72	128.02	472.40	1.28	377.92	0.008	2.358	0.035	
TOT AVG				0.0350		0.17		0.27		4.72		640.10		2362.00		1.28	

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECA	BOD1 SETT	ABOD1 DECA	BOD1 HYDR	BOD2 DECA	BOD2 SETT	ABOD2 DECA	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECA	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECA	NCM DECA	NCM SETT
		mg/L	1/da	1/da	1/da	1/da	1/da	1/da	1/da	1/da	*	*	*	1/da	1/da	1/da	*	1/da	1/da	1/da	*	**	**	1/da	1/da	1/da

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

No.	DIST	deg C	ppt	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	g/m²	#/100mL	
219	14.300	20.80	0.28	548.70	11.70	7.99	2.23	0.00	3.30	0.00	0.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.	0.00
220	14.200	20.80	0.28	550.08	12.08	7.97	2.29	0.00	3.36	0.00	0.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.	0.00

PHYTOPLANKTON AND PERIPHYTON DATA

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
219	14.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
220	14.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000

FINAL REPORT B VINCENT & BONFOUCA WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 19 BONFOUCA FROM HWY 190 TO BB02 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

REACH INPUTS

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
239	UPR RCH	0.05051	20.80	0.28	550.08	12.08	7.97	2.29	0.00	3.36	0.00	0.99	0.00	0.00	0.00	10.00	0.00	0.00
239	TRIB	0.00474	20.80	0.31	614.62	29.81	8.34	6.04	0.00	7.11	0.00	3.40	0.00	0.00	0.00	10.00	0.00	0.00

HYDRAULIC PARAMETER VALUES

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
239	14.20	14.10	0.05525	64.1	0.00586	0.20	4.80	0.87	10.84	943.08	1084.00	9.43	703.12	0.002	1.043	0.006
240	14.10	14.00	0.05525	64.1	0.00586	0.20	5.00	0.87	10.84	943.08	1084.00	9.43	811.52	0.002	1.043	0.006
241	14.00	13.90	0.05525	64.1	0.00586	0.20	5.20	0.87	10.84	943.08	1084.00	9.43	919.92	0.003	1.043	0.006
242	13.90	13.80	0.05525	64.1	0.00586	0.20	5.39	0.87	10.84	943.08	1084.00	9.43	1028.32	0.003	1.043	0.006
243	13.80	13.70	0.05525	64.1	0.00586	0.20	5.59	0.87	10.84	943.08	1084.00	9.43	1136.72	0.003	1.043	0.006
244	13.70	13.60	0.05525	64.1	0.00586	0.20	5.79	0.87	10.84	943.08	1084.00	9.43	1245.12	0.004	1.043	0.006
245	13.60	13.50	0.05525	64.1	0.00586	0.20	5.99	0.87	10.84	943.08	1084.00	9.43	1353.52	0.004	1.045	0.006
246	13.50	13.40	0.05525	64.1	0.00586	0.20	6.18	0.87	10.84	943.08	1084.00	9.43	1461.92	0.004	1.063	0.006
247	13.40	13.30	0.05525	64.1	0.00586	0.20	6.38	0.87	10.84	943.08	1084.00	9.43	1570.32	0.005	1.091	0.006
TOT AVG						1.78		0.87	10.84	8487.72	9756.00	9.43				

BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECA 1/da	BOD1 SETT 1/da	ABOD1 DECA 1/da	BOD1 HYDR 1/da	BOD2 DECA 1/da	BOD2 SETT 1/da	ABOD2 DECA 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECA 1/da	NH3-N SRCE 1/da	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECA 1/da	NCM DECA 1/da	NCM SETT 1/da	
239	14.100	8.94	0.87	0.08	0.06	0.00	0.00	0.00	0.00	0.00	1.09	1.21	1.21	0.03	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00	0.00
240	14.000	8.94	0.87	0.08	0.06	0.00	0.00	0.00	0.00	0.00	1.09	1.21	1.21	0.03	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00	0.00
241	13.900	8.94	0.87	0.08	0.06	0.00	0.00	0.00	0.00	0.00	1.09	1.21	1.21	0.03	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00	0.00
242	13.800	8.94	0.87	0.08	0.06	0.00	0.00	0.00	0.00	0.00	1.09	1.21	1.21	0.03	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00	0.00
243	13.700	8.94	0.87	0.08	0.06	0.00	0.00	0.00	0.00	0.00	1.09	1.21	1.21	0.03	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00	0.00
244	13.600	8.94	0.87	0.08	0.06	0.00	0.00	0.00	0.00	0.00	1.09	1.21	1.21	0.03	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00	0.00
245	13.500	8.93	0.87	0.08	0.06	0.00	0.00	0.00	0.00	0.00	1.09	1.22	1.22	0.03	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00	0.00
246	13.400	8.93	0.87	0.08	0.06	0.00	0.00	0.00	0.00	0.00	1.09	1.22	1.22	0.03	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00	0.00
247	13.300	8.93	0.88	0.08	0.06	0.00	0.00	0.00	0.00	0.00	1.09	1.22	1.22	0.03	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE		0.86	0.08	0.01	0.00	0.00	0.00	0.00	0.00	0.00	1.03		0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00		

WATER QUALITY CONSTITUENT VALUES

ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL	NCM	
239	14.100	20.80	0.28	552.15	12.65	7.94	2.42	0.00	3.49	0.00	1.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
240	14.000	20.80	0.28	552.18	12.66	7.91	2.43	0.00	3.50	0.00	1.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
241	13.900	20.80	0.28	552.22	12.68	7.88	2.44	0.00	3.51	0.00	1.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
242	13.800	20.80	0.28	552.28	12.70	7.85	2.46	0.00	3.52	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
243	13.700	20.80	0.28	552.39	12.73	7.83	2.47	0.00	3.54	0.00	0.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

244	13.600	20.80	0.28	552.55	12.79	7.81	2.48	0.00	3.55	0.00	0.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.	0.00
245	13.500	20.80	0.28	552.80	12.87	7.79	2.50	0.00	3.57	0.00	0.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.	0.00
246	13.400	20.80	0.28	553.20	13.01	7.77	2.52	0.00	3.59	0.00	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.	0.00	
247	13.300	20.80	0.28	553.79	13.21	7.75	2.55	0.00	3.62	0.00	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.	0.00	

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT P/R 1/da	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²		
239	14.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0
240	14.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0
241	13.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0
242	13.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0
243	13.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0
244	13.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0
245	13.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0
246	13.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0
247	13.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0

20 DEG C RATE 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT B VINCENT & BONFOUCA WATER QUALITY/HYDRAULIC MODEL FOR:
REACH NO. 20 BONFOUCA FROM BB02 TO WD BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
248	UPR RCH	0.05525	20.80	0.28	553.79	13.21	7.75	2.55	0.00	3.62	0.00	0.95	0.00	0.00	0.00	10.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
248	13.30	13.20	0.05525	64.1	0.00586	0.20	6.58	0.87	10.84	943.08	1084.00	9.43	1678.72	0.005	1.124	0.006
249	13.20	13.10	0.05525	64.1	0.00586	0.20	6.78	0.87	10.84	943.08	1084.00	9.43	1787.12	0.005	1.161	0.007
250	13.10	13.00	0.05525	64.1	0.00586	0.20	6.97	0.87	10.84	943.08	1084.00	9.43	1895.52	0.006	1.201	0.007
251	13.00	12.90	0.05525	64.1	0.00586	0.20	7.17	0.87	10.84	943.08	1084.00	9.43	2003.92	0.006	1.243	0.007
252	12.90	12.80	0.05525	64.1	0.00586	0.20	7.37	0.87	10.84	943.08	1084.00	9.43	2112.32	0.006	1.287	0.007
253	12.80	12.70	0.05525	64.1	0.00586	0.20	7.57	0.87	10.84	943.08	1084.00	9.43	2220.72	0.007	1.332	0.007
254	12.70	12.60	0.05525	64.1	0.00586	0.20	7.76	0.87	10.84	943.08	1084.00	9.43	2329.12	0.007	1.379	0.008
255	12.60	12.50	0.05525	64.1	0.00586	0.20	7.96	0.87	10.84	943.08	1084.00	9.43	2437.52	0.007	1.427	0.008
256	12.50	12.40	0.05525	64.1	0.00586	0.20	8.16	0.87	10.84	943.08	1084.00	9.43	2545.92	0.008	1.476	0.008
257	12.40	12.30	0.05525	64.1	0.00586	0.20	8.36	0.87	10.84	943.08	1084.00	9.43	2654.32	0.008	1.525	0.009
258	12.30	12.20	0.05525	64.1	0.00586	0.20	8.55	0.87	10.84	943.08	1084.00	9.43	2762.72	0.008	1.575	0.009
259	12.20	12.10	0.05525	64.1	0.00586	0.20	8.75	0.87	10.84	943.08	1084.00	9.43	2871.12	0.009	1.626	0.009
TOT AVG						2.37		0.87	10.84	11316.96	13008.00	9.43				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REARER RATE 1/da	BOD1 DECAF 1/da	BOD1 SETT 1/da	ABOD1 1/da	BOD1 HYDR 1/da	BOD2 DECAF 1/da	BOD2 SETT 1/da	ABOD2 1/da	BKGD SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAF 1/da	NH3-N SRCE 1/da	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAF 1/da	NCM DECAF 1/da	NCM SETT 1/da
248	13.200	8.93	0.88	0.08	0.06	0.00	0.00	0.00	0.00	0.00	1.09	1.22	1.22	0.03	0.06	0.00	0.00	0.00	0.00	0.00	0.51	0.00	0.00	0.00	0.00
249	13.100	8.93	0.88	0.08	0.06	0.00	0.00	0.00	0.00	0.00	1.09	1.22	1.22	0.03	0.06	0.00	0.00	0.00	0.00	0.00	0.51	0.00	0.00	0.00	0.00
250	13.000	8.93	0.89	0.08	0.06	0.00	0.00	0.00	0.00	0.00	1.09	1.22	1.22	0.03	0.06	0.00	0.00	0.00	0.00	0.00	0.50	0.00	0.00	0.00	0.00
251	12.900	8.93	0.89	0.08	0.06	0.00	0.00	0.00	0.00	0.00	1.09	1.23	1.23	0.03	0.06	0.00	0.00	0.00	0.00	0.00	0.50	0.00	0.00	0.00	0.00
252	12.800	8.93	0.90	0.08	0.06	0.00	0.00	0.00	0.00	0.00	1.09	1.23	1.23	0.03	0.06	0.00	0.00	0.00	0.00	0.00	0.49	0.00	0.00	0.00	0.00
253	12.700	8.93	0.90	0.08	0.06	0.00	0.00	0.00	0.00	0.00	1.09	1.23	1.23	0.03	0.06	0.00	0.00	0.00	0.00	0.00	0.49	0.00	0.00	0.00	0.00
254	12.600	8.93	0.90	0.08	0.06	0.00	0.00	0.00	0.00	0.00	1.09	1.23	1.23	0.03	0.06	0.00	0.00	0.00	0.00	0.00	0.48	0.00	0.00	0.00	0.00
255	12.500	8.93	0.91	0.08	0.06	0.00	0.00	0.00	0.00	0.00	1.09	1.23	1.23	0.03	0.06	0.00	0.00	0.00	0.00	0.00	0.48	0.00	0.00	0.00	0.00
256	12.400	8.93	0.91	0.08	0.06	0.00	0.00	0.00	0.00	0.00	1.09	1.23	1.23	0.03	0.06	0.00	0.00	0.00	0.00	0.00	0.47	0.00	0.00	0.00	0.00
257	12.300	8.93	0.92	0.08	0.06	0.00	0.00	0.00	0.00	0.00	1.09	1.23	1.23	0.03	0.06	0.00	0.00	0.00	0.00	0.00	0.47	0.00	0.00	0.00	0.00
258	12.200	8.93	0.92	0.08	0.06	0.00	0.00	0.00	0.00	0.00	1.09	1.23	1.23	0.03	0.06	0.00	0.00	0.00	0.00	0.00	0.46	0.00	0.00	0.00	0.00
259	12.100	8.93	0.93	0.08	0.06	0.00	0.00	0.00	0.00	0.00	1.09	1.23	1.23	0.03	0.06	0.00	0.00	0.00	0.00	0.00	0.46	0.00	0.00	0.00	0.00

AVG 20 DEG C RATE 0.89 0.08 0.00 0.00 0.00 0.00 0.00 0.00 0.00 1.03 0.03 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

* g/m²/d ** mg/L/day

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	NCM
248	13.200	20.80	0.28	554.69	13.51	7.74	2.59	0.00	3.65	0.00	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.9	0.0	0.0	0.00
249	13.100	20.80	0.28	556.02	13.96	7.73	2.63	0.00	3.68	0.00	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.8	0.0	0.0	0.00
250	13.000	20.80	0.28	557.96	14.62	7.72	2.67	0.00	3.70	0.00	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.7	0.0	0.0	0.00
251	12.900	20.80	0.28	560.77	15.57	7.71	2.70	0.00	3.72	0.00	0.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.6	0.0	0.0	0.00
252	12.800	20.80	0.28	564.78	16.93	7.70	2.73	0.00	3.75	0.00	0.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.5	0.0	0.0	0.00
253	12.700	20.80	0.29	570.46	18.86	7.69	2.76	0.00	3.76	0.00	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.4	0.0	0.0	0.00
254	12.600	20.80	0.29	578.39	21.54	7.69	2.78	0.00	3.78	0.00	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.3	0.0	0.0	0.00
255	12.500	20.80	0.30	589.37	25.26	7.70	2.80	0.00	3.78	0.00	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.2	0.0	0.0	0.00
256	12.400	20.80	0.31	604.42	30.36	7.71	2.81	0.00	3.79	0.00	0.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.1	0.0	0.0	0.00
257	12.300	20.80	0.32	624.85	37.28	7.73	2.82	0.00	3.78	0.00	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.0	0.0	0.0	0.00
258	12.200	20.80	0.33	652.35	46.60	7.78	2.81	0.00	3.76	0.00	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.9	0.0	0.0	0.00
259	12.100	20.80	0.35	689.04	59.03	7.84	2.78	0.00	3.72	0.00	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.0	0.00

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
248	13.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.9	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
249	13.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.8	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
250	13.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.7	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
251	12.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.6	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
252	12.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.5	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
253	12.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.4	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
254	12.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.3	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
255	12.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.2	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
256	12.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.1	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
257	12.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
258	12.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.9	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
259	12.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT B VINCENT & BONFOUCA WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 22 BONFOUCA FROM WD TO DD6 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
263	UPR RCH	0.05525	20.80	0.35	689.04	59.03	7.84	2.78	0.00	3.72	0.00	0.83	0.00	0.00	0.00	8.80	0.00	0.00
263	TRIB	0.00346	20.80	0.37	722.79	70.70	7.92	2.71	0.00	3.65	0.00	0.80	0.00	0.00	0.00	8.80	0.00	0.00
281	WSTLD	0.00000	30.00	0.39	753.60	63.30	2.00	46.00	0.00	46.00	0.00	43.00	0.00	0.00	0.00	0.00	0.00	0.00
282	WSTLD	0.00020	30.00	0.39	753.60	63.30	2.00	46.00	0.00	46.00	0.00	43.00	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST Km	ENDING DIST Km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
263	12.10	12.00	0.05871	61.4	0.00087	1.33	10.08	1.24	54.25	6727.00	5425.00	67.27	3503.62	0.001	0.366	0.002
264	12.00	11.90	0.05871	61.4	0.00087	1.33	11.40	1.24	54.25	6727.00	5425.00	67.27	4046.12	0.002	0.417	0.002
265	11.90	11.80	0.05871	61.4	0.00087	1.33	12.73	1.24	54.25	6727.00	5425.00	67.27	4588.62	0.002	0.468	0.002
266	11.80	11.70	0.05871	61.4	0.00087	1.33	14.06	1.24	54.25	6727.00	5425.00	67.27	5131.12	0.002	0.520	0.002
267	11.70	11.60	0.05871	61.4	0.00087	1.33	15.38	1.24	54.25	6727.00	5425.00	67.27	5673.62	0.002	0.572	0.002
268	11.60	11.50	0.05871	61.4	0.00087	1.33	16.71	1.24	54.25	6727.00	5425.00	67.27	6216.12	0.003	0.625	0.003
269	11.50	11.40	0.05871	61.4	0.00087	1.33	18.03	1.24	54.25	6727.00	5425.00	67.27	6758.62	0.003	0.678	0.003
270	11.40	11.30	0.05871	61.4	0.00087	1.33	19.36	1.24	54.25	6727.00	5425.00	67.27	7301.12	0.003	0.731	0.003
271	11.30	11.20	0.05871	61.4	0.00087	1.33	20.69	1.24	54.25	6727.00	5425.00	67.27	7843.62	0.003	0.784	0.003
272	11.20	11.10	0.05871	61.4	0.00087	1.33	22.01	1.24	54.25	6727.00	5425.00	67.27	8386.12	0.004	0.838	0.004
273	11.10	11.00	0.05871	61.4	0.00087	1.33	23.34	1.24	54.25	6727.00	5425.00	67.27	8928.62	0.004	0.891	0.004
274	11.00	10.90	0.05871	61.4	0.00087	1.33	24.66	1.24	54.25	6727.00	5425.00	67.27	9471.12	0.004	0.945	0.004
275	10.90	10.80	0.05871	61.4	0.00087	1.33	25.99	1.24	54.25	6727.00	5425.00	67.27	10013.62	0.004	0.999	0.004
276	10.80	10.70	0.05871	61.4	0.00087	1.33	27.32	1.24	54.25	6727.00	5425.00	67.27	10556.12	0.004	1.052	0.004
277	10.70	10.60	0.05871	61.4	0.00087	1.33	28.64	1.24	54.25	6727.00	5425.00	67.27	11098.62	0.005	1.106	0.005
278	10.60	10.50	0.05871	61.4	0.00087	1.33	29.97	1.24	54.25	6727.00	5425.00	67.27	11641.12	0.005	1.160	0.005
279	10.50	10.40	0.05871	61.4	0.00087	1.33	31.30	1.24	54.25	6727.00	5425.00	67.27	12183.62	0.005	1.214	0.005
280	10.40	10.30	0.05871	61.4	0.00087	1.33	32.62	1.24	54.25	6727.00	5425.00	67.27	12726.12	0.005	1.268	0.005

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

281	10.30	10.20	0.05871	61.4	0.00087	1.33	33.95	1.24	54.25	6727.00	5425.00	67.27	13268.62	0.006	1.322	0.006
282	10.20	10.10	0.05892	61.5	0.00088	1.32	35.27	1.24	54.25	6727.00	5425.00	67.27	13811.12	0.006	1.376	0.006
283	10.10	10.00	0.05892	61.5	0.00088	1.32	36.59	1.24	54.25	6727.00	5425.00	67.27	14353.62	0.006	1.430	0.006
TOT						27.84				141267.02	113925.00					
AVG					0.0009			1.24	54.25			67.27				

BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REARER RATE 1/da	BOD1 DECA 1/da	BOD1 SETT 1/da	ABOD1 DECA 1/da	BOD1 HYDR 1/da	BOD2 DECA 1/da	BOD2 SETT 1/da	ABOD2 DECA 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECA 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECA 1/da	NCM DECA 1/da	NCM SETT 1/da	
263	12.000	8.93	0.57	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.70	0.84	0.84	0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.46	0.00	0.00	0.00	0.00	0.00
264	11.900	8.93	0.57	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.70	0.84	0.84	0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.46	0.00	0.00	0.00	0.00	0.00
265	11.800	8.93	0.57	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.70	0.84	0.84	0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.46	0.00	0.00	0.00	0.00	0.00
266	11.700	8.93	0.57	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.70	0.84	0.84	0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.46	0.00	0.00	0.00	0.00	0.00
267	11.600	8.92	0.57	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.70	0.84	0.84	0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.46	0.00	0.00	0.00	0.00	0.00
268	11.500	8.92	0.57	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.70	0.85	0.85	0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.46	0.00	0.00	0.00	0.00	0.00
269	11.400	8.92	0.57	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.70	0.85	0.85	0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.46	0.00	0.00	0.00	0.00	0.00
270	11.300	8.92	0.57	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.70	0.86	0.86	0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.46	0.00	0.00	0.00	0.00	0.00
271	11.200	8.92	0.57	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.70	0.87	0.87	0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.46	0.00	0.00	0.00	0.00	0.00
272	11.100	8.92	0.57	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.70	0.88	0.88	0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.46	0.00	0.00	0.00	0.00	0.00
273	11.000	8.91	0.57	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.70	0.89	0.89	0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.46	0.00	0.00	0.00	0.00	0.00
274	10.900	8.91	0.57	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.70	0.90	0.90	0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.46	0.00	0.00	0.00	0.00	0.00
275	10.800	8.91	0.57	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.70	0.92	0.92	0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.46	0.00	0.00	0.00	0.00	0.00
276	10.700	8.91	0.57	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.70	0.93	0.93	0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.46	0.00	0.00	0.00	0.00	0.00
277	10.600	8.91	0.57	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.70	0.95	0.95	0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.46	0.00	0.00	0.00	0.00	0.00
278	10.500	8.90	0.57	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.70	0.98	0.98	0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.46	0.00	0.00	0.00	0.00	0.00
279	10.400	8.90	0.57	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.70	1.00	1.00	0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.46	0.00	0.00	0.00	0.00	0.00
280	10.300	8.90	0.57	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.70	1.03	1.03	0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.46	0.00	0.00	0.00	0.00	0.00
281	10.200	8.90	0.57	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.70	1.06	1.06	0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.46	0.00	0.00	0.00	0.00	0.00
282	10.100	8.89	0.57	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.70	1.09	1.09	0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.46	0.00	0.00	0.00	0.00	0.00
283	10.000	8.89	0.57	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.70	1.13	1.13	0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.46	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.56	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.66			0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00

* g/m²/d ** mg/L/day

WATER QUALITY CONSTITUENT VALUES

ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	NCM		
263	12.000	20.80	0.38	726.90	71.85	7.92	2.74	0.00	3.68	0.00	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.0	0.00
264	11.900	20.80	0.40	766.49	85.09	7.96	2.76	0.00	3.70	0.00	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.0	0.00
265	11.800	20.80	0.42	809.34	99.41	7.98	2.79	0.00	3.73	0.00	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.0	0.00
266	11.700	20.80	0.45	855.29	114.78	7.99	2.84	0.00	3.78	0.00	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.0	0.00
267	11.600	20.80	0.47	904.20	131.13	7.98	2.91	0.00	3.85	0.00	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.0	0.00
268	11.500	20.80	0.50	955.95	148.43	7.97	3.00	0.00	3.94	0.00	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.0	0.00
269	11.400	20.80	0.53	1010.42	166.64	7.95	3.11	0.00	4.05	0.00	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.0	0.00
270	11.300	20.80	0.57	1067.55	185.74	7.91	3.25	0.00	4.19	0.00	0.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.0	0.00
271	11.200	20.80	0.60	1127.24	205.70	7.88	3.41	0.00	4.35	0.00	0.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.0	0.00
272	11.100	20.80	0.63	1189.42	226.49	7.83	3.60	0.00	4.54	0.00	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.0	0.00
273	11.000	20.80	0.67	1254.04	248.09	7.78	3.82	0.00	4.76	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.0	0.00
274	10.900	20.80	0.71	1321.02	270.49	7.72	4.08	0.00	5.02	0.00	1.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.0	0.00
275	10.800	20.80	0.75	1390.32	293.65	7.65	4.37	0.00	5.31	0.00	1.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.0	0.00
276	10.700	20.80	0.79	1461.89	317.58	7.57	4.70	0.00	5.64	0.00	1.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.0	0.00
277	10.600	20.80	0.83	1535.67	342.25	7.49	5.07	0.00	6.01	0.00	1.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.0	0.00
278	10.500	20.80	0.87	1611.64	367.65	7.40	5.49	0.00	6.43	0.00	1.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.0	0.00
279	10.400	20.80	0.91	1689.74	393.76	7.31	5.97	0.00	6.91	0.00	1.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.0	0.00
280	10.300	20.80	0.96	1769.94	420.57	7.21	6.50	0.00	7.43	0.00	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.0	0.00
281	10.200	20.80	1.01	1852.20	448.08	7.10	7.08	0.00	8.02	0.00	1.61	0.00	0.00	0.0													

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
310	9.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
311	9.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
312	8.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
313	8.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
314	8.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
315	8.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT B VINCENT & BONFOUCA WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 28 BONFOUCA FROM BB03 TO CANAL 26 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
316	UPR RCH	0.06482	20.80	1.65	3010.81	835.37	6.25	12.65	0.00	13.59	0.00	2.62	0.00	0.00	0.00	8.80	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
316	8.60	8.50	0.06482	56.3	0.00043	2.66	77.56	1.60	93.08	14920.72	9308.00	149.21	28915.63	0.005	1.610	0.005
317	8.50	8.40	0.06482	56.3	0.00043	2.66	80.22	1.60	93.08	14920.72	9308.00	149.21	29846.43	0.006	1.662	0.006
318	8.40	8.30	0.06482	56.3	0.00043	2.66	82.89	1.60	93.08	14920.72	9308.00	149.21	30777.23	0.006	1.714	0.006
319	8.30	8.20	0.06482	56.3	0.00043	2.66	85.55	1.60	93.08	14920.72	9308.00	149.21	31708.03	0.006	1.765	0.006
320	8.20	8.10	0.06482	56.3	0.00043	2.66	88.22	1.60	93.08	14920.72	9308.00	149.21	32638.83	0.006	1.817	0.006
321	8.10	8.00	0.06482	56.3	0.00043	2.66	90.88	1.60	93.08	14920.72	9308.00	149.21	33569.63	0.006	1.869	0.006
322	8.00	7.90	0.06482	56.3	0.00043	2.66	93.55	1.60	93.08	14920.72	9308.00	149.21	34500.43	0.007	1.921	0.006
323	7.90	7.80	0.06482	56.3	0.00043	2.66	96.21	1.60	93.08	14920.72	9308.00	149.21	35431.23	0.007	1.973	0.007
TOT AVG					0.0004	21.31			1.60	93.08	119365.80	74464.00	149.21			

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER 1/da	BOD1 DECAT 1/da	BOD1 SETT DECAT 1/da	ABOD1 1/da	BOD1 HYDR DECAT 1/da	BOD2 1/da	BOD2 SETT DECAT 1/da	ABOD2 1/da	BKGD SOD *	PULL SOD *	CORR HYDR *	ORG-N 1/da	ORG-N SETT 1/da	NH3-N 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da	
316	8.500	8.86	0.51	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.53	1.17	1.17	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46	0.00	0.00	0.00	0.00
317	8.400	8.86	0.51	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.53	1.18	1.18	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47	0.00	0.00	0.00	0.00
318	8.300	8.86	0.51	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.53	1.18	1.18	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48	0.00	0.00	0.00	0.00
319	8.200	8.86	0.51	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.53	1.18	1.18	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.49	0.00	0.00	0.00	0.00
320	8.100	8.85	0.51	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.53	1.18	1.18	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.00	0.00	0.00	0.00
321	8.000	8.85	0.51	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.53	1.18	1.18	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.00	0.00	0.00	0.00
322	7.900	8.85	0.51	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.53	1.19	1.19	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51	0.00	0.00	0.00	0.00
323	7.800	8.85	0.51	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.53	1.19	1.19	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE		0.50	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.50				0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL	NCM		
316	8.500	20.80	1.69	3078.36	857.94	6.25	12.70	0.00	13.66	0.00	2.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.9	0.0	0.0
317	8.400	20.80	1.73	3145.56	880.40	6.25	12.75	0.00	13.72	0.00	2.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.1	0.0	0.0
318	8.300	20.80	1.77	3212.42	902.75	6.25	12.80	0.00	13.78	0.00	2.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.2	0.0	0.0
319	8.200	20.80	1.80	3278.96	924.98	6.26	12.84	0.00	13.84	0.00	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.4	0.0	0.0
320	8.100	20.80	1.84	3345.18	947.11	6.27	12.87	0.00	13.89	0.00	2.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.6	0.0	0.0
321	8.000	20.80	1.88	3411.09	969.14	6.29	12.91	0.00	13.94	0.00	2.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.7	0.0	0.0
322	7.900	20.80	1.91	3476.71	991.07	6.31	12.94	0.00	13.99	0.00	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.9	0.0	0.0
323	7.800	20.80	1.95	3542.04	1012.90	6.33	12.97	0.00	14.03	0.00	2.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
316	8.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
317	8.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
318	8.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
319	8.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
320	8.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
321	8.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
322	7.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
323	7.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT B VINCENT & BONFOUCA WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 30 BONFOUCA FROM CANAL 26 TO TRIB 4 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
344	UPR RCH	0.06482	20.80	1.95	3542.04	1012.90	6.33	12.97	0.00	14.03	0.00	2.75	0.00	0.00	0.00	10.00	0.00	0.00
344	TRIB	0.00283	20.80	1.97	3582.91	1026.57	6.38	12.34	0.00	13.41	0.00	2.71	0.00	0.00	0.00	10.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
344	7.80	7.70	0.06765	54.0	0.00047	2.45	98.66	1.87	76.51	14307.37	7651.00	143.07	58996.34	0.012	3.899	0.012
345	7.70	7.60	0.06765	54.0	0.00047	2.45	101.11	1.87	76.51	14307.37	7651.00	143.07	59761.44	0.012	3.950	0.012
TOT AVG					0.0005	4.90		1.87	76.51	28614.74	15302.00	143.07				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT 1/da	ABOD1 1/da	BOD1 HYDR 1/da	BOD2 DECAT 1/da	BOD2 SETT 1/da	ABOD2 1/da	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAT 1/da	NH3-N SETT 1/da	DENIT SRCE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 PROD	PHYTO PROD	PERIP PROD	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da
344	7.700	8.85	0.48	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.53	1.19	1.19	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00
345	7.600	8.85	0.48	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.53	1.19	1.19	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE		0.48	0.08	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.50			0.03	0.01	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL	NCM
344	7.700	20.80	1.98	3587.58	1028.12	6.35	12.98	0.00	14.05	0.00	2.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	0.00
345	7.600	20.80	2.00	3624.21	1040.36	6.37	13.12	0.00	14.19	0.00	2.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	0.00

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
344	7.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
345	7.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT B VINCENT & BONFOUCA WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 33 BONFOUCA FROM TRIB 4 TO BB04 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

***** REACH INPUTS *****																			
ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM	
365	UPR RCH	0.06765	20.80	2.00	3624.21	1040.36	6.37	13.12	0.00	14.19	0.00	2.78	0.00	0.00	0.00	10.00	0.00	0.00	
365	TRIB	0.00392	20.80	2.00	3634.75	1043.86	6.39	12.91	0.00	13.98	0.00	2.80	0.00	0.00	0.00	10.00	0.00	0.00	

***** HYDRAULIC PARAMETER VALUES *****																			
ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s			
365	7.60	7.50	0.07157	52.5	0.00050	2.31	103.42	1.87	76.51	14307.37	7651.00	143.07	61966.54	0.012	4.096	0.012			
366	7.50	7.40	0.07157	52.5	0.00050	2.31	105.73	1.87	76.51	14307.37	7651.00	143.07	62731.64	0.012	4.146	0.012			
367	7.40	7.30	0.07157	52.5	0.00050	2.31	108.05	1.87	76.51	14307.37	7651.00	143.07	63496.74	0.012	4.197	0.012			
368	7.30	7.20	0.07157	52.5	0.00050	2.31	110.36	1.87	76.51	14307.37	7651.00	143.07	64261.84	0.013	4.248	0.013			
369	7.20	7.10	0.07157	52.5	0.00050	2.31	112.67	1.87	76.51	14307.37	7651.00	143.07	65026.95	0.013	4.298	0.013			
370	7.10	7.00	0.07157	52.5	0.00050	2.31	114.99	1.87	76.51	14307.37	7651.00	143.07	65792.05	0.013	4.349	0.013			
371	7.00	6.90	0.07157	52.5	0.00050	2.31	117.30	1.87	76.51	14307.37	7651.00	143.07	66557.15	0.013	4.400	0.013			
372	6.90	6.80	0.07157	52.5	0.00050	2.31	119.61	1.87	76.51	14307.37	7651.00	143.07	67322.25	0.013	4.450	0.013			
TOT AVG				0.0005		18.51		1.87	76.51	114458.95	61208.00	143.07							

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****																										
ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECAT	BOD1 SETT	ABOD1 DECAT	BOD1 HYDR	BOD2 DECAT	BOD2 SETT	ABOD2 DECAT	BKGD SOD	PULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECAT	NH3-N SRCE	ORG-P HYDR	ORG-P SETT	PO4 PROD	PHYTO	PERIP PROD	COLI DECAT	NCM DECAT	NCM SETT	
365	7.500	8.84	0.48	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.26	0.93	0.93	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00
366	7.400	8.84	0.48	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.26	0.94	0.94	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00
367	7.300	8.84	0.48	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.26	0.94	0.94	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00
368	7.200	8.84	0.48	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.26	0.95	0.95	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00
369	7.100	8.84	0.48	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.26	0.95	0.95	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00
370	7.000	8.84	0.48	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.26	0.95	0.95	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00
371	6.900	8.84	0.48	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.26	0.96	0.96	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00
372	6.800	8.84	0.48	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.26	0.96	0.96	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE		0.48	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25		0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00
*	g/m²/d		**	mg/L/day																						

***** WATER QUALITY CONSTITUENT VALUES *****																									
ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL	NCM
365	7.500	20.80	2.02	3660.38	1052.45	6.38	13.18	0.00	14.25	0.00	2.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.	0.00
366	7.400	20.80	2.04	3698.15	1065.07	6.39	13.25	0.00	14.32	0.00	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.	0.00
367	7.300	20.80	2.06	3735.91	1077.69	6.41	13.32	0.00	14.39	0.00	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.	0.00
368	7.200	20.80	2.08	3773.67	1090.31	6.42	13.40	0.00	14.46	0.00	2.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.	0.00
369	7.100	20.80	2.10	3811.42	1102.92	6.43	13.46	0.00	14.53	0.00	2.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.	0.00
370	7.000	20.80	2.12	3849.16	1115.54	6.44	13.53	0.00	14.60	0.00	2.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.	0.00
371	6.900	20.80	2.14	3886.90	1128.15	6.46	13.60	0.00	14.67	0.00	2.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.	0.00
372	6.800	20.80	2.17	3924.64	1140.76	6.47	13.66	0.00	14.73	0.00	2.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.	0.00

***** PHYTOPLANKTON AND PERIPHYTON DATA *****																									
ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²	
365	7.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
366	7.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
367	7.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
368	7.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
369	7.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
370	7.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
371	6.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
372	6.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
20 DEG C RATE								0.000	0.000	0.000	0.000											0.000	0.000	0.000	

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

FINAL REPORT B VINCENT & BONFOUCA
 REACH NO. 34 BONFOUCA FROM BB04 TO RKM 5.6

WATER QUALITY/HYDRAULIC MODEL FOR:
 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****																		
ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
373	UPR RCH	0.07157	20.80	2.17	3924.64	1140.76	6.47	13.66	0.00	14.73	0.00	2.81	0.00	0.00	0.00	10.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****																
ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
373	6.80	6.70	0.07157	52.5	0.00041	2.79	122.41	1.89	91.40	17274.60	9140.00	172.75	68236.25	0.011	3.769	0.011
374	6.70	6.60	0.07157	52.5	0.00041	2.79	125.20	1.89	91.40	17274.60	9140.00	172.75	69150.25	0.011	3.820	0.011
375	6.60	6.50	0.07157	52.5	0.00041	2.79	127.99	1.89	91.40	17274.60	9140.00	172.75	70064.25	0.011	3.870	0.011
376	6.50	6.40	0.07157	52.5	0.00041	2.79	130.79	1.89	91.40	17274.60	9140.00	172.75	70978.25	0.012	3.921	0.012
377	6.40	6.30	0.07157	52.5	0.00041	2.79	133.58	1.89	91.40	17274.60	9140.00	172.75	71892.25	0.012	3.972	0.012
378	6.30	6.20	0.07157	52.5	0.00041	2.79	136.37	1.89	91.40	17274.60	9140.00	172.75	72806.25	0.012	4.022	0.012
379	6.20	6.10	0.07157	52.5	0.00041	2.79	139.17	1.89	91.40	17274.60	9140.00	172.75	73720.25	0.012	4.073	0.012
380	6.10	6.00	0.07157	52.5	0.00041	2.79	141.96	1.89	91.40	17274.60	9140.00	172.75	74634.25	0.012	4.123	0.012
381	6.00	5.90	0.07157	52.5	0.00041	2.79	144.76	1.89	91.40	17274.60	9140.00	172.75	75548.25	0.012	4.174	0.012
382	5.90	5.80	0.07157	52.5	0.00041	2.79	147.55	1.89	91.40	17274.60	9140.00	172.75	76462.25	0.012	4.224	0.012
383	5.80	5.70	0.07157	52.5	0.00041	2.79	150.34	1.89	91.40	17274.60	9140.00	172.75	77376.25	0.013	4.275	0.013
384	5.70	5.60	0.07157	52.5	0.00041	2.79	153.14	1.89	91.40	17274.60	9140.00	172.75	78290.25	0.013	4.326	0.013
TOT AVG					0.0004	33.52		1.89	91.40	207295.17	109680.00	172.75				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****																												
ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECA 1/da	BOD1 SETT 1/da	ABOD1 DECA 1/da	BOD1 HYDR 1/da	BOD2 DECA 1/da	BOD2 SETT 1/da	ABOD2 DECA 1/da	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECA 1/da	NH3-N SRCE 1/da	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE	PHYTO PROD **	PERIP PROD **	COLI DECA 1/da	NCM DECA 1/da	NCM SETT 1/da		
373	6.700	8.84	0.48	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.70	0.70	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00	0.00	0.00
374	6.600	8.83	0.48	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.70	0.70	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00	0.00	0.00
375	6.500	8.83	0.48	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.71	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00	0.00	0.00
376	6.400	8.83	0.48	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.71	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00	0.00	0.00
377	6.300	8.83	0.48	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.71	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00	0.00	0.00
378	6.200	8.83	0.48	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.71	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00	0.00	0.00
379	6.100	8.83	0.48	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.71	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00	0.00	0.00
380	6.000	8.83	0.48	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.72	0.72	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00	0.00	0.00
381	5.900	8.83	0.48	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.72	0.72	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00	0.00	0.00
382	5.800	8.83	0.48	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.72	0.72	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00	0.00	0.00
383	5.700	8.82	0.48	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.72	0.72	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00	0.00	0.00
384	5.600	8.82	0.48	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.72	0.72	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.48	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00	0.00	0.00	
*	g/m²/d		**		mg/L/day																							

***** WATER QUALITY CONSTITUENT VALUES *****																											
ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL	NCM		
373	6.700	20.80	2.19	3962.16	1153.30	6.49	13.73	0.00	14.80	0.00	2.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.00
374	6.600	20.80	2.21	3999.42	1165.75	6.51	13.79	0.00	14.86	0.00	2.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.00
375	6.500	20.80	2.23	4036.60	1178.17	6.52	13.84	0.00	14.91	0.00	2.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.00
376	6.400	20.80	2.25	4073.69	1190.57	6.53	13.89	0.00	14.96	0.00	2.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.00
377	6.300	20.80	2.27	4110.70	1202.94	6.54	13.93	0.00	15.00	0.00	2.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.00
378	6.200	20.80	2.29	4147.62	1215.27	6.56	13.97	0.00	15.04	0.00	2.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.00
379	6.100	20.80	2.31	4184.45	1227.58	6.57	14.01	0.00	15.07	0.00	2.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.00
380	6.000	20.80	2.33	4221.21	1239.87	6.58	14.04	0.00	15.10	0.00	2.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.00
381	5.900	20.80	2.35	4257.88	1252.12	6.60	14.06	0.00	15.13	0.00	2.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.00
382	5.800	20.80	2.37	4294.48	1264.35	6.61	14.08	0.00	15.15	0.00	2.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.00
383	5.700	20.80	2.39	4330.99	1276.55	6.63	14.10	0.00	15.17	0.00	2.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.00
384	5.600	20.80	2.41	4367.43	1288.73	6.64	14.12	0.00	15.18	0.00	2.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.00

***** PHYTOPLANKTON AND PERIPHYTON DATA *****																								
ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI P LIM	PERI N&P LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
373	6.700																							

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

AVG 20 DEG C RATE 0.50 0.08 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.03 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	NCM	
899	0.700	20.80	3.63	6545.10	2016.04	7.30	7.57	0.00	8.33	0.00	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.2	0.0	0.0	0.00
900	0.600	20.80	3.67	6617.02	2040.06	7.26	7.49	0.00	8.23	0.00	1.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.9	0.0	0.0	0.00
901	0.500	20.80	3.71	6689.41	2064.23	7.21	7.42	0.00	8.14	0.00	1.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.7	0.0	0.0	0.00
902	0.400	20.80	3.75	6762.27	2088.56	7.15	7.36	0.00	8.06	0.00	1.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.5	0.0	0.0	0.00
903	0.300	20.80	3.79	6835.58	2113.04	7.08	7.32	0.00	7.98	0.00	1.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.2	0.0	0.0	0.00
904	0.200	20.80	3.84	6909.36	2137.68	7.01	7.28	0.00	7.92	0.00	1.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.0	0.0	0.0	0.00
905	0.100	20.80	3.88	6983.61	2162.47	6.93	7.25	0.00	7.87	0.00	1.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.8	0.0	0.0	0.00
906	0.000	20.80	3.92	7058.31	2187.42	6.85	7.23	0.00	7.82	0.00	1.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.6	0.0	0.0	0.00

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW	PHYT RESP	PHYT DEATH	PHYT SETT	PHYT P/R	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW	PERI RESP	PERI DEATH	PERI P/R	PERIP g/m ²
899	0.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
900	0.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.9	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
901	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.7	0.50	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0		
902	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.5	0.50	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.000	0.0	0.0	
903	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.2	0.50	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.000	0.0	0.0	
904	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.0	0.50	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.000	0.0	0.0	
905	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	5.8	0.50	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.000	0.0	0.0	
906	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	5.6	0.50	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.000	0.0	0.0	

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT BROWNS VILL RD (DD2)
 REACH NO. 5 DRAINAGE DITCH 2

WATER QUALITY/HYDRAULIC MODEL FOR:
 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
67	HDWTR	0.00283	20.80	0.26	520.90	7.23	6.00	0.62	0.00	0.62	0.00	0.29	0.00	0.00	0.00	0.00	0.00	0.00
67	WSTLD	0.00105	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	8.60	0.00	0.00	0.00	0.00	0.00	0.00
73	WSTLD	0.00000	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00	0.00	0.00
74	WSTLD	0.00012	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00	0.00	0.00
79	WSTLD	0.00004	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00	0.00	0.00
80	WSTLD	0.00014	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00	0.00	0.00
81	WSTLD	0.00001	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00	0.00	0.00
83	WSTLD	0.00002	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00	0.00	0.00
84	WSTLD	0.00000	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00	0.00	0.00
87	WSTLD	0.00002	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTY VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
67	2.10	2.00	0.00388	27.1	0.01379	0.08	0.08	0.13	2.19	28.15	219.35	0.28	0.00	0.000	0.000	0.014
68	2.00	1.90	0.00388	27.1	0.01379	0.08	0.17	0.13	2.19	28.15	219.35	0.28	0.00	0.000	0.000	0.014
69	1.90	1.80	0.00388	27.1	0.01379	0.08	0.25	0.13	2.19	28.15	219.35	0.28	0.00	0.000	0.000	0.014
70	1.80	1.70	0.00388	27.1	0.01379	0.08	0.34	0.13	2.19	28.15	219.35	0.28	0.00	0.000	0.000	0.014
71	1.70	1.60	0.00388	27.1	0.01379	0.08	0.42	0.13	2.19	28.15	219.35	0.28	0.00	0.000	0.000	0.014
72	1.60	1.50	0.00388	27.1	0.01379	0.08	0.50	0.13	2.19	28.15	219.35	0.28	0.00	0.000	0.000	0.014
73	1.50	1.40	0.00389	27.1	0.01380	0.08	0.59	0.13	2.19	28.17	219.40	0.28	0.00	0.000	0.000	0.014
74	1.40	1.30	0.00400	29.2	0.01394	0.08	0.67	0.13	2.21	28.72	221.33	0.29	0.00	0.000	0.000	0.014
75	1.30	1.20	0.00400	29.2	0.01394	0.08	0.75	0.13	2.21	28.72	221.33	0.29	0.00	0.000	0.000	0.014
76	1.20	1.10	0.00400	29.2	0.01394	0.08	0.84	0.13	2.21	28.72	221.33	0.29	0.00	0.000	0.000	0.014
77	1.10	1.00	0.00400	29.2	0.01394	0.08	0.92	0.13	2.21	28.72	221.33	0.29	0.00	0.000	0.000	0.014
78	1.00	0.90	0.00400	29.2	0.01394	0.08	1.00	0.13	2.21	28.72	221.33	0.29	0.00	0.000	0.000	0.014
79	0.90	0.80	0.00405	30.0	0.01399	0.08	1.09	0.13	2.22	28.92	222.06	0.29	0.00	0.000	0.000	0.014
80	0.80	0.70	0.00418	32.3	0.01415	0.08	1.17	0.13	2.24	29.56	224.28	0.30	0.00	0.000	0.000	0.014
81	0.70	0.60	0.00419	32.4	0.01415	0.08	1.25	0.13	2.24	29.59	224.39	0.30	0.00	0.000	0.000	0.014
82	0.60	0.50	0.00419	32.4	0.01415	0.08	1.33	0.13	2.24	29.59	224.39	0.30	0.00	0.000	0.000	0.014

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

83	0.50	0.40	0.00421	32.8	0.01418	0.08	1.41	0.13	2.25	29.70	224.76	0.30	0.00	0.000	0.000	0.014
84	0.40	0.30	0.00421	32.8	0.01418	0.08	1.49	0.13	2.25	29.72	224.81	0.30	0.00	0.000	0.000	0.014
85	0.30	0.20	0.00421	32.8	0.01418	0.08	1.58	0.13	2.25	29.72	224.81	0.30	0.00	0.000	0.000	0.014
86	0.20	0.10	0.00421	32.8	0.01418	0.08	1.66	0.13	2.25	29.72	224.81	0.30	0.00	0.000	0.000	0.014
87	0.10	0.00	0.00423	33.1	0.01420	0.08	1.74	0.13	2.25	29.79	225.07	0.30	0.00	0.000	0.000	0.014
TOT						1.74				606.98	4661.54					
AVG				0.0140				0.13	2.22				0.29			

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REARER RATE 1/da	BOD1 1/da	BOD1 1/da	ABOD1 1/da	BOD1 1/da	BOD2 1/da	BOD2 1/da	ABOD2 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N 1/da	ORG-N 1/da	NH3-N 1/da	NH3-N 1/da	DENIT SRCE 1/da	ORG-P 1/da	ORG-P 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI 1/da	NCM 1/da	NCM 1/da	
67	2.000	8.93	6.82	0.08	0.40	0.00	0.00	0.00	0.00	0.00	0.15	0.48	0.48	0.03	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
68	1.900	8.93	6.82	0.08	0.40	0.00	0.00	0.00	0.00	0.00	0.15	0.47	0.47	0.03	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
69	1.800	8.93	6.82	0.08	0.40	0.00	0.00	0.00	0.00	0.00	0.15	0.46	0.46	0.03	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
70	1.700	8.93	6.82	0.08	0.40	0.00	0.00	0.00	0.00	0.00	0.15	0.45	0.45	0.03	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
71	1.600	8.93	6.82	0.08	0.40	0.00	0.00	0.00	0.00	0.00	0.15	0.43	0.43	0.03	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
72	1.500	8.93	6.82	0.08	0.40	0.00	0.00	0.00	0.00	0.00	0.15	0.42	0.42	0.03	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
73	1.400	8.93	6.81	0.08	0.40	0.00	0.00	0.00	0.00	0.00	0.15	0.42	0.42	0.03	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
74	1.300	8.93	6.76	0.08	0.39	0.00	0.00	0.00	0.00	0.00	0.15	0.43	0.43	0.03	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
75	1.200	8.93	6.76	0.08	0.39	0.00	0.00	0.00	0.00	0.00	0.15	0.42	0.42	0.03	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
76	1.100	8.93	6.76	0.08	0.39	0.00	0.00	0.00	0.00	0.00	0.15	0.41	0.41	0.03	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
77	1.000	8.93	6.76	0.08	0.39	0.00	0.00	0.00	0.00	0.00	0.15	0.40	0.40	0.03	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
78	0.900	8.93	6.76	0.08	0.39	0.00	0.00	0.00	0.00	0.00	0.15	0.39	0.39	0.03	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
79	0.800	8.93	6.74	0.08	0.39	0.00	0.00	0.00	0.00	0.00	0.15	0.39	0.39	0.03	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
80	0.700	8.93	6.68	0.08	0.39	0.00	0.00	0.00	0.00	0.00	0.15	0.42	0.42	0.03	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
81	0.600	8.93	6.67	0.08	0.39	0.00	0.00	0.00	0.00	0.00	0.15	0.41	0.41	0.03	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
82	0.500	8.93	6.67	0.08	0.39	0.00	0.00	0.00	0.00	0.00	0.15	0.40	0.40	0.03	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
83	0.400	8.93	6.66	0.08	0.39	0.00	0.00	0.00	0.00	0.00	0.15	0.40	0.40	0.03	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
84	0.300	8.93	6.66	0.08	0.39	0.00	0.00	0.00	0.00	0.00	0.15	0.39	0.39	0.03	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
85	0.200	8.93	6.66	0.08	0.39	0.00	0.00	0.00	0.00	0.00	0.15	0.38	0.38	0.03	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
86	0.100	8.93	6.66	0.08	0.39	0.00	0.00	0.00	0.00	0.00	0.15	0.37	0.37	0.03	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
87	0.000	8.93	6.65	0.08	0.38	0.00	0.00	0.00	0.00	0.00	0.15	0.37	0.37	0.03	0.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			6.64	0.08	0.02	0.00	0.00	0.00	0.00	0.00	0.14			0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00
*	g/m ² /d																										
**	mg/L/day																										

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	NCM		
67	2.000	20.80	0.30	583.91	22.41	6.15	6.44	0.00	6.44	0.00	2.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
68	1.900	20.80	0.30	583.91	22.41	6.93	6.20	0.00	6.20	0.00	2.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
69	1.800	20.80	0.30	583.91	22.41	7.44	5.98	0.00	5.98	0.00	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
70	1.700	20.80	0.30	583.91	22.41	7.77	5.76	0.00	5.76	0.00	2.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
71	1.600	20.80	0.30	583.91	22.41	7.98	5.55	0.00	5.55	0.00	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
72	1.500	20.80	0.30	583.91	22.41	8.13	5.35	0.00	5.35	0.00	2.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
73	1.400	20.80	0.30	584.05	22.45	8.22	5.18	0.00	5.18	0.00	2.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
74	1.300	20.80	0.30	588.92	23.62	8.16	5.49	0.00	5.49	0.00	2.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
75	1.200	20.80	0.30	588.92	23.62	8.24	5.29	0.00	5.29	0.00	2.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
76	1.100	20.80	0.30	588.92	23.62	8.29	5.11	0.00	5.11	0.00	2.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
77	1.000	20.80	0.30	588.92	23.62	8.33	4.93	0.00	4.93	0.00	2.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
78	0.900	20.80	0.30	588.92	23.62	8.36	4.75	0.00	4.75	0.00	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
79	0.800	20.80	0.30	590.70	24.05	8.34	4.78	0.00	4.78	0.00	2.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
80	0.700	20.80	0.30	596.03	25.33	8.22	5.19	0.00	5.19	0.00	2.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
81	0.600	20.80	0.30	596.28	25.39	8.27	5.04	0.00	5.04	0.00	2.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
82	0.500	20.80	0.30	596.28	25.39	8.32	4.87	0.00	4.87	0.00	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
83	0.400	20.80	0.30	597.14	25.60	8.33	4.80	0.00	4.80	0.00	2.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
84	0.300	20.80	0.30	597.25	25.63	8.36	4.65	0.00	4.65	0.00	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
85	0.200	20.80	0.30	597.25	25.63</																						

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
159	HDWTR	0.00283	20.80	0.26	520.90	7.23	6.00	0.63	0.00	0.63	0.00	0.29	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
159	5.00	4.90	0.00283	0.0	0.05667	0.02	0.02	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
160	4.90	4.80	0.00283	0.0	0.05667	0.02	0.04	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
161	4.80	4.70	0.00283	0.0	0.05667	0.02	0.06	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
162	4.70	4.60	0.00283	0.0	0.05667	0.02	0.08	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
163	4.60	4.50	0.00283	0.0	0.05667	0.02	0.10	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
164	4.50	4.40	0.00283	0.0	0.05667	0.02	0.12	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
165	4.40	4.30	0.00283	0.0	0.05667	0.02	0.14	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
166	4.30	4.20	0.00283	0.0	0.05667	0.02	0.16	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
167	4.20	4.10	0.00283	0.0	0.05667	0.02	0.18	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
168	4.10	4.00	0.00283	0.0	0.05667	0.02	0.20	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
169	4.00	3.90	0.00283	0.0	0.05667	0.02	0.22	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
170	3.90	3.80	0.00283	0.0	0.05667	0.02	0.25	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
171	3.80	3.70	0.00283	0.0	0.05667	0.02	0.27	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
172	3.70	3.60	0.00283	0.0	0.05667	0.02	0.29	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
173	3.60	3.50	0.00283	0.0	0.05667	0.02	0.31	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
174	3.50	3.40	0.00283	0.0	0.05667	0.02	0.33	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
175	3.40	3.30	0.00283	0.0	0.05667	0.02	0.35	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
176	3.30	3.20	0.00283	0.0	0.05667	0.02	0.37	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
177	3.20	3.10	0.00283	0.0	0.05667	0.02	0.39	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
178	3.10	3.00	0.00283	0.0	0.05667	0.02	0.41	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
179	3.00	2.90	0.00283	0.0	0.05667	0.02	0.43	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
180	2.90	2.80	0.00283	0.0	0.05667	0.02	0.45	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
181	2.80	2.70	0.00283	0.0	0.05667	0.02	0.47	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
182	2.70	2.60	0.00283	0.0	0.05667	0.02	0.49	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
TOT AVG					0.0567	0.49		0.05	1.00	119.93	2400.16	0.05				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECAT	BOD1 SETT	ABOD1 DECAT	BOD1 HYDR	BOD2 DECAT	BOD2 SETT	ABOD2 DECAT	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECAT	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECAT	NCM DECAT	NCM SETT	
159	4.900	8.94	25.40	0.08	1.02	0.00	0.00	0.00	0.00	0.00	0.15	0.18	0.18	0.03	1.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
160	4.800	8.94	25.40	0.08	1.02	0.00	0.00	0.00	0.00	0.00	0.15	0.18	0.18	0.03	1.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
161	4.700	8.94	25.40	0.08	1.02	0.00	0.00	0.00	0.00	0.00	0.15	0.18	0.18	0.03	1.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
162	4.600	8.94	25.40	0.08	1.02	0.00	0.00	0.00	0.00	0.00	0.15	0.18	0.18	0.03	1.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
163	4.500	8.94	25.40	0.08	1.02	0.00	0.00	0.00	0.00	0.00	0.15	0.18	0.18	0.03	1.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
164	4.400	8.94	25.40	0.08	1.02	0.00	0.00	0.00	0.00	0.00	0.15	0.18	0.18	0.03	1.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
165	4.300	8.94	25.40	0.08	1.02	0.00	0.00	0.00	0.00	0.00	0.15	0.18	0.18	0.03	1.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
166	4.200	8.94	25.40	0.08	1.02	0.00	0.00	0.00	0.00	0.00	0.15	0.19	0.19	0.03	1.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
167	4.100	8.94	25.40	0.08	1.02	0.00	0.00	0.00	0.00	0.00	0.15	0.19	0.19	0.03	1.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
168	4.000	8.94	25.40	0.08	1.02	0.00	0.00	0.00	0.00	0.00	0.15	0.19	0.19	0.03	1.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
169	3.900	8.94	25.40	0.08	1.02	0.00	0.00	0.00	0.00	0.00	0.15	0.19	0.19	0.03	1.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
170	3.800	8.94	25.40	0.08	1.02	0.00	0.00	0.00	0.00	0.00	0.15	0.19	0.19	0.03	1.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
171	3.700	8.94	25.40	0.08	1.02	0.00	0.00	0.00	0.00	0.00	0.15	0.19	0.19	0.03	1.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
172	3.600	8.94	25.40	0.08	1.02	0.00	0.00	0.00	0.00	0.00	0.15	0.19	0.19	0.03	1.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
173	3.500	8.94	25.40	0.08	1.02	0.00	0.00	0.00	0.00	0.00	0.15	0.19	0.19	0.03	1.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
174	3.400	8.94	25.40	0.08	1.02	0.00	0.00	0.00	0.00	0.00	0.15	0.19	0.19	0.03	1.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
175	3.300	8.94	25.40	0.08	1.02	0.00	0.00	0.00	0.00	0.00	0.15	0.19	0.19	0.03	1.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
176	3.200	8.94	25.40	0.08	1.02	0.00	0.00	0.00	0.00	0.00	0.15	0.19	0.19	0.03	1.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
177	3.100	8.94	25.40	0.08	1.02	0.00	0.00	0.00	0.00	0.00	0.15	0.19	0.19	0.03	1.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
178	3.000	8.94	25.40	0.08	1.02	0.00	0.00	0.00	0.00	0.00	0.15	0.19	0.19	0.03	1.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
179	2.900	8.94	25.40	0.08	1.02	0.00	0.00	0.00	0.00	0.00	0.15	0.19	0.19	0.03	1.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
180	2.800	8.94	25.40	0.08	1.02	0.00	0.00	0.00	0.00	0.00	0.15	0.19	0.19	0.03	1.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
181	2.700	8.94	25.40	0.08	1.02	0.00	0.00	0.00	0.00	0.00	0.15	0.19	0.19	0.03	1.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
182	2.600	8.94	25.40	0.08	1.02	0.00	0.00	0.00	0.00	0.00	0.15	0.19	0.19	0.03	1.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			25.00	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.14			0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00
*	g/m²/d		**	mg/L/day																							

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM	ENDING	TEMP	SALN	COND	CL	DO	BOD1	BOD2	EBOD1	EBOD2	ORG-N	NH3-N	NO3-N	TOT-N	EORG-N	ETOT-N	ORG-P	PO4-P	TOT-P	EORG-P	ETOT-P	CHL A	PERIP	COLI	NCM
------	--------	------	------	------	----	----	------	------	-------	-------	-------	-------	-------	-------	--------	--------	-------	-------	-------	--------	--------	-------	-------	------	-----

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

194	2.50	2.40	0.00572	1.1	0.07199	0.02	0.52	0.06	1.24	7.95	123.51	0.08	0.00	0.000	0.000	0.072
195	2.40	2.30	0.00572	1.1	0.07199	0.02	0.54	0.06	1.24	7.95	123.51	0.08	0.00	0.000	0.000	0.072
196	2.30	2.20	0.00572	1.1	0.07199	0.02	0.55	0.06	1.24	7.95	123.51	0.08	0.00	0.000	0.000	0.072
197	2.20	2.10	0.00572	1.1	0.07199	0.02	0.57	0.06	1.24	7.95	123.51	0.08	0.00	0.000	0.000	0.072
198	2.10	2.00	0.00572	1.1	0.07199	0.02	0.59	0.06	1.24	7.95	123.51	0.08	0.00	0.000	0.000	0.072
199	2.00	1.90	0.00572	1.1	0.07199	0.02	0.60	0.06	1.24	7.95	123.51	0.08	0.00	0.000	0.000	0.072
200	1.90	1.80	0.00572	1.1	0.07199	0.02	0.62	0.06	1.24	7.95	123.51	0.08	0.00	0.000	0.000	0.072
201	1.80	1.70	0.00572	1.1	0.07199	0.02	0.63	0.06	1.24	7.95	123.51	0.08	0.00	0.000	0.000	0.072
202	1.70	1.60	0.00572	1.1	0.07199	0.02	0.65	0.06	1.24	7.95	123.51	0.08	0.00	0.000	0.000	0.072
203	1.60	1.50	0.00572	1.1	0.07199	0.02	0.67	0.06	1.24	7.95	123.51	0.08	0.00	0.000	0.000	0.072
204	1.50	1.40	0.00572	1.1	0.07199	0.02	0.68	0.06	1.24	7.95	123.51	0.08	0.00	0.000	0.000	0.072
205	1.40	1.30	0.00572	1.1	0.07199	0.02	0.70	0.06	1.24	7.95	123.51	0.08	0.00	0.000	0.000	0.072
206	1.30	1.20	0.00572	1.1	0.07199	0.02	0.72	0.06	1.24	7.95	123.51	0.08	0.00	0.000	0.000	0.072
207	1.20	1.10	0.00572	1.1	0.07199	0.02	0.73	0.06	1.24	7.95	123.51	0.08	0.00	0.000	0.000	0.072
TOT										119.27	1852.70					
AVG				0.0720		0.24		0.06	1.24			0.08				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECA	BOD1 SETT	ABOD1 DECA	BOD1 HYDR	BOD2 DECA	BOD2 SETT	ABOD2 DECA	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECA	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECA	NCM DECA	NCM SETT	
		mg/L	1/da	1/da	1/da	1/da	1/da	1/da	1/da	1/da	1/da	1/da	1/da	1/da	1/da	1/da	1/da	1/da	1/da	1/da	1/da	1/da	1/da	1/da	1/da	1/da	
193	2.500	8.94	25.40	0.08	0.79	0.00	0.00	0.00	0.00	0.00	0.15	0.19	0.19	0.03	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
194	2.400	8.94	25.40	0.08	0.79	0.00	0.00	0.00	0.00	0.00	0.15	0.19	0.19	0.03	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
195	2.300	8.94	25.40	0.08	0.79	0.00	0.00	0.00	0.00	0.00	0.15	0.19	0.19	0.03	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
196	2.200	8.94	25.40	0.08	0.79	0.00	0.00	0.00	0.00	0.00	0.15	0.19	0.19	0.03	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
197	2.100	8.94	25.40	0.08	0.79	0.00	0.00	0.00	0.00	0.00	0.15	0.19	0.19	0.03	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
198	2.000	8.94	25.40	0.08	0.79	0.00	0.00	0.00	0.00	0.00	0.15	0.19	0.19	0.03	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
199	1.900	8.94	25.40	0.08	0.79	0.00	0.00	0.00	0.00	0.00	0.15	0.19	0.19	0.03	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
200	1.800	8.94	25.40	0.08	0.79	0.00	0.00	0.00	0.00	0.00	0.15	0.19	0.19	0.03	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
201	1.700	8.94	25.40	0.08	0.79	0.00	0.00	0.00	0.00	0.00	0.15	0.19	0.19	0.03	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
202	1.600	8.94	25.40	0.08	0.79	0.00	0.00	0.00	0.00	0.00	0.15	0.19	0.19	0.03	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
203	1.500	8.94	25.40	0.08	0.79	0.00	0.00	0.00	0.00	0.00	0.15	0.19	0.19	0.03	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
204	1.400	8.94	25.40	0.08	0.79	0.00	0.00	0.00	0.00	0.00	0.15	0.19	0.19	0.03	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
205	1.300	8.94	25.40	0.08	0.79	0.00	0.00	0.00	0.00	0.00	0.15	0.19	0.19	0.03	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
206	1.200	8.94	25.40	0.08	0.79	0.00	0.00	0.00	0.00	0.00	0.15	0.19	0.19	0.03	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
207	1.100	8.94	25.40	0.08	0.79	0.00	0.00	0.00	0.00	0.00	0.15	0.19	0.19	0.03	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG	20	DEG C	RATE	25.00	0.08	0.05	0.00	0.00	0.00	0.00	0.14			0.03	0.05	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EBORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EBORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	NCM	
193	2.500	20.80	0.26	523.35	7.82	8.75	0.82	0.00	0.82	0.00	0.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
194	2.400	20.80	0.26	523.35	7.82	8.77	0.82	0.00	0.82	0.00	0.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
195	2.300	20.80	0.26	523.35	7.82	8.78	0.82	0.00	0.82	0.00	0.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
196	2.200	20.80	0.26	523.35	7.82	8.79	0.82	0.00	0.82	0.00	0.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
197	2.100	20.80	0.26	523.35	7.82	8.80	0.82	0.00	0.82	0.00	0.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
198	2.000	20.80	0.26	523.35	7.82	8.80	0.82	0.00	0.82	0.00	0.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
199	1.900	20.80	0.26	523.35	7.82	8.81	0.82	0.00	0.82	0.00	0.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
200	1.800	20.80	0.26	523.35	7.82	8.81	0.82	0.00	0.82	0.00	0.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
201	1.700	20.80	0.26	523.35	7.82	8.81	0.82	0.00	0.82	0.00	0.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
202	1.600	20.80	0.26	523.35	7.82	8.81	0.82	0.00	0.82	0.00	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
203	1.500	20.80	0.26	523.35	7.82	8.81	0.82	0.00	0.82	0.00	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
204	1.400	20.80	0.26	523.35	7.82	8.81	0.82	0.00	0.82	0.00	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
205	1.300	20.80	0.26	523.35	7.82	8.81	0.82	0.00	0.82	0.00	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
206	1.200	20.80	0.26	523.35	7.82	8.81	0.82	0.00	0.82	0.00	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
207	1.100	20.80	0.26	523.35	7.82	8.81	0.82	0.00	0.82	0.00	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW	PHYT RESP	PHYT DEATH	PHYT SETT	PHYT P/R	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW	PERI RESP	PERI DEATH	PERI P/R	PERIP g/m ²
193	2.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.00	0.00	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.00	0.00
194	2.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.00	0.00	0.50	0.00	0.00</								

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
208	1.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
209	0.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
210	0.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
211	0.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
212	0.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	4.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
213	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	5.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
214	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
215	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
216	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
217	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
218	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3
 FINAL REPORT DRAINAGE DITCH 23 WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 14 DRAINAGE DITCH 23 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
183	HDWTR	0.00283	20.80	0.26	520.90	7.23	6.00	0.63	0.00	0.63	0.00	0.29	0.00	0.00	0.00	0.00	0.00	0.00
183	WSTLD	0.00006	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
183	1.00	0.90	0.00289	2.1	0.01248	0.09	0.09	0.12	2.01	23.18	200.79	0.23	0.00	0.000	0.000	0.012
184	0.90	0.80	0.00289	2.1	0.01248	0.09	0.19	0.12	2.01	23.18	200.79	0.23	0.00	0.000	0.000	0.012
185	0.80	0.70	0.00289	2.1	0.01248	0.09	0.28	0.12	2.01	23.18	200.79	0.23	0.00	0.000	0.000	0.012
186	0.70	0.60	0.00289	2.1	0.01248	0.09	0.37	0.12	2.01	23.18	200.79	0.23	0.00	0.000	0.000	0.012
187	0.60	0.50	0.00289	2.1	0.01248	0.09	0.46	0.12	2.01	23.18	200.79	0.23	0.00	0.000	0.000	0.012
188	0.50	0.40	0.00289	2.1	0.01248	0.09	0.56	0.12	2.01	23.18	200.79	0.23	0.00	0.000	0.000	0.012
189	0.40	0.30	0.00289	2.1	0.01248	0.09	0.65	0.12	2.01	23.18	200.79	0.23	0.00	0.000	0.000	0.012
190	0.30	0.20	0.00289	2.1	0.01248	0.09	0.74	0.12	2.01	23.18	200.79	0.23	0.00	0.000	0.000	0.012
191	0.20	0.10	0.00289	2.1	0.01248	0.09	0.83	0.12	2.01	23.18	200.79	0.23	0.00	0.000	0.000	0.012
192	0.10	0.00	0.00289	2.1	0.01248	0.09	0.93	0.12	2.01	23.18	200.79	0.23	0.00	0.000	0.000	0.012
TOT AVG					0.0125	0.93		0.12	2.01	231.76	2007.89	0.23				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECA 1/da	BOD1 SETT 1/da	ABOD1 DECA 1/da	BOD1 HYDR DECA 1/da	BOD2 DECA 1/da	BOD2 SETT 1/da	ABOD2 DECA 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECA 1/da	NH3-N SRCE 1/da	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECA 1/da	NCM DECA 1/da	NCM SETT 1/da								
183	0.900	8.94	7.41	0.08	0.44	0.00	0.00	0.00	0.00	0.00	0.15	0.21	0.21	0.03	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
184	0.800	8.94	7.41	0.08	0.44	0.00	0.00	0.00	0.00	0.00	0.15	0.21	0.21	0.03	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
185	0.700	8.94	7.41	0.08	0.44	0.00	0.00	0.00	0.00	0.00	0.15	0.20	0.20	0.03	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
186	0.600	8.94	7.41	0.08	0.44	0.00	0.00	0.00	0.00	0.00	0.15	0.20	0.20	0.03	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
187	0.500	8.94	7.41	0.08	0.44	0.00	0.00	0.00	0.00	0.00	0.15	0.20	0.20	0.03	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
188	0.400	8.94	7.41	0.08	0.44	0.00	0.00	0.00	0.00	0.00	0.15	0.20	0.20	0.03	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
189	0.300	8.94	7.41	0.08	0.44	0.00	0.00	0.00	0.00	0.00	0.15	0.20	0.20	0.03	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
190	0.200	8.94	7.41	0.08	0.44	0.00	0.00	0.00	0.00	0.00	0.15	0.20	0.20	0.03	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
191	0.100	8.94	7.41	0.08	0.44	0.00	0.00	0.00	0.00	0.00	0.15	0.20	0.20	0.03	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
192	0.000	8.94	7.41	0.08	0.44	0.00	0.00	0.00	0.00	0.00	0.15	0.20	0.20	0.03	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
AVG 20 DEG C RATE			7.30	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.14			0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00								
*	g/m ² /d		**		mg/L/day																													

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM	ENDING	TEMP	SALN	COND	CL	DO	BOD1	BOD2	EBOD1	EBOD2	ORG-N	NH3-N	NO3-N	TOT-N	EORG-N	ETOT-N	ORG-P	PO4-P	TOT-P	EORG-P	ETOT-P	CHL A	PERIP	COLI	NCM
------	--------	------	------	------	----	----	------	------	-------	-------	-------	-------	-------	-------	--------	--------	-------	-------	-------	--------	--------	-------	-------	------	-----

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

NO.	DIST	deg C	ppt	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	g/m²	#/100mL
183	0.900	20.80	0.26	525.74	8.40	7.04	1.08	0.00	1.08	0.00	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
184	0.800	20.80	0.26	525.74	8.40	7.71	1.06	0.00	1.06	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
185	0.700	20.80	0.26	525.74	8.40	8.11	1.04	0.00	1.04	0.00	0.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
186	0.600	20.80	0.26	525.74	8.40	8.34	1.03	0.00	1.03	0.00	0.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
187	0.500	20.80	0.26	525.74	8.40	8.48	1.01	0.00	1.01	0.00	0.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
188	0.400	20.80	0.26	525.74	8.40	8.56	0.99	0.00	0.99	0.00	0.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
189	0.300	20.80	0.26	525.74	8.40	8.61	0.98	0.00	0.98	0.00	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
190	0.200	20.80	0.26	525.74	8.40	8.64	0.96	0.00	0.96	0.00	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
191	0.100	20.80	0.26	525.74	8.40	8.66	0.95	0.00	0.95	0.00	0.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
192	0.000	20.80	0.26	525.74	8.40	8.67	0.94	0.00	0.94	0.00	0.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
183	0.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
184	0.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
185	0.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
186	0.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
187	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
188	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
189	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
190	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
191	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
192	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0

20 DEG C RATE 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT HIGHWAY 190(DD 5) WATER QUALITY/HYDRAULIC MODEL FOR:
REACH NO. 18 HWY 190 (DRAINAGE DITCH 5) BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
221	HDWTR	0.00283	20.80	0.26	520.90	7.23	6.00	0.63	0.00	0.63	0.00	0.29	0.00	0.00	0.00	0.00	0.00	0.00
221	WSTLD	0.00031	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	8.60	0.00	0.00	0.00	0.00	0.00	0.00
222	WSTLD	0.00051	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	8.60	0.00	0.00	0.00	0.00	0.00	0.00
223	WSTLD	0.00016	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00	0.00	0.00
224	WSTLD	0.00003	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00	0.00	0.00
227	WSTLD	0.00011	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00	0.00	0.00
228	WSTLD	0.00058	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	8.60	0.00	0.00	0.00	0.00	0.00	0.00
230	WSTLD	0.00004	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00	0.00	0.00
231	WSTLD	0.00000	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00	0.00	0.00
232	WSTLD	0.00003	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00	0.00	0.00
233	WSTLD	0.00013	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00	0.00	0.00
234	WSTLD	0.00002	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00	0.00	0.00
235	WSTLD	0.00001	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
221	1.80	1.70	0.00314	9.9	0.01284	0.09	0.09	0.12	2.06	24.49	205.88	0.24	0.00	0.000	0.000	0.013
222	1.70	1.60	0.00365	22.5	0.01351	0.09	0.18	0.13	2.15	27.04	215.37	0.27	0.00	0.000	0.000	0.014
223	1.60	1.50	0.00381	25.7	0.01371	0.08	0.26	0.13	2.18	27.80	218.10	0.28	0.00	0.000	0.000	0.014
224	1.50	1.40	0.00384	26.2	0.01374	0.08	0.34	0.13	2.19	27.93	218.56	0.28	0.00	0.000	0.000	0.014
225	1.40	1.30	0.00384	26.2	0.01374	0.08	0.43	0.13	2.19	27.93	218.56	0.28	0.00	0.000	0.000	0.014
226	1.30	1.20	0.00384	26.2	0.01374	0.08	0.51	0.13	2.19	27.93	218.56	0.28	0.00	0.000	0.000	0.014
227	1.20	1.10	0.00394	28.2	0.01387	0.08	0.60	0.13	2.20	28.44	220.36	0.28	0.00	0.000	0.000	0.014
228	1.10	1.00	0.00452	37.3	0.01452	0.08	0.68	0.14	2.30	31.11	229.55	0.31	0.00	0.000	0.000	0.015
229	1.00	0.90	0.00452	37.3	0.01452	0.08	0.76	0.14	2.30	31.11	229.55	0.31	0.00	0.000	0.000	0.015
230	0.90	0.80	0.00455	37.8	0.01456	0.08	0.84	0.14	2.30	31.27	230.08	0.31	0.00	0.000	0.000	0.015
231	0.80	0.70	0.00456	37.9	0.01457	0.08	0.91	0.14	2.30	31.29	230.14	0.31	0.00	0.000	0.000	0.015
232	0.70	0.60	0.00458	38.2	0.01460	0.08	0.99	0.14	2.31	31.41	230.55	0.31	0.00	0.000	0.000	0.015
233	0.60	0.50	0.00471	39.9	0.01473	0.08	1.07	0.14	2.32	32.00	232.49	0.32	0.00	0.000	0.000	0.015
234	0.50	0.40	0.00473	40.2	0.01476	0.08	1.15	0.14	2.33	32.08	232.78	0.32	0.00	0.000	0.000	0.015
235	0.40	0.30	0.00474	40.3	0.01476	0.08	1.23	0.14	2.33	32.12	232.89	0.32	0.00	0.000	0.000	0.015
236	0.30	0.20	0.00474	40.3	0.01476	0.08	1.31	0.14	2.33	32.12	232.89	0.32	0.00	0.000	0.000	0.015
237	0.20	0.10	0.00474	40.3	0.01476	0.08	1.39	0.14	2.33	32.12	232.89	0.32	0.00	0.000	0.000	0.015
238	0.10	0.00	0.00474	40.3	0.01476	0.08	1.46	0.14	2.33	32.12	232.89	0.32	0.00	0.000	0.000	0.015

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT WEST DRAINAGE CANAL WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 21 WEST DRAINAGE CANAL BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
260	HDWTR	0.00283	20.80	0.26	520.90	7.23	6.00	0.63	0.00	0.63	0.00	0.29	0.00	0.00	0.00	0.00	0.00	0.00
260	WSTLD	0.00063	30.00	0.22	437.30	23.50	2.00	1.33	0.00	1.33	0.00	1.74	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
260	0.30	0.20	0.00346	18.2	0.00770	0.15	0.15	0.15	3.00	45.00	300.00	0.45	30.00	0.002	0.317	0.008
261	0.20	0.10	0.00346	18.2	0.00770	0.15	0.30	0.15	3.00	45.00	300.00	0.45	60.00	0.004	0.317	0.008
262	0.10	0.00	0.00346	18.2	0.00770	0.15	0.45	0.15	3.00	45.00	300.00	0.45	90.00	0.006	0.321	0.008
TOT AVG					0.0077	0.45			3.00	135.00	900.00					

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT 1/da	ABOD1 1/da	BOD1 HYDR 1/da	BOD2 DECAT 1/da	BOD2 SETT 1/da	ABOD2 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAT 1/da	NH3-N SRCE 1/da	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da	
260	0.200	8.94	5.24	0.08	0.34	0.00	0.00	0.00	0.00	0.00	0.15	0.20	0.20	0.03	0.34	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.00	0.00	0.00	0.00
261	0.100	8.93	5.24	0.08	0.34	0.00	0.00	0.00	0.00	0.00	0.15	0.22	0.22	0.03	0.34	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.00	0.00	0.00	0.00	0.00
262	0.000	8.93	5.25	0.08	0.34	0.00	0.00	0.00	0.00	0.00	0.15	0.29	0.29	0.03	0.34	0.00	0.00	0.00	0.00	0.00	0.00	0.46	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE		5.16	0.08	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.14			0.03	0.11	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	
*	g/m²/d		**		mg/L/day																						

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL	NCM	
260	0.200	20.80	0.26	524.23	15.37	6.94	0.92	0.00	1.23	0.00	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.9	0.0	0.00
261	0.100	20.80	0.29	569.32	27.93	7.62	1.31	0.00	1.93	0.00	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.9	0.0	0.00
262	0.000	20.80	0.37	722.79	70.70	7.92	2.71	0.00	3.65	0.00	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.00

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
260	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
261	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	5.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
262	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT DRAINAGE DITCH 6 WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 23 DRAINAGE DITCH 6 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
284	HDWTR	0.00283	20.80	0.26	520.90	7.23	6.00	2.75	0.00	2.75	0.00	1.25	0.00	0.00	0.00	0.00	0.00	0.00
284	WSTLD	0.00001	30.00	0.39	753.60	200.00	2.00	69.00	0.00	69.00	0.00	64.50	0.00	0.00	0.00	0.00	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
284	0.30	0.20	0.00284	0.2	0.01240	0.09	0.09	0.11	2.00	22.89	199.64	0.23	0.00	0.000	0.000	0.012
285	0.20	0.10	0.00284	0.2	0.01240	0.09	0.19	0.11	2.00	22.89	199.64	0.23	0.00	0.000	0.000	0.012
286	0.10	0.00	0.00284	0.2	0.01240	0.09	0.28	0.11	2.00	22.89	199.64	0.23	0.00	0.000	0.000	0.012
TOT AVG					0.0124	0.28		0.11	2.00	68.66	598.92	0.23				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECA	BOD1 SETT	ABOD1 DECA	BOD1 HYDR	BOD2 DECA	BOD2 SETT	ABOD2 DECA	BKGD SOD	FULL SOD	CORR SOD	ORG-N	ORG-N	NH3-N	NH3-N	SRCE	SRCE	HYDR	HYDR	PO4	PHYTO	PERIP	COLI	NCM	NCM	
284	0.200	8.94	7.45	0.08	0.44	0.00	0.00	0.00	0.00	0.00	0.15	0.29	0.29	0.03	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.00	0.00	0.00	0.00
285	0.100	8.94	7.45	0.08	0.44	0.00	0.00	0.00	0.00	0.00	0.15	0.29	0.29	0.03	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.00	0.00	0.00	0.00	0.00
286	0.000	8.94	7.45	0.08	0.44	0.00	0.00	0.00	0.00	0.00	0.15	0.28	0.28	0.03	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			7.34	0.08	0.15	0.00	0.00	0.00	0.00	0.00	0.14			0.03	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	ORGN mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EOG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	NCM	
284	0.200	20.80	0.26	521.34	7.60	7.05	2.77	0.00	3.09	0.00	1.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.9	0.0	0.	0.00
285	0.100	20.80	0.26	521.34	7.60	7.69	2.68	0.00	3.30	0.00	1.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.9	0.0	0.	0.00
286	0.000	20.80	0.26	521.34	7.60	8.08	2.59	0.00	3.53	0.00	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.	0.00

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
284	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.9	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
285	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	5.9	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
286	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
20 DEG C RATE										0.000	0.000	0.000	0.000									0.000	0.000	0.000			

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT TRIBUTARY 2 WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 25 DRAINAGE DITCH 7 - UPLAND BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
295	HDWTR	0.00283	20.80	0.26	520.90	7.23	6.00	2.75	0.00	2.75	0.00	1.25	0.00	0.00	0.00	0.00	0.00	0.00
295	WSTLD	0.00004	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	64.50	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
295	1.50	1.40	0.00288	1.5	0.01246	0.09	0.09	0.12	2.00	23.09	200.45	0.23	0.00	0.000	0.000	0.012
296	1.40	1.30	0.00288	1.5	0.01246	0.09	0.19	0.12	2.00	23.09	200.45	0.23	0.00	0.000	0.000	0.012
297	1.30	1.20	0.00288	1.5	0.01246	0.09	0.28	0.12	2.00	23.09	200.45	0.23	0.00	0.000	0.000	0.012
298	1.20	1.10	0.00288	1.5	0.01246	0.09	0.37	0.12	2.00	23.09	200.45	0.23	0.00	0.000	0.000	0.012
299	1.10	1.00	0.00288	1.5	0.01246	0.09	0.46	0.12	2.00	23.09	200.45	0.23	0.00	0.000	0.000	0.012
300	1.00	0.90	0.00288	1.5	0.01246	0.09	0.56	0.12	2.00	23.09	200.45	0.23	0.00	0.000	0.000	0.012
301	0.90	0.80	0.00288	1.5	0.01246	0.09	0.65	0.12	2.00	23.09	200.45	0.23	0.00	0.000	0.000	0.012
302	0.80	0.70	0.00288	1.5	0.01246	0.09	0.74	0.12	2.00	23.09	200.45	0.23	0.00	0.000	0.000	0.012
303	0.70	0.60	0.00288	1.5	0.01246	0.09	0.84	0.12	2.00	23.09	200.45	0.23	0.00	0.000	0.000	0.012

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

304	0.60	0.50	0.00288	1.5	0.01246	0.09	0.93	0.12	2.00	23.09	200.45	0.23	0.00	0.000	0.000	0.012
TOT						0.93				230.89	2004.47	0.23				
AVG					0.0125			0.12	2.00			0.23				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECA 1/da	BOD1 SETT 1/da	ABOD1 DECA 1/da	BOD1 HYDR 1/da	BOD2 DECA 1/da	BOD2 SETT 1/da	ABOD2 DECA 1/da	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT 1/da	NH3-N DECA 1/da	NH3-N SRCE 1/da	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE	PHYTO PROD **	PERIP PROD **	COLI DECA 1/da	NCM DECA 1/da	NCM SETT 1/da	
295	1.400	8.94	7.43	0.08	0.44	0.00	0.00	0.00	0.00	0.00	0.66	0.85	0.85	0.03	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
296	1.300	8.94	7.43	0.08	0.44	0.00	0.00	0.00	0.00	0.00	0.66	0.85	0.85	0.03	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
297	1.200	8.94	7.43	0.08	0.44	0.00	0.00	0.00	0.00	0.00	0.66	0.84	0.84	0.03	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
298	1.100	8.94	7.43	0.08	0.44	0.00	0.00	0.00	0.00	0.00	0.66	0.84	0.84	0.03	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
299	1.000	8.94	7.43	0.08	0.44	0.00	0.00	0.00	0.00	0.00	0.66	0.84	0.84	0.03	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300	0.900	8.94	7.43	0.08	0.44	0.00	0.00	0.00	0.00	0.00	0.66	0.84	0.84	0.03	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
301	0.800	8.94	7.43	0.08	0.44	0.00	0.00	0.00	0.00	0.00	0.66	0.84	0.84	0.03	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
302	0.700	8.94	7.43	0.08	0.44	0.00	0.00	0.00	0.00	0.00	0.66	0.84	0.84	0.03	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
303	0.600	8.94	7.43	0.08	0.44	0.00	0.00	0.00	0.00	0.00	0.66	0.83	0.83	0.03	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
304	0.500	8.92	7.43	0.08	0.44	0.00	0.00	0.00	0.00	0.00	0.66	0.88	0.88	0.03	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
AVG 20 DEG C RATE			7.31	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.62			0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	
* g/m ² /d			**	mg/L/day																							

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EBORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EBORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	NCM	
295	1.400	20.80	0.26	524.44	8.08	6.74	3.72	0.00	3.72	0.00	2.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
296	1.300	20.80	0.26	524.44	8.08	7.21	3.68	0.00	3.68	0.00	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
297	1.200	20.80	0.26	524.44	8.08	7.49	3.65	0.00	3.65	0.00	2.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
298	1.100	20.80	0.26	524.44	8.08	7.66	3.62	0.00	3.62	0.00	2.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
299	1.000	20.80	0.26	524.44	8.08	7.76	3.58	0.00	3.58	0.00	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300	0.900	20.80	0.26	524.44	8.08	7.82	3.55	0.00	3.55	0.00	2.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
301	0.800	20.80	0.26	524.44	8.08	7.86	3.53	0.00	3.53	0.00	2.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
302	0.700	20.80	0.26	524.44	8.08	7.88	3.50	0.00	3.50	0.00	1.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
303	0.600	20.80	0.26	524.44	8.08	7.89	3.47	0.00	3.47	0.00	1.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
304	0.500	20.80	0.49	928.62	142.47	7.68	4.37	0.00	4.37	0.00	1.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

***** PHYTOPLANKTON AND PERIPLHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCCHI DEPTH m	PHYT N PREP	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREP	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
295	1.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
296	1.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
297	1.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
298	1.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
299	1.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300	0.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
301	0.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
302	0.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
303	0.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
304	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000

NOTE ON NITR PREP: 1.0=NO3 ; 0.0=NH3

FINAL REPORT TRIBUTARY 2 WATER QUALITY/HYDRAULIC MODEL FOR:
REACH NO. 26 TRIBUTARY 2 - TIDAL BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
305	UPR RCH	0.00288	20.80	0.49	928.62	142.47	7.68	4.37	0.00	4.37	0.00	1.99	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
----------	---------------	----------------	------------------------	---------	-----------------	------------------	---------------	---------	---------	-----------------------	-----------------------------	----------------------------	----------------------------	----------------	---------------------------	---------------

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

305	0.50	0.40	0.00288	1.5	0.00040	2.90	3.83	0.60	12.00	720.00	1200.00	7.20	120.00	0.000	0.068	0.001
306	0.40	0.30	0.00288	1.5	0.00040	2.90	6.72	0.60	12.00	720.00	1200.00	7.20	240.00	0.001	0.124	0.001
307	0.30	0.20	0.00288	1.5	0.00040	2.90	9.62	0.60	12.00	720.00	1200.00	7.20	360.00	0.001	0.184	0.001
308	0.20	0.10	0.00288	1.5	0.00040	2.90	12.52	0.60	12.00	720.00	1200.00	7.20	480.00	0.002	0.244	0.002
309	0.10	0.00	0.00288	1.5	0.00040	2.90	15.42	0.60	12.00	720.00	1200.00	7.20	600.00	0.002	0.305	0.002
TOT						14.49				3600.00	6000.00					
AVG				0.0004				0.60	12.00			7.20				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECAT	BOD1 SETT	ABOD1 DECAT	BOD1 HYDR	BOD2 DECAT	BOD2 SETT	ABOD2 DECAT	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECAT	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECAT	NCM DECAT	NCM SETT	
305	0.400	8.91	1.19	0.08	0.08	0.00	0.00	0.00	0.00	0.00	0.66	0.94	0.94	0.03	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
306	0.300	8.90	1.19	0.08	0.08	0.00	0.00	0.00	0.00	0.00	0.66	1.00	1.00	0.03	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.00	0.00	0.00
307	0.200	8.89	1.19	0.08	0.08	0.00	0.00	0.00	0.00	0.00	0.66	1.07	1.07	0.03	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.00	0.00	0.00	0.00
308	0.100	8.88	1.19	0.08	0.08	0.00	0.00	0.00	0.00	0.00	0.66	1.16	1.16	0.03	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.00	0.00	0.00	0.00
309	0.000	8.87	1.19	0.08	0.08	0.00	0.00	0.00	0.00	0.00	0.66	1.26	1.26	0.03	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46	0.00	0.00	0.00	0.00
AVG	20 DEG C	RATE	1.17	0.08	0.02	0.00	0.00	0.00	0.00	0.00	0.62			0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	NCM	
305	0.400	20.80	0.75	1400.12	299.24	7.30	5.49	0.00	5.68	0.00	2.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.8	0.0	0.0	0.00
306	0.300	20.80	0.96	1762.84	419.84	7.10	6.69	0.00	7.07	0.00	2.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.5	0.0	0.0	0.00
307	0.200	20.80	1.13	2083.71	526.53	6.90	8.12	0.00	8.68	0.00	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.3	0.0	0.0	0.00
308	0.100	20.80	1.30	2374.54	623.22	6.67	9.80	0.00	10.55	0.00	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.0	0.0	0.0	0.00
309	0.000	20.80	1.45	2643.50	712.65	6.38	11.77	0.00	12.71	0.00	2.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.0	0.00

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT	PHYT N	PHYT P	PHYT N&P	PHYT TOT	PHYT GROW	PHYT RESP	PHYT DEATH	PHYT SETT	PHYT P/R	PHYTO µg/L	PERI N PREF	PERI LIT	PERI N	PERI P	PERI N&P	PERI SPC	PERI TOT	PERI GROW	PERI RESP	PERI DEATH	PERI P/R	PERI PERIP g/m ²
305	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
306	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
307	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	5.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
308	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
309	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT CANAL 26 WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 29 CANAL 26 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
324	HDWTR	0.00283	20.80	0.26	520.90	7.23	6.00	2.75	0.00	2.75	0.00	1.25	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
324	2.00	1.90	0.00283	0.0	0.00002	46.59	46.59	1.00	114.00	11400.00	11400.00	114.00	1140.00	0.000	0.056	0.000
325	1.90	1.80	0.00283	0.0	0.00002	46.59	93.18	1.00	114.00	11400.00	11400.00	114.00	2280.00	0.001	0.112	0.001
326	1.80	1.70	0.00283	0.0	0.00002	46.59	139.77	1.00	114.00	11400.00	11400.00	114.00	3420.00	0.001	0.169	0.001
327	1.70	1.60	0.00283	0.0	0.00002	46.59	186.36	1.00	114.00	11400.00	11400.00	114.00	4560.00	0.001	0.225	0.001
328	1.60	1.50	0.00283	0.0	0.00002	46.59	232.95	1.00	114.00	11400.00	11400.00	114.00	5700.00	0.001	0.281	0.001
329	1.50	1.40	0.00283	0.0	0.00002	46.59	279.54	1.00	114.00	11400.00	11400.00	114.00	6840.00	0.002	0.337	0.002
330	1.40	1.30	0.00283	0.0	0.00002	46.59	326.13	1.00	114.00	11400.00	11400.00	114.00	7980.00	0.002	0.394	0.002
331	1.30	1.20	0.00283	0.0	0.00002	46.59	372.72	1.00	114.00	11400.00	11400.00	114.00	9120.00	0.002	0.450	0.002
332	1.20	1.10	0.00283	0.0	0.00002	46.59	419.31	1.00	114.00	11400.00	11400.00	114.00	10260.00	0.003	0.506	0.003

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040907, and 040908

Originated: September 21, 2011

ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL	NCM	
346	1.800	20.80	0.28	550.37	14.33	6.23	10.75	0.00	10.85	0.00	8.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.9	0.0	0.0	0.00
347	1.700	20.80	0.28	550.37	14.33	6.69	10.38	0.00	10.57	0.00	8.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.8	0.0	0.0	0.00
348	1.600	20.80	0.28	550.37	14.33	6.99	10.02	0.00	10.31	0.00	8.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.7	0.0	0.0	0.00
349	1.500	20.80	0.28	550.37	14.33	7.18	9.68	0.00	10.07	0.00	8.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.6	0.0	0.0	0.00
350	1.400	20.80	0.28	550.37	14.33	7.31	9.35	0.00	9.84	0.00	7.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.5	0.0	0.0	0.00
351	1.300	20.80	0.30	585.56	22.81	6.74	11.34	0.00	11.92	0.00	13.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.5	0.0	0.0	0.00
352	1.200	20.80	0.30	585.56	22.81	6.98	10.98	0.00	11.66	0.00	13.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.4	0.0	0.0	0.00
353	1.100	20.80	0.30	585.56	22.81	7.14	10.63	0.00	11.41	0.00	12.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.3	0.0	0.0	0.00
354	1.000	20.80	0.30	585.56	22.81	7.26	10.30	0.00	11.17	0.00	12.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.2	0.0	0.0	0.00
355	0.900	20.80	0.30	585.56	22.81	7.35	9.98	0.00	10.95	0.00	11.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.1	0.0	0.0	0.00
356	0.800	20.80	0.73	1362.98	283.14	7.30	8.41	0.00	9.48	0.00	8.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	0.00	

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
346	1.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0
347	1.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	1.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0
348	1.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	2.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0
349	1.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	3.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0
350	1.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	4.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0
351	1.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	5.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0
352	1.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	6.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0
353	1.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	7.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0
354	1.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	8.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0
355	0.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	9.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0
356	0.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0

20 DEG C RATE

0.000 0.000 0.000 0.000

0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT TRIBUTARY 4 WATER QUALITY/HYDRAULIC MODEL FOR:
REACH NO. 32 TRIBUTARY 4 - TIDAL BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
357	UPR RCH	0.00392	20.80	0.73	1362.98	283.14	7.30	8.41	0.00	9.48	0.00	8.33	0.00	0.00	0.00	10.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
357	0.80	0.70	0.00392	27.8	0.00024	4.78	5.73	0.90	18.00	1620.00	1800.00	16.20	180.00	0.000	0.063	0.000
358	0.70	0.60	0.00392	27.8	0.00024	4.78	10.51	0.90	18.00	1620.00	1800.00	16.20	360.00	0.001	0.116	0.001
359	0.60	0.50	0.00392	27.8	0.00024	4.78	15.29	0.90	18.00	1620.00	1800.00	16.20	540.00	0.001	0.172	0.001
360	0.50	0.40	0.00392	27.8	0.00024	4.78	20.07	0.90	18.00	1620.00	1800.00	16.20	720.00	0.001	0.228	0.001
361	0.40	0.30	0.00392	27.8	0.00024	4.78	24.85	0.90	18.00	1620.00	1800.00	16.20	900.00	0.002	0.285	0.002
362	0.30	0.20	0.00392	27.8	0.00024	4.78	29.63	0.90	18.00	1620.00	1800.00	16.20	1080.00	0.002	0.342	0.002
363	0.20	0.10	0.00392	27.8	0.00024	4.78	34.42	0.90	18.00	1620.00	1800.00	16.20	1260.00	0.002	0.399	0.002
364	0.10	0.00	0.00392	27.8	0.00024	4.78	39.20	0.90	18.00	1620.00	1800.00	16.20	1440.00	0.003	0.456	0.002
TOT AVG					0.0002	38.25		0.90	18.00	12960.00	14400.00		16.20			

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE 1/da	BOD1 DECA 1/da	BOD1 SETT 1/da	ABOD1 DECA 1/da	BOD1 HYDR 1/da	BOD2 DECA 1/da	BOD2 SETT 1/da	ABOD2 DECA 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECA 1/da	NH3-N SRCE 1/da	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	SRCE HYDR 1/da	PHYTO PROD *	PERIP PROD **	COLI DECA 1/da	NCM DECA 1/da	NCM SETT 1/da	
357	0.700	8.89	0.79	0.08	0.06	0.00	0.00	0.00	0.00	0.00	0.66	1.03	1.03	0.03	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00
358	0.600	8.88	0.79	0.08	0.06	0.00	0.00	0.00	0.00	0.00	0.66	1.03	1.03	0.03	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00
359	0.500	8.87	0.79	0.08	0.06	0.00	0.00	0.00	0.00	0.00	0.66	1.05	1.05	0.03	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00
360	0.400	8.87	0.79	0.08	0.06	0.00	0.00	0.00	0.00	0.00	0.66	1.09	1.09	0.03	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00
361	0.300	8.86	0.79	0.08	0.06	0.00	0.00	0.00	0.00	0.00	0.66	1.13	1.13	0.03	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00
362	0.200	8.85	0.79	0.08	0.06	0.00	0.00	0.00	0.00	0.00	0.66	1.18	1.18	0.03	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00
363	0.100	8.85	0.79	0.08	0.06	0.00	0.00	0.00	0.00	0.00	0.66	1.24	1.24	0.03	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00
364	0.000	8.85	0.79	0.08	0.06	0.00	0.00	0.00	0.00	0.00	0.66	1.32	1.32	0.03	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

AVG 20 DEG C RATE 0.78 0.08 0.01 0.00 0.00 0.00 0.00 0.00 0.62 0.03 0.01 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	NCM
357	0.700	20.80	1.07	1964.99	484.73	7.13	7.40	0.00	8.47	0.00	5.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	0.00
358	0.600	20.80	1.28	2339.77	610.23	7.07	7.40	0.00	8.47	0.00	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	0.00
359	0.500	20.80	1.44	2635.39	709.22	6.98	7.79	0.00	8.86	0.00	4.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	0.00
360	0.400	20.80	1.58	2883.60	792.33	6.88	8.43	0.00	9.49	0.00	3.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	0.00
361	0.300	20.80	1.70	3100.35	864.92	6.75	9.27	0.00	10.33	0.00	3.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	0.00
362	0.200	20.80	1.81	3294.48	929.92	6.62	10.29	0.00	11.36	0.00	3.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	0.00
363	0.100	20.80	1.91	3471.42	989.17	6.49	11.50	0.00	12.57	0.00	2.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	0.00
364	0.000	20.80	2.00	3634.75	1043.86	6.39	12.91	0.00	13.98	0.00	2.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	0.00

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
357	0.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
358	0.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
359	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
360	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
361	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
362	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
363	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
364	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT BAYOU LIBERTY WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 38 LIBERTY FROM RKM 15.0 TO TRIB 1 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
433	HDWTR	0.02832	20.80	0.26	520.90	7.23	6.00	0.55	0.00	0.55	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
433	15.00	14.90	0.02832	0.0	0.05506	0.02	0.02	0.17	2.99	51.44	299.33	0.51	0.00	0.000	0.000	0.055
434	14.90	14.80	0.02832	0.0	0.05506	0.02	0.04	0.17	2.99	51.44	299.33	0.51	0.00	0.000	0.000	0.055
435	14.80	14.70	0.02832	0.0	0.05506	0.02	0.06	0.17	2.99	51.44	299.33	0.51	0.00	0.000	0.000	0.055
436	14.70	14.60	0.02832	0.0	0.05506	0.02	0.08	0.17	2.99	51.44	299.33	0.51	0.00	0.000	0.000	0.055
437	14.60	14.50	0.02832	0.0	0.05506	0.02	0.11	0.17	2.99	51.44	299.33	0.51	0.00	0.000	0.000	0.055
438	14.50	14.40	0.02832	0.0	0.05506	0.02	0.13	0.17	2.99	51.44	299.33	0.51	0.00	0.000	0.000	0.055
TOT AVG					0.0551	0.13		0.17	2.99	308.63	1795.96	0.51				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECA 1/da	BOD1 SETT 1/da	ABOD1 1/da	BOD1 HYDR 1/da	BOD2 DECA 1/da	BOD2 SETT 1/da	ABOD2 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECA 1/da	NH3-N SRCE 1/da	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECA 1/da	NCM DECA 1/da	NCM SETT 1/da
433	14.900	8.94	8.58	0.08	0.30	0.00	0.00	0.00	0.00	0.00	0.53	0.56	0.56	0.03	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
434	14.800	8.94	8.58	0.08	0.30	0.00	0.00	0.00	0.00	0.00	0.53	0.56	0.56	0.03	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
435	14.700	8.94	8.58	0.08	0.30	0.00	0.00	0.00	0.00	0.00	0.53	0.56	0.56	0.03	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
436	14.600	8.94	8.58	0.08	0.30	0.00	0.00	0.00	0.00	0.00	0.53	0.57	0.57	0.03	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
437	14.500	8.94	8.58	0.08	0.30	0.00	0.00	0.00	0.00	0.00	0.53	0.57	0.57	0.03	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
438	14.400	8.94	8.58	0.08	0.30	0.00	0.00	0.00	0.00	0.00	0.53	0.57	0.57	0.03	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE		8.44	0.08	0.05	0.00	0.00	0.00	0.00	0.00	0.50		0.03	0.05	0.00	0.00	0.10	0.00	0.00	0.00					0.00	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

***** WATER QUALITY CONSTITUENT VALUES *****																											
ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL	NCM		
463	14.300	20.80	0.26	520.93	7.24	7.82	0.94	0.00	0.94	0.00	0.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00		
464	14.200	20.80	0.26	520.93	7.24	7.91	0.98	0.00	0.98	0.00	0.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00		
465	14.100	20.80	0.26	520.93	7.24	7.99	1.03	0.00	1.03	0.00	0.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00		
466	14.000	20.80	0.26	520.93	7.24	8.06	1.07	0.00	1.07	0.00	0.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00		
467	13.900	20.80	0.26	520.93	7.24	8.11	1.12	0.00	1.12	0.00	0.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00		
468	13.800	20.80	0.26	520.93	7.24	8.16	1.16	0.00	1.16	0.00	0.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00		
469	13.700	20.80	0.26	520.93	7.24	8.20	1.21	0.00	1.21	0.00	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00		

***** PHYTOPLANKTON AND PERIPHYTON DATA *****																											
ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW	PHYT RESP	PHYT DEATH	PHYT SETT	PHYT P/R	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW	PERI RESP	PERI DEATH	PERI P/R	PERIP g/m²	
463	14.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
464	14.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
465	14.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
466	14.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
467	13.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
468	13.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
469	13.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000
 NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT BAYOU LIBERTY WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 42 LIBERTY FROM DD22 TO DD20 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****																		
ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
473	UPR RCH	0.03116	20.80	0.26	520.93	7.24	8.20	1.21	0.00	1.21	0.00	0.82	0.00	0.00	0.00	0.00	0.00	0.00
473	TRIB	0.01795	20.80	0.50	969.04	127.47	5.13	9.33	0.00	9.33	0.00	7.01	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****																	
ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s	
473	13.70	13.60	0.04910	30.8	0.02075	0.06	0.32	0.34	7.06	236.66	706.02	2.37	0.00	0.000	0.000	0.021	
474	13.60	13.50	0.04910	30.8	0.02075	0.06	0.38	0.34	7.06	236.66	706.02	2.37	0.00	0.000	0.000	0.021	
475	13.50	13.40	0.04910	30.8	0.02075	0.06	0.44	0.34	7.06	236.66	706.02	2.37	0.00	0.000	0.000	0.021	
476	13.40	13.30	0.04910	30.8	0.02075	0.06	0.49	0.34	7.06	236.66	706.02	2.37	0.00	0.000	0.000	0.021	
477	13.30	13.20	0.04910	30.8	0.02075	0.06	0.55	0.34	7.06	236.66	706.02	2.37	0.00	0.000	0.000	0.021	
478	13.20	13.10	0.04910	30.8	0.02075	0.06	0.60	0.34	7.06	236.66	706.02	2.37	0.00	0.000	0.000	0.021	
479	13.10	13.00	0.04910	30.8	0.02075	0.06	0.66	0.34	7.06	236.66	706.02	2.37	0.00	0.000	0.000	0.021	
480	13.00	12.90	0.04910	30.8	0.02075	0.06	0.71	0.34	7.06	236.66	706.02	2.37	0.00	0.000	0.000	0.021	
481	12.90	12.80	0.04910	30.8	0.02075	0.06	0.77	0.34	7.06	236.66	706.02	2.37	0.00	0.000	0.000	0.021	
TOT AVG					0.0207	0.50			7.06	2129.95	6354.20	2.37					

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****																											
ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER 1/da	BOD1 DECAT 1/da	BOD1 ABOD1 1/da	BOD1 1/da	BOD2 1/da	BOD2 ABOD2 1/da	BOD2 HYDR DECAT 1/da	BKGD * 1/da	FULL SOD * 1/da	CORR HYDR * 1/da	ORG-N 1/da	ORG-N 1/da	NH3-N 1/da	NH3-N 1/da	DENIT * 1/da	ORG-P 1/da	ORG-P 1/da	PO4 SRCE * 1/da	PHYTO ** 1/da	PERIP ** 1/da	COLI PROD 1/da	NCM DECAT 1/da	NCM SETT 1/da		
473	13.600	8.93	2.91	0.08	0.15	0.00	0.00	0.00	0.00	0.00	0.71	0.92	0.92	0.03	0.15	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00		
474	13.500	8.93	2.91	0.08	0.15	0.00	0.00	0.00	0.00	0.00	0.71	0.93	0.93	0.03	0.15	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.00	0.00	0.00		
475	13.400	8.93	2.91	0.08	0.15	0.00	0.00	0.00	0.00	0.00	0.71	0.93	0.93	0.03	0.15	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00		
476	13.300	8.93	2.91	0.08	0.15	0.00	0.00	0.00	0.00	0.00	0.71	0.93	0.93	0.03	0.15	0.00	0.00	0.00	0.00	0.00	0.23	0.00	0.00	0.00	0.00		
477	13.200	8.93	2.91	0.08	0.15	0.00	0.00	0.00	0.00	0.00	0.71	0.93	0.93	0.03	0.15	0.00	0.00	0.00	0.00	0.00	0.29	0.00	0.00	0.00	0.00		
478	13.100	8.93	2.91	0.08	0.15	0.00	0.00	0.00	0.00	0.00	0.71	0.93	0.93	0.03	0.15	0.00	0.00	0.00	0.00	0.00	0.35	0.00	0.00	0.00	0.00		
479	13.000	8.93	2.91	0.08	0.15	0.00	0.00	0.00	0.00	0.00	0.71	0.93	0.93	0.03	0.15	0.00	0.00	0.00	0.00	0.00	0.40	0.00	0.00	0.00	0.00		
480	12.900	8.93	2.91	0.08	0.15	0.00	0.00	0.00	0.00	0.00	0.71	0.94	0.94	0.03	0.15	0.00	0.00	0.00	0.00	0.00	0.46	0.00	0.00	0.00	0.00		
481	12.800	8.93	2.91	0.08	0.15	0.00	0.00	0.00	0.00	0.00	0.71	0.94	0.94	0.03	0.15	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00		
AVG 20 DEG C RATE		2.87	0.08	0.02	0.00	0.00	0.00	0.00	0.00	0.68		0.03	0.02	0.00	0.00	0.10	0.00	0.00	0.00			0.00	0.00	0.00			

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

No.	DIST	deg C	ppt	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	g/m²	#/100mL			
509	12.700	20.80	0.34	672.62	48.79	7.82	4.63	0.00	5.70	0.00	3.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	0.00	
510	12.600	20.80	0.34	672.62	48.79	7.84	4.64	0.00	5.71	0.00	3.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	0.00

PHYTOPLANKTON AND PERIPHYTON DATA

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
509	12.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
510	12.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20 DEG C RATE				0.000										0.000											

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT BAYOU LIBERTY WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 45 LIBERTY FROM BL03 TO HWY 190 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

REACH INPUTS

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
511	UPR RCH	0.05631	20.80	0.34	672.62	48.79	7.84	4.64	0.00	5.71	0.00	3.86	0.00	0.00	0.00	10.00	0.00	0.00

HYDRAULIC PARAMETER VALUES

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s	
511	12.60	12.50	0.05631	34.6	0.01350	0.09	1.03	0.47	8.84	417.25	884.00	4.17	265.20	0.002	0.722	0.013	
512	12.50	12.40	0.05631	34.6	0.01350	0.09	1.11	0.47	8.84	417.25	884.00	4.17	353.60	0.002	0.722	0.013	
513	12.40	12.30	0.05631	34.6	0.01350	0.09	1.20	0.47	8.84	417.25	884.00	4.17	442.00	0.003	0.722	0.013	
514	12.30	12.20	0.05631	34.6	0.01350	0.09	1.29	0.47	8.84	417.25	884.00	4.17	530.40	0.004	0.722	0.013	
515	12.20	12.10	0.05631	34.6	0.01350	0.09	1.37	0.47	8.84	417.25	884.00	4.17	618.80	0.004	0.722	0.013	
516	12.10	12.00	0.05631	34.6	0.01350	0.09	1.46	0.47	8.84	417.25	884.00	4.17	707.20	0.005	0.722	0.013	
517	12.00	11.90	0.05631	34.6	0.01350	0.09	1.54	0.47	8.84	417.25	884.00	4.17	795.60	0.005	0.722	0.013	
518	11.90	11.80	0.05631	34.6	0.01350	0.09	1.63	0.47	8.84	417.25	884.00	4.17	884.00	0.006	0.722	0.013	
519	11.80	11.70	0.05631	34.6	0.01350	0.09	1.71	0.47	8.84	417.25	884.00	4.17	972.40	0.007	0.722	0.013	
520	11.70	11.60	0.05631	34.6	0.01350	0.09	1.80	0.47	8.84	417.25	884.00	4.17	1060.80	0.007	0.722	0.013	
521	11.60	11.50	0.05631	34.6	0.01350	0.09	1.89	0.47	8.84	417.25	884.00	4.17	1149.20	0.008	0.722	0.013	
522	11.50	11.40	0.05631	34.6	0.01350	0.09	1.97	0.47	8.84	417.25	884.00	4.17	1237.60	0.008	0.722	0.013	
523	11.40	11.30	0.05631	34.6	0.01350	0.09	2.06	0.47	8.84	417.25	884.00	4.17	1326.00	0.009	0.722	0.013	
524	11.30	11.20	0.05631	34.6	0.01350	0.09	2.14	0.47	8.84	417.25	884.00	4.17	1414.40	0.010	0.726	0.014	
525	11.20	11.10	0.05631	34.6	0.01350	0.09	2.23	0.47	8.84	417.25	884.00	4.17	1502.80	0.010	0.738	0.014	
526	11.10	11.00	0.05631	34.6	0.01350	0.09	2.31	0.47	8.84	417.25	884.00	4.17	1591.20	0.011	0.753	0.014	
527	11.00	10.90	0.05631	34.6	0.01350	0.09	2.40	0.47	8.84	417.25	884.00	4.17	1679.60	0.011	0.771	0.014	
528	10.90	10.80	0.05631	34.6	0.01350	0.09	2.49	0.47	8.84	417.25	884.00	4.17	1768.00	0.012	0.791	0.015	
529	10.80	10.70	0.05631	34.6	0.01350	0.09	2.57	0.47	8.84	417.25	884.00	4.17	1856.40	0.013	0.812	0.015	
530	10.70	10.60	0.05631	34.6	0.01350	0.09	2.66	0.47	8.84	417.25	884.00	4.17	1944.80	0.013	0.834	0.016	
531	10.60	10.50	0.05631	34.6	0.01350	0.09	2.74	0.47	8.84	417.25	884.00	4.17	2033.20	0.014	0.858	0.016	
532	10.50	10.40	0.05631	34.6	0.01350	0.09	2.83	0.47	8.84	417.25	884.00	4.17	2121.60	0.014	0.882	0.016	
533	10.40	10.30	0.05631	34.6	0.01350	0.09	2.91	0.47	8.84	417.25	884.00	4.17	2210.00	0.015	0.907	0.017	
534	10.30	10.20	0.05631	34.6	0.01350	0.09	3.00	0.47	8.84	417.25	884.00	4.17	2298.40	0.015	0.932	0.017	
535	10.20	10.10	0.05631	34.6	0.01350	0.09	3.09	0.47	8.84	417.25	884.00	4.17	2386.80	0.016	0.958	0.018	
TOT AVG					0.0135	2.14	0.47		8.84	10431.20	22100.00	4.17					

BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE 1/da	BOD1 DECA 1/da	BOD1 SETT DECA 1/da	ABOD1 DECA 1/da	BOD1 HYDR DECA 1/da	BOD2 DECA 1/da	BOD2 SETT DECA 1/da	ABOD2 DECA 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT DECA 1/da	NH3-N SRCE 1/da	NH3-N DENIT 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECA 1/da	NCM DECA 1/da	NCM SETT 1/da	
511	12.500	8.93	1.84	0.08	0.11	0.00	0.00	0.00	0.00	0.00	0.45	0.68	0.68	0.03	0.11	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00	0.00
512	12.400	8.93	1.84	0.08	0.11	0.00	0.00	0.00	0.00	0.00	0.45	0.68	0.68	0.03	0.11	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00	0.00
513	12.300	8.93	1.84	0.08	0.11	0.00	0.00	0.00	0.00	0.00	0.45	0.68	0.68	0.03	0.11	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00	0.00
514	12.200	8.93	1.84	0.08	0.11	0.00	0.00	0.00	0.00	0.00	0.45	0.68	0.68	0.03	0.11	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00	0.00
515	12.100	8.93	1.84	0.08	0.11	0.00	0.00	0.00	0.00	0.00	0.45	0.69	0.69	0.03	0.11	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00	0.00
516	12.000	8.93	1.84	0.08	0.11	0.00	0.00	0.00	0.00	0.00	0.45	0.69	0.69	0.03	0.11	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00	0.00
517	11.900	8.93	1.84	0.08	0.11	0.00	0.00	0.00	0.00	0.00	0.45	0.69	0.69	0.03	0.11	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00	0.00
518	11.800	8.93	1.84	0.08	0.11	0.00	0.00	0.00	0.00	0.00	0.45	0.69	0.69	0.03	0.11	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00	0.00
519	11.700	8.93	1.84	0.08	0.11	0.00	0.00	0.00	0.00	0.00	0.45	0.69	0.69	0.03	0.11	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00	0.00
520	11.600	8.93	1.84	0.08	0.11	0.00	0.00	0.00	0.00	0.00	0.45	0.69	0.69	0.03	0.11	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

521	11.500	8.93	1.84	0.08	0.11	0.00	0.00	0.00	0.00	0.00	0.45	0.69	0.69	0.03	0.11	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00
522	11.400	8.93	1.84	0.08	0.11	0.00	0.00	0.00	0.00	0.00	0.45	0.69	0.69	0.03	0.11	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00
523	11.300	8.93	1.84	0.08	0.11	0.00	0.00	0.00	0.00	0.00	0.45	0.69	0.69	0.03	0.11	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00
524	11.200	8.93	1.85	0.08	0.11	0.00	0.00	0.00	0.00	0.00	0.45	0.69	0.69	0.03	0.11	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00
525	11.100	8.93	1.85	0.08	0.11	0.00	0.00	0.00	0.00	0.00	0.45	0.69	0.69	0.03	0.11	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00
526	11.000	8.93	1.86	0.08	0.11	0.00	0.00	0.00	0.00	0.00	0.45	0.69	0.69	0.03	0.11	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00
527	10.900	8.93	1.87	0.08	0.11	0.00	0.00	0.00	0.00	0.00	0.45	0.69	0.69	0.03	0.11	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00
528	10.800	8.93	1.88	0.08	0.11	0.00	0.00	0.00	0.00	0.00	0.45	0.69	0.69	0.03	0.11	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00
529	10.700	8.93	1.90	0.08	0.11	0.00	0.00	0.00	0.00	0.00	0.45	0.69	0.69	0.03	0.11	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00
530	10.600	8.93	1.91	0.08	0.11	0.00	0.00	0.00	0.00	0.00	0.45	0.69	0.69	0.03	0.11	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00
531	10.500	8.93	1.92	0.08	0.11	0.00	0.00	0.00	0.00	0.00	0.45	0.69	0.69	0.03	0.11	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00
532	10.400	8.93	1.94	0.08	0.11	0.00	0.00	0.00	0.00	0.00	0.45	0.69	0.69	0.03	0.11	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00
533	10.300	8.93	1.95	0.08	0.11	0.00	0.00	0.00	0.00	0.00	0.45	0.69	0.69	0.03	0.11	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00
534	10.200	8.93	1.96	0.08	0.11	0.00	0.00	0.00	0.00	0.00	0.45	0.70	0.70	0.03	0.11	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00
535	10.100	8.93	1.98	0.08	0.11	0.00	0.00	0.00	0.00	0.00	0.45	0.72	0.72	0.03	0.11	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00

AVG 20 DEG C RATE 1.84 0.08 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.43 0.03 0.00 0.00 0.00 0.10 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL	NCM
511	12.500	20.80	0.34	672.62	48.79	7.88	4.65	0.00	5.72	0.00	3.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	0.00
512	12.400	20.80	0.34	672.62	48.79	7.91	4.66	0.00	5.72	0.00	3.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	0.00
513	12.300	20.80	0.34	672.62	48.79	7.94	4.66	0.00	5.73	0.00	3.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	0.00
514	12.200	20.80	0.34	672.62	48.79	7.97	4.67	0.00	5.73	0.00	3.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	0.00
515	12.100	20.80	0.34	672.62	48.79	7.99	4.67	0.00	5.74	0.00	3.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	0.00
516	12.000	20.80	0.34	672.62	48.79	8.01	4.68	0.00	5.75	0.00	3.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	0.00
517	11.900	20.80	0.34	672.62	48.79	8.03	4.68	0.00	5.75	0.00	3.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	0.00
518	11.800	20.80	0.34	672.62	48.79	8.05	4.69	0.00	5.76	0.00	3.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	0.00
519	11.700	20.80	0.34	672.62	48.79	8.06	4.69	0.00	5.76	0.00	3.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	0.00
520	11.600	20.80	0.34	672.62	48.79	8.07	4.70	0.00	5.77	0.00	3.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	0.00
521	11.500	20.80	0.34	672.62	48.79	8.08	4.70	0.00	5.77	0.00	3.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	0.00
522	11.400	20.80	0.34	672.62	48.79	8.09	4.71	0.00	5.78	0.00	3.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	0.00
523	11.300	20.80	0.34	672.62	48.79	8.10	4.71	0.00	5.78	0.00	3.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	0.00
524	11.200	20.80	0.34	672.62	48.79	8.11	4.72	0.00	5.79	0.00	3.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	0.00
525	11.100	20.80	0.34	672.62	48.79	8.11	4.72	0.00	5.79	0.00	3.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	0.00
526	11.000	20.80	0.34	672.62	48.79	8.12	4.73	0.00	5.80	0.00	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	0.00
527	10.900	20.80	0.34	672.62	48.79	8.13	4.73	0.00	5.80	0.00	3.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	0.00
528	10.800	20.80	0.34	672.61	48.79	8.13	4.74	0.00	5.81	0.00	3.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	0.00
529	10.700	20.80	0.34	672.61	48.79	8.14	4.74	0.00	5.81	0.00	3.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	0.00
530	10.600	20.80	0.34	672.59	48.79	8.14	4.75	0.00	5.82	0.00	3.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	0.00
531	10.500	20.80	0.34	672.54	48.77	8.15	4.76	0.00	5.83	0.00	3.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	0.00
532	10.400	20.80	0.34	672.42	48.74	8.15	4.79	0.00	5.86	0.00	3.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	0.00
533	10.300	20.80	0.34	672.14	48.66	8.15	4.84	0.00	5.91	0.00	3.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	0.00
534	10.200	20.80	0.34	671.43	48.46	8.15	4.97	0.00	6.03	0.00	3.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	0.00
535	10.100	20.80	0.34	669.73	47.98	8.12	5.27	0.00	6.34	0.00	3.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	0.00

***** PHYTOPLANKTON AND PERIPLHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE	SECCHI DEPTH m	PHYT PREF	PHYT LIT	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW	PHYT RESP	PHYT DEATH	PHYT SETT	PHYT P/R	PHYTO µg/L	PERI PREF	PERI LIT	PERI N LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT	PERI GROW	PERI RESP	PERI DEATH	PERI P/R	PERIP g/m²
511	12.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
512	12.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
513	12.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
514	12.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
515	12.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
516	12.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
517	11.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.0															

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT BAYOU LIBERTY WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 47 LIBERTY FROM HWY 190 TO BL04 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
559	UPR RCH	0.05631	20.80	0.34	669.73	47.98	8.12	5.27	0.00	6.34	0.00	3.13	0.00	0.00	0.00	10.00	0.00	0.00
559	TRIB	0.00365	20.80	0.29	573.07	19.80	8.53	3.35	0.00	4.42	0.00	4.55	0.00	0.00	0.00	10.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
559	10.10	10.00	0.05996	33.9	0.00230	0.50	3.59	1.40	18.60	2604.00	1860.00	26.04	2572.80	0.003	0.408	0.003
TOT AVG					0.0023	0.50		1.40	18.60	2604.00	1860.00	26.04				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECA 1/da	BOD1 SETT 1/da	ABOD1 DECA 1/da	BOD1 HYDR 1/da	BOD2 DECA 1/da	BOD2 SETT 1/da	ABOD2 DECA 1/da	BKGD SOD *	FULL SOD *	CORR HYDR *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N SRCE *	NO3-N DENIT 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4-P SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECA 1/da	NCM DECA 1/da	NCM SETT 1/da	
559	10.000	8.93	0.51	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.33	0.61	0.61	0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.50	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.31			0.03	0.04	0.00	0.00	0.10	0.00	0.00			0.00	0.00	0.00	

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL	NCM
559	10.000	20.80	0.34	667.51	47.36	8.08	5.66	0.00	6.73	0.00	3.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.	0.00

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²	
559	10.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20 DEG C RATE										0.000	0.000	0.000	0.000									0.000	0.000	0.000			

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT BAYOU LIBERTY WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 48 LIBERTY FROM BL04 TO DD18 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
560	UPR RCH	0.05996	20.80	0.34	667.51	47.36	8.08	5.66	0.00	6.73	0.00	3.21	0.00	0.00	0.00	10.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
560	10.00	9.90	0.05996	33.9	0.00230	0.50	4.09	1.40	18.60	2604.00	1860.00	26.04	2758.80	0.003	0.430	0.003

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

561	9.90	9.80	0.05996	33.9	0.00230	0.50	4.59	1.40	18.60	2604.00	1860.00	26.04	2944.80	0.003	0.453	0.003
562	9.80	9.70	0.05996	33.9	0.00230	0.50	5.10	1.40	18.60	2604.00	1860.00	26.04	3130.80	0.003	0.477	0.004
563	9.70	9.60	0.05996	33.9	0.00230	0.50	5.60	1.40	18.60	2604.00	1860.00	26.04	3316.80	0.004	0.501	0.004
564	9.60	9.50	0.05996	33.9	0.00230	0.50	6.10	1.40	18.60	2604.00	1860.00	26.04	3502.80	0.004	0.525	0.004
565	9.50	9.40	0.05996	33.9	0.00230	0.50	6.60	1.40	18.60	2604.00	1860.00	26.04	3688.80	0.004	0.549	0.004
566	9.40	9.30	0.05996	33.9	0.00230	0.50	7.11	1.40	18.60	2604.00	1860.00	26.04	3874.80	0.004	0.574	0.004
567	9.30	9.20	0.05996	33.9	0.00230	0.50	7.61	1.40	18.60	2604.00	1860.00	26.04	4060.80	0.004	0.598	0.005
568	9.20	9.10	0.05996	33.9	0.00230	0.50	8.11	1.40	18.60	2604.00	1860.00	26.04	4246.80	0.005	0.623	0.005
569	9.10	9.00	0.05996	33.9	0.00230	0.50	8.62	1.40	18.60	2604.00	1860.00	26.04	4432.80	0.005	0.648	0.005
570	9.00	8.90	0.05996	33.9	0.00230	0.50	9.12	1.40	18.60	2604.00	1860.00	26.04	4618.80	0.005	0.674	0.005
571	8.90	8.80	0.05996	33.9	0.00230	0.50	9.62	1.40	18.60	2604.00	1860.00	26.04	4804.80	0.005	0.699	0.005
572	8.80	8.70	0.05996	33.9	0.00230	0.50	10.12	1.40	18.60	2604.00	1860.00	26.04	4990.80	0.005	0.724	0.005
573	8.70	8.60	0.05996	33.9	0.00230	0.50	10.63	1.40	18.60	2604.00	1860.00	26.04	5176.80	0.006	0.750	0.006
574	8.60	8.50	0.05996	33.9	0.00230	0.50	11.13	1.40	18.60	2604.00	1860.00	26.04	5362.80	0.006	0.775	0.006
575	8.50	8.40	0.05996	33.9	0.00230	0.50	11.63	1.40	18.60	2604.00	1860.00	26.04	5548.80	0.006	0.801	0.006
TOT						8.04				41664.00	29760.00					
AVG					0.0023			1.40	18.60			26.04				

BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST	SAT D.O.	REARER RATE	BOD1 DECA	BOD1 DECA	BOD1 DECA	BOD1 DECA	BOD2 DECA	BOD2 DECA	BOD2 DECA	BOD2 DECA	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECA	NH3-N DECA	DENIT SRCE	ORG-P RATE	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECA	NCM DECA	NCM DECA			
		mg/L	1/da	1/da	1/da	1/da	1/da	1/da	1/da	1/da	1/da	*	*	*	1/da	1/da	1/da	*	1/da	1/da	*	**	**	**	1/da	1/da	1/da			
560	9.900	8.93	0.51	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.57	0.57	0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.00	0.00	0.00	0.00			
561	9.800	8.93	0.51	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.58	0.58	0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
562	9.700	8.93	0.51	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.59	0.59	0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
563	9.600	8.93	0.51	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.60	0.60	0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
564	9.500	8.93	0.51	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.61	0.61	0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
565	9.400	8.93	0.51	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.62	0.62	0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
566	9.300	8.93	0.51	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.63	0.63	0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
567	9.200	8.93	0.51	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.64	0.64	0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
568	9.100	8.93	0.51	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.65	0.65	0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
569	9.000	8.93	0.51	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.66	0.66	0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
570	8.900	8.93	0.51	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.66	0.66	0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
571	8.800	8.93	0.51	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.67	0.67	0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
572	8.700	8.93	0.51	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.68	0.68	0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
573	8.600	8.93	0.51	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.69	0.69	0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
574	8.500	8.93	0.51	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.70	0.70	0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
575	8.400	8.93	0.51	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.71	0.71	0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
AVG	20	DEG C	RATE	0.50	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.26			0.03	0.00	0.00	0.00	0.10	0.00	0.00	0.00		0.00	0.00	0.00	0.00			
*				g/m ² /d																										
**				mg/L/day																										

WATER QUALITY CONSTITUENT VALUES

ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EBORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EBORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	NCM	
560	9.900	20.80	0.34	668.04	47.54	8.04	5.90	0.00	6.93	0.00	3.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.6	0.0	0.0	0.00
561	9.800	20.80	0.34	668.81	47.80	7.99	6.13	0.00	7.11	0.00	3.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.1	0.0	0.0	0.00
562	9.700	20.80	0.34	669.92	48.19	7.93	6.35	0.00	7.28	0.00	3.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.7	0.0	0.0	0.00
563	9.600	20.80	0.34	671.50	48.73	7.87	6.55	0.00	7.43	0.00	2.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.3	0.0	0.0	0.00
564	9.500	20.80	0.34	673.73	49.50	7.80	6.74	0.00	7.58	0.00	2.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.9	0.0	0.0	0.00
565	9.400	20.80	0.35	676.80	50.56	7.73	6.92	0.00	7.72	0.00	2.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.4	0.0	0.0	0.00
566	9.300	20.80	0.35	681.01	52.00	7.66	7.10	0.00	7.85	0.00	2.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.0	0.0	0.0	0.00
567	9.200	20.80	0.35	686.68	53.96	7.59	7.26	0.00	7.97	0.00	2.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.6	0.0	0.0	0.00
568	9.100	20.80	0.36	694.27	56.57	7.51	7.42	0.00	8.08	0.00	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.2	0.0	0.0	0.00
569	9.000	20.80	0.36	704.30	60.02	7.44	7.58	0.00	8.19	0.00	2.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.8	0.0	0.0	0.00
570	8.900	20.80	0.37	717.45	64.54	7.36	7.74	0.00	8.31	0.00	2.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.3	0.0	0.0	0.00
571	8.800	20.80	0.38	734.53	70.42	7.29	7.89	0.00	8.42	0.00	2.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.9	0.0	0.0	0.00
572	8.700	20.80	0.39	756.52	77.99	7.21	8.06	0.00	8.54	0.00	2.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.5	0.0	0.0	0.00
573	8.600	20.80	0.41	784.62	87.66	7.13	8.23	0.00	8.66	0.00	2.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.0	0.0	0.0	0.00
574	8.500	20.80	0.43	820.26	99.93	7.05	8.42	0.00	8.81	0.00	2.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.6	0.0	0.0	0.00
575	8.400	20.80	0.45	865.16	115.38	6.97	8.63	0.00	8.97	0.00	2.52	0.00														

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
650	6.90	6.80	0.08557	43.7	0.00088	1.32	28.44	2.28	42.67	9728.76	4267.00	97.29	10931.80	0.003	1.885	0.003
651	6.80	6.70	0.08557	43.7	0.00088	1.32	29.75	2.28	42.67	9728.76	4267.00	97.29	11358.50	0.003	1.957	0.003
652	6.70	6.60	0.08557	43.7	0.00088	1.32	31.07	2.28	42.67	9728.76	4267.00	97.29	11785.20	0.003	2.029	0.003
653	6.60	6.50	0.08557	43.7	0.00088	1.32	32.39	2.28	42.67	9728.76	4267.00	97.29	12211.90	0.004	2.102	0.004
654	6.50	6.40	0.08557	43.7	0.00088	1.32	33.70	2.28	42.67	9728.76	4267.00	97.29	12638.60	0.004	2.174	0.004
655	6.40	6.30	0.08557	43.7	0.00088	1.32	35.02	2.28	42.67	9728.76	4267.00	97.29	13065.30	0.004	2.247	0.004
TOT AVG				0.0009		7.90		2.28	42.67	58372.55	25602.00	97.29				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECA	BOD1 SETT	ABOD1 DECA	BOD1 HYDR	BOD2 DECA	BOD2 SETT	ABOD2 DECA	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECA	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECA	NCM DECA	NCM SETT
650	6.800	8.90	0.36	0.08	0.02	0.00	0.00	0.00	0.00	0.00	0.08	0.30	0.30	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00
651	6.700	8.90	0.36	0.08	0.02	0.00	0.00	0.00	0.00	0.00	0.08	0.31	0.31	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00
652	6.600	8.90	0.36	0.08	0.02	0.00	0.00	0.00	0.00	0.00	0.08	0.31	0.31	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00
653	6.500	8.89	0.36	0.08	0.02	0.00	0.00	0.00	0.00	0.00	0.08	0.31	0.31	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00
654	6.400	8.89	0.36	0.08	0.02	0.00	0.00	0.00	0.00	0.00	0.08	0.31	0.31	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00
655	6.300	8.89	0.36	0.08	0.02	0.00	0.00	0.00	0.00	0.00	0.08	0.31	0.31	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.35	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.08			0.03	0.00	0.00	0.00	0.10	0.00	0.00	0.00			0.00	0.00	0.00

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	NCM
650	6.800	20.80	0.98	1805.54	433.86	6.17	10.92	0.00	11.26	0.00	2.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.	0.00
651	6.700	20.80	1.01	1858.96	451.70	6.18	10.95	0.00	11.30	0.00	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.	0.00
652	6.600	20.80	1.04	1912.79	469.67	6.18	10.99	0.00	11.34	0.00	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.	0.00
653	6.500	20.80	1.07	1967.03	487.78	6.18	11.04	0.00	11.39	0.00	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.	0.00
654	6.400	20.80	1.10	2021.66	506.02	6.18	11.10	0.00	11.45	0.00	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.	0.00
655	6.300	20.80	1.13	2076.68	524.38	6.18	11.17	0.00	11.52	0.00	2.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.	0.00

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P TOT LIM	PHYT TOT GROW	PHYT RESP	PHYT DEATH	PHYT SETT P/R	PHYT RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P SPC	PERI TOT GROW	PERI RESP	PERI DEATH	PERI P/R	PERIP g/m ²		
650	6.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	
651	6.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	
652	6.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	
653	6.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	
654	6.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	
655	6.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	
20 DEG C RATE									0.000	0.000	0.000	0.000										0.000	0.000	0.000		

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT BAYOU LIBERTY WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 56 LIBERTY FROM RKM 6.3 TO RKM 6.0 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
656	UPR RCH	0.08557	20.80	1.13	2076.68	524.38	6.18	11.17	0.00	11.52	0.00	2.31	0.00	0.00	0.00	3.20	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
656	6.300	6.300	0.08557	43.7	0.00088	1.32	35.02	2.28	42.67	9728.76	4267.00	97.29	13065.30	0.004	2.247	0.004

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

656	6.30	6.20	0.08557	43.7	0.00127	0.91	35.93	1.70	39.69	6747.30	3969.00	67.47	13462.20	0.006	2.613	0.006
657	6.20	6.10	0.08557	43.7	0.00127	0.91	36.84	1.70	39.69	6747.30	3969.00	67.47	13859.10	0.006	2.690	0.006
658	6.10	6.00	0.08557	43.7	0.00127	0.91	37.76	1.70	39.69	6747.30	3969.00	67.47	14256.00	0.006	2.766	0.006
TOT						2.74				20241.90	11907.00					
AVG				0.0013				1.70	39.69			67.47				

BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECA 1/da	BOD1 SETT 1/da	ABOD1 DECA 1/da	BOD1 HYDR 1/da	BOD2 DECA 1/da	BOD2 SETT 1/da	ABOD2 DECA 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECA 1/da	NH3-N SETT 1/da	SRCE RATE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECA 1/da	NCM DECA 1/da	NCM SETT 1/da	
656	6.200	8.89	0.48	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.03	0.61	0.61	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00	0.00
657	6.100	8.89	0.48	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.03	0.61	0.61	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00	0.00
658	6.000	8.88	0.48	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.03	0.62	0.62	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00	0.00
AVG	20 DEG C	RATE	0.47	0.08	0.01	0.00	0.00	0.00	0.00	0.00	0.03			0.03	0.01	0.00	0.00	0.10	0.00	0.00	0.00			0.00	0.00	0.00		

* g/m²/d ** mg/L/day

WATER QUALITY CONSTITUENT VALUES

ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	NCM		
656	6.200	20.80	1.17	2138.98	545.18	6.18	11.26	0.00	11.60	0.00	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
657	6.100	20.80	1.21	2210.72	569.14	6.17	11.35	0.00	11.70	0.00	2.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
658	6.000	20.80	1.25	2283.79	593.53	6.16	11.44	0.00	11.78	0.00	2.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

PHYTOPLANKTON AND PERIPHYTON DATA

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P TOT LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²	
656	6.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
657	6.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
658	6.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
20 DEG C	RATE									0.000	0.000	0.000	0.000									0.000	0.000	0.000			

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT BAYOU LIBERTY WATER QUALITY/HYDRAULIC MODEL FOR:
REACH NO. 57 LIBERTY FROM RKM 6.0 TO TRIB 9 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

REACH INPUTS

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
659	UPR RCH	0.08557	20.80	1.25	2283.79	593.53	6.16	11.44	0.00	11.78	0.00	2.37	0.00	0.00	0.00	3.20	0.00	0.00

HYDRAULIC PARAMETER VALUES

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
659	6.00	5.90	0.08557	43.7	0.00087	1.34	39.09	2.08	47.55	9890.40	4755.00	98.90	14731.50	0.004	2.306	0.004
660	5.90	5.80	0.08557	43.7	0.00087	1.34	40.43	2.08	47.55	9890.40	4755.00	98.90	15207.00	0.004	2.380	0.004
661	5.80	5.70	0.08557	43.7	0.00087	1.34	41.77	2.08	47.55	9890.40	4755.00	98.90	15682.50	0.004	2.454	0.004
662	5.70	5.60	0.08557	43.7	0.00087	1.34	43.11	2.08	47.55	9890.40	4755.00	98.90	16158.00	0.005	2.528	0.005
663	5.60	5.50	0.08557	43.7	0.00087	1.34	44.44	2.08	47.55	9890.40	4755.00	98.90	16633.50	0.005	2.602	0.005
664	5.50	5.40	0.08557	43.7	0.00087	1.34	45.78	2.08	47.55	9890.40	4755.00	98.90	17109.00	0.005	2.676	0.005
665	5.40	5.30	0.08557	43.7	0.00087	1.34	47.12	2.08	47.55	9890.40	4755.00	98.90	17584.50	0.005	2.751	0.005
666	5.30	5.20	0.08557	43.7	0.00087	1.34	48.46	2.08	47.55	9890.40	4755.00	98.90	18060.00	0.005	2.825	0.005
TOT						10.70				79123.20	38040.00					
AVG				0.0009				2.08	47.55			98.90				

BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECA 1/da	BOD1 SETT 1/da	ABOD1 DECA 1/da	BOD1 HYDR 1/da	BOD2 DECA 1/da	BOD2 SETT 1/da	ABOD2 DECA 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECA 1/da	NH3-N SETT 1/da	SRCE RATE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECA 1/da	NCM DECA 1/da	NCM SETT 1/da
----------	-------------	---------------	-----------------	----------------	----------------	-----------------	----------------	----------------	----------------	-----------------	------------	------------	------------	-----------------	-----------------	-----------------	-----------------	-------------	-----------------	-----------------	-----------------	------------	---------------	---------------	----------------	---------------	---------------

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECA	BOD1 ABOD1	BOD1 HYDR	BOD2 DECA	BOD2 ABOD2	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECA	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECA	NCM DECA	NCM SETT
		mg/L	1/da	1/da	1/da	1/da	1/da	1/da	*	*	*	1/da	1/da	1/da	*	1/da	1/da	1/da	*	**	**	1/da	1/da	1/da
672	5.100	8.87	0.44	0.08	0.02	0.00	0.00	0.00	0.00	0.62	0.62	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00
673	5.000	8.87	0.44	0.08	0.02	0.00	0.00	0.00	0.00	0.62	0.62	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00
674	4.900	8.86	0.44	0.08	0.02	0.00	0.00	0.00	0.00	0.63	0.63	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00
675	4.800	8.86	0.44	0.08	0.02	0.00	0.00	0.00	0.00	0.63	0.63	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00
676	4.700	8.86	0.44	0.08	0.02	0.00	0.00	0.00	0.00	0.63	0.63	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00
677	4.600	8.86	0.44	0.08	0.02	0.00	0.00	0.00	0.00	0.63	0.63	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00
678	4.500	8.86	0.44	0.08	0.02	0.00	0.00	0.00	0.00	0.62	0.62	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00
679	4.400	8.85	0.44	0.08	0.02	0.00	0.00	0.00	0.00	0.62	0.62	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.44	0.08	0.00	0.00	0.00	0.00	0.00			0.03	0.00	0.00	0.00	0.10	0.00	0.00	0.00			0.00	0.00	0.00

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	NCM
672	5.100	20.80	1.57	2865.39	787.70	6.20	12.14	0.00	12.49	0.00	2.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.	0.00
673	5.000	20.80	1.61	2931.59	809.80	6.22	12.23	0.00	12.57	0.00	2.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.	0.00
674	4.900	20.80	1.65	2998.12	832.01	6.25	12.29	0.00	12.63	0.00	2.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.	0.00
675	4.800	20.80	1.68	3064.96	854.33	6.27	12.31	0.00	12.65	0.00	2.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.	0.00
676	4.700	20.80	1.72	3132.12	876.75	6.30	12.31	0.00	12.65	0.00	2.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.	0.00
677	4.600	20.80	1.76	3199.59	899.27	6.34	12.27	0.00	12.62	0.00	3.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.	0.00
678	4.500	20.80	1.80	3267.35	921.89	6.38	12.21	0.00	12.55	0.00	3.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.	0.00
679	4.400	20.80	1.84	3335.41	944.61	6.42	12.12	0.00	12.46	0.00	3.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.	0.00

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²	
672	5.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0
673	5.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0
674	4.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0
675	4.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0
676	4.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0
677	4.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0
678	4.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0
679	4.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT BAYOU LIBERTY WATER QUALITY/HYDRAULIC MODEL FOR:
REACH NO. 63 LIBERTY FROM TRIB 6 TO TRIB 10 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
696	UPR RCH	0.08841	20.80	1.84	3335.41	944.61	6.42	12.12	0.00	12.46	0.00	3.09	0.00	0.00	0.00	3.20	0.00	0.00
696	TRIB	0.00288	20.80	1.86	3380.19	959.57	6.49	11.81	0.00	12.16	0.00	3.08	0.00	0.00	0.00	3.20	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
696	4.40	4.30	0.09128	41.1	0.00083	1.40	60.21	2.09	52.73	11020.57	5273.00	110.21	23591.30	0.006	3.324	0.006
697	4.30	4.20	0.09128	41.1	0.00083	1.40	61.61	2.09	52.73	11020.57	5273.00	110.21	24118.61	0.006	3.398	0.006
TOT AVG					0.0008	2.79		2.09	52.73	22041.14	10546.00	110.21				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECA	BOD1 ABOD1	BOD1 HYDR	BOD2 DECA	BOD2 ABOD2	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECA	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECA	NCM DECA	NCM SETT
		mg/L	1/da	1/da	1/da	1/da	1/da	1/da	*	*	*	1/da	1/da	1/da	*	1/da	1/da	1/da	*	**	**	1/da	1/da	1/da

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL	NCM
705	4.100	20.80	1.95	3538.17	1012.29	6.57	11.80	0.00	12.23	0.00	3.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.0	0.0	0.0	0.00
706	4.000	20.80	1.99	3606.92	1035.24	6.63	11.70	0.00	12.20	0.00	3.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.7	0.0	0.0	0.00
707	3.900	20.80	2.03	3675.86	1058.25	6.69	11.58	0.00	12.17	0.00	3.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.5	0.0	0.0	0.00
708	3.800	20.80	2.06	3745.00	1081.33	6.75	11.45	0.00	12.12	0.00	3.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.2	0.0	0.0	0.00
709	3.700	20.80	2.10	3814.32	1104.47	6.81	11.31	0.00	12.05	0.00	3.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.0	0.0	0.0	0.00
710	3.600	20.80	2.14	3883.83	1127.67	6.87	11.14	0.00	11.97	0.00	3.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.7	0.0	0.0	0.00
711	3.500	20.80	2.18	3953.53	1150.94	6.93	10.97	0.00	11.87	0.00	3.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.5	0.0	0.0	0.00
712	3.400	20.80	2.22	4023.40	1174.26	6.99	10.77	0.00	11.76	0.00	3.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.2	0.0	0.0	0.00
713	3.300	20.80	2.26	4093.44	1197.64	7.04	10.57	0.00	11.63	0.00	3.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	0.00

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW l/da	PHYT RESP l/da	PHYT DEATH l/da	PHYT SETT P/R	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW l/da	PERI RESP l/da	PERI DEATH l/da	PERI P/R RATIO	PERIP g/m²
705	4.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	4.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
706	4.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	4.7	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
707	3.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	5.5	0.50	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	
708	3.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.2	0.50	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	
709	3.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.0	0.50	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	
710	3.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.7	0.50	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	
711	3.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.5	0.50	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	
712	3.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.2	0.50	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	
713	3.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	

20 DEG C RATE 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT BAYOU LIBERTY WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 67 LIBERTY FROM BL07 TO TRIB 8 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
714	UPR RCH	0.09415	20.80	2.26	4093.44	1197.64	7.04	10.57	0.00	11.63	0.00	3.07	0.00	0.00	0.00	10.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
714	3.30	3.20	0.09415	39.8	0.00084	1.37	75.32	2.14	52.12	11153.68	5212.00	111.54	29590.60	0.007	4.202	0.007
TOT AVG					0.0008	1.37		2.14	52.12	11153.68	5212.00	111.54				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT mg/L	REAER l/da	BOD1 l/da	BOD1 SETT l/da	ABOD1 l/da	BOD1 l/da	BOD2 l/da	BOD2 SETT l/da	ABOD2 l/da	BKGD SOD *	FULL SOD *	CORR HYDR *	ORG-N l/da	ORG-N l/da	NH3-N l/da	NH3-N l/da	DEMIT SRCE *	ORG-P l/da	ORG-P l/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECATY **	NCM DECATY **	NCM DECATY **
714	3.200	8.83	0.43	0.08	0.02	0.00	0.00	0.00	0.00	0.00	0.18	0.18	0.18	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE		0.43	0.08	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.17		0.03	0.02	0.00	0.00	0.10	0.00	0.00	0.00			0.00	0.00	0.00	
*	g/m²/d		**	mg/L/day																						

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL	NCM
714	3.200	20.80	2.30	4163.66	1221.08	7.09	10.34	0.00	11.41	0.00	3.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P N&P LIM	PHYT TOT LIM	PHYT GROW	PHYT RESP	PHYT DEATH	PHYT SETT	PHYT P/R	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW	PERI RESP	PERI DEATH	PERI P/R	PERIP g/m²
714	3.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20 DEG C RATE									0.000	0.000	0.000	0.000									0.000	0.000	0.000		

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT REACH NO. 70 BAYOU LIBERTY LIBERTY FROM TRIB 8 TO M1 WATER QUALITY/HYDRAULIC MODEL FOR: BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
721	UPR RCH	0.09415	20.80	2.30	4163.66	1221.08	7.09	10.34	0.00	11.41	0.00	3.05	0.00	0.00	0.00	10.00	0.00	0.00
721	TRIB	0.00284	20.80	2.26	4098.59	1199.43	7.19	9.74	0.00	10.80	0.00	2.91	0.00	0.00	0.00	10.00	0.00	0.00
723	WSTLD	0.00016	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
721	3.20	3.10	0.09699	38.7	0.00087	1.33	76.65	2.14	52.12	11153.68	5212.00	111.54	30211.80	0.008	4.290	0.008
722	3.10	3.00	0.09699	38.7	0.00087	1.33	77.98	2.14	52.12	11153.68	5212.00	111.54	30733.00	0.008	4.364	0.008
723	3.00	2.90	0.09716	38.8	0.00087	1.33	79.31	2.14	52.12	11153.68	5212.00	111.54	31254.20	0.008	4.439	0.008
724	2.90	2.80	0.09716	38.8	0.00087	1.33	80.64	2.14	52.12	11153.68	5212.00	111.54	31775.39	0.008	4.513	0.008
725	2.80	2.70	0.09716	38.8	0.00087	1.33	81.97	2.14	52.12	11153.68	5212.00	111.54	32296.59	0.008	4.587	0.008
726	2.70	2.60	0.09716	38.8	0.00087	1.33	83.30	2.14	52.12	11153.68	5212.00	111.54	32817.79	0.008	4.661	0.008
TOT AVG						7.98				66922.09	31272.00					111.54

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REARER 1/da	BOD1 RATE DECAY 1/da	BOD1 SETT DECAY 1/da	ABOD1 1/da	BOD1 HYDR DECAY 1/da	BOD2 1/da	BOD2 SETT DECAY 1/da	ABOD2 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N 1/da	ORG-N HYDR 1/da	NH3-N 1/da	NH3-N DECAT 1/da	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE **	PHYTO PROD **	PERIP PROD **	COLI DECAY 1/da	NCM DECAY 1/da	NCM SETT 1/da	
721	3.100	8.83	0.43	0.08	0.02	0.00	0.00	0.00	0.00	0.00	0.16	0.16	0.16	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.49	0.00	0.00	0.00	0.00	0.00
722	3.000	8.83	0.43	0.08	0.02	0.00	0.00	0.00	0.00	0.00	0.16	0.16	0.16	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.46	0.00	0.00	0.00	0.00	0.00
723	2.900	8.82	0.43	0.08	0.02	0.00	0.00	0.00	0.00	0.00	0.16	0.16	0.16	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.44	0.00	0.00	0.00	0.00	0.00
724	2.800	8.82	0.43	0.08	0.02	0.00	0.00	0.00	0.00	0.00	0.16	0.16	0.16	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.00	0.00	0.00	0.00	0.00
725	2.700	8.82	0.43	0.08	0.02	0.00	0.00	0.00	0.00	0.00	0.16	0.16	0.16	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.00	0.00	0.00	0.00	0.00
726	2.600	8.82	0.43	0.08	0.02	0.00	0.00	0.00	0.00	0.00	0.16	0.16	0.16	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.35	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.43	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.16			0.03	0.00	0.00	0.00	0.10	0.00	0.00				0.00	0.00	0.00	

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL	NCM	
721	3.100	20.80	2.34	4233.94	1244.53	7.14	10.15	0.00	11.16	0.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.5	0.0	0.0
722	3.000	20.80	2.38	4306.45	1268.74	7.18	9.98	0.00	10.93	0.00	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.9	0.0	0.0
723	2.900	20.80	2.42	4379.18	1293.01	7.21	9.83	0.00	10.73	0.00	2.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.4	0.0	0.0
724	2.800	20.80	2.46	4452.23	1317.39	7.24	9.70	0.00	10.54	0.00	2.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.9	0.0	0.0
725	2.700	20.80	2.50	4525.49	1341.85	7.27	9.59	0.00	10.38	0.00	2.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.3	0.0	0.0
726	2.600	20.80	2.54	4598.96	1366.37	7.29	9.50	0.00	10.23	0.00	2.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.8	0.0	0.0

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P N&P LIM	PHYT TOT LIM	PHYT GROW	PHYT RESP	PHYT DEATH	PHYT SETT	PHYT P/R	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW	PERI RESP	PERI DEATH	PERI P/R	PERIP g/m²
721	3.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.5	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
722	3.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.9	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
723	2.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.4	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

898 0.000 20.80 3.59 6476.66 1993.19 7.33 7.71 0.00 8.50 0.00 1.89 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 7.4 0.0 0.0 0.00

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R	PERIP g/m ²
888	1.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
889	0.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.9	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
890	0.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
891	0.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
892	0.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.1	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
893	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.1	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
894	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.2	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
895	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.2	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
896	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.3	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
897	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.3	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
898	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.4	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT TRIBUTARY 1 WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 39 TRIBUTARY 1 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
439	HDWTR	0.00283	20.80	0.26	520.90	7.23	6.00	0.55	0.00	0.55	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.00
439	WSTLD	0.00000	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00	0.00	0.00
442	WSTLD	0.00000	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
439	2.40	2.30	0.00283	0.0	0.01239	0.09	0.09	0.11	2.00	22.86	199.55	0.23	0.00	0.000	0.000	0.012
440	2.30	2.20	0.00283	0.0	0.01239	0.09	0.19	0.11	2.00	22.86	199.55	0.23	0.00	0.000	0.000	0.012
441	2.20	2.10	0.00283	0.0	0.01239	0.09	0.28	0.11	2.00	22.86	199.55	0.23	0.00	0.000	0.000	0.012
442	2.10	2.00	0.00284	0.1	0.01240	0.09	0.37	0.11	2.00	22.87	199.60	0.23	0.00	0.000	0.000	0.012
443	2.00	1.90	0.00284	0.1	0.01240	0.09	0.47	0.11	2.00	22.87	199.60	0.23	0.00	0.000	0.000	0.012
444	1.90	1.80	0.00284	0.1	0.01240	0.09	0.56	0.11	2.00	22.87	199.60	0.23	0.00	0.000	0.000	0.012
445	1.80	1.70	0.00284	0.1	0.01240	0.09	0.65	0.11	2.00	22.87	199.60	0.23	0.00	0.000	0.000	0.012
446	1.70	1.60	0.00284	0.1	0.01240	0.09	0.75	0.11	2.00	22.87	199.60	0.23	0.00	0.000	0.000	0.012
447	1.60	1.50	0.00284	0.1	0.01240	0.09	0.84	0.11	2.00	22.87	199.60	0.23	0.00	0.000	0.000	0.012
448	1.50	1.40	0.00284	0.1	0.01240	0.09	0.93	0.11	2.00	22.87	199.60	0.23	0.00	0.000	0.000	0.012
449	1.40	1.30	0.00284	0.1	0.01240	0.09	1.03	0.11	2.00	22.87	199.60	0.23	0.00	0.000	0.000	0.012
450	1.30	1.20	0.00284	0.1	0.01240	0.09	1.12	0.11	2.00	22.87	199.60	0.23	0.00	0.000	0.000	0.012
451	1.20	1.10	0.00284	0.1	0.01240	0.09	1.21	0.11	2.00	22.87	199.60	0.23	0.00	0.000	0.000	0.012
452	1.10	1.00	0.00284	0.1	0.01240	0.09	1.31	0.11	2.00	22.87	199.60	0.23	0.00	0.000	0.000	0.012
453	1.00	0.90	0.00284	0.1	0.01240	0.09	1.40	0.11	2.00	22.87	199.60	0.23	0.00	0.000	0.000	0.012
454	0.90	0.80	0.00284	0.1	0.01240	0.09	1.49	0.11	2.00	22.87	199.60	0.23	0.00	0.000	0.000	0.012
455	0.80	0.70	0.00284	0.1	0.01240	0.09	1.59	0.11	2.00	22.87	199.60	0.23	0.00	0.000	0.000	0.012
456	0.70	0.60	0.00284	0.1	0.01240	0.09	1.68	0.11	2.00	22.87	199.60	0.23	0.00	0.000	0.000	0.012
457	0.60	0.50	0.00284	0.1	0.01240	0.09	1.77	0.11	2.00	22.87	199.60	0.23	0.00	0.000	0.000	0.012
458	0.50	0.40	0.00284	0.1	0.01240	0.09	1.87	0.11	2.00	22.87	199.60	0.23	0.00	0.000	0.000	0.012
459	0.40	0.30	0.00284	0.1	0.01240	0.09	1.96	0.11	2.00	22.87	199.60	0.23	0.00	0.000	0.000	0.012
460	0.30	0.20	0.00284	0.1	0.01240	0.09	2.05	0.11	2.00	22.87	199.60	0.23	0.00	0.000	0.000	0.012
461	0.20	0.10	0.00284	0.1	0.01240	0.09	2.15	0.11	2.00	22.87	199.60	0.23	0.00	0.000	0.000	0.012
462	0.10	0.00	0.00284	0.1	0.01240	0.09	2.24	0.11	2.00	22.87	199.60	0.23	0.00	0.000	0.000	0.012
TOT AVG					0.0124	2.24		0.11	2.00	548.96	4790.22	0.23				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE 1/da	BOD1 DECA 1/da	BOD1 DECA 1/da	ABOD1 DECA 1/da	BOD1 HYDR DECA 1/da	BOD2 DECA 1/da	BOD2 DECA 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N 1/da	NH3-N 1/da	DENIT SRCE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECA 1/da	NCM DECA 1/da	NCM SETT 1/da
439	2.300	8.94	7.46	0.08	0.44	0.00	0.00	0.00	0.00	0.13	0.16	0.16	0.03	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
440	2.200	8.94	7.46	0.08	0.44	0.00	0.00	0.00	0.00	0.13	0.16	0.16	0.03	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
441	2.100	8.94	7.46	0.08	0.44	0.00	0.00	0.00	0.00	0.13	0.16	0.16	0.03	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

NO.		deg C	ppt	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
482	HDWTR	0.00283	20.80	0.26	520.90	7.23	6.00	0.55	0.00	0.55	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.00
482	WSTLD	0.00024	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00	0.00	0.00
494	WSTLD	0.00022	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00	0.00	0.00
495	WSTLD	0.00005	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00	0.00	0.00
498	WSTLD	0.00387	30.00	0.32	619.50	47.00	2.00	11.50	0.00	11.50	0.00	8.60	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
482	2.70	2.60	0.00307	7.7	0.01273	0.09	0.09	0.12	2.04	24.10	204.41	0.24	0.00	0.000	0.000	0.013
483	2.60	2.50	0.00307	7.7	0.01273	0.09	0.18	0.12	2.04	24.10	204.41	0.24	0.00	0.000	0.000	0.013
484	2.50	2.40	0.00307	7.7	0.01273	0.09	0.27	0.12	2.04	24.10	204.41	0.24	0.00	0.000	0.000	0.013
485	2.40	2.30	0.00307	7.7	0.01273	0.09	0.36	0.12	2.04	24.10	204.41	0.24	0.00	0.000	0.000	0.013
486	2.30	2.20	0.00307	7.7	0.01273	0.09	0.45	0.12	2.04	24.10	204.41	0.24	0.00	0.000	0.000	0.013
487	2.20	2.10	0.00307	7.7	0.01273	0.09	0.55	0.12	2.04	24.10	204.41	0.24	0.00	0.000	0.000	0.013
488	2.10	2.00	0.00307	7.7	0.01273	0.09	0.64	0.12	2.04	24.10	204.41	0.24	0.00	0.000	0.000	0.013
489	2.00	1.90	0.00307	7.7	0.01273	0.09	0.73	0.12	2.04	24.10	204.41	0.24	0.00	0.000	0.000	0.013
490	1.90	1.80	0.00307	7.7	0.01273	0.09	0.82	0.12	2.04	24.10	204.41	0.24	0.00	0.000	0.000	0.013
491	1.80	1.70	0.00307	7.7	0.01273	0.09	0.91	0.12	2.04	24.10	204.41	0.24	0.00	0.000	0.000	0.013
492	1.70	1.60	0.00307	7.7	0.01273	0.09	1.00	0.12	2.04	24.10	204.41	0.24	0.00	0.000	0.000	0.013
493	1.60	1.50	0.00307	7.7	0.01273	0.09	1.09	0.12	2.04	24.10	204.41	0.24	0.00	0.000	0.000	0.013
494	1.50	1.40	0.00329	13.9	0.01304	0.09	1.18	0.12	2.09	25.23	208.68	0.25	0.00	0.000	0.000	0.013
495	1.40	1.30	0.00334	15.2	0.01310	0.09	1.27	0.12	2.10	25.48	209.64	0.25	0.00	0.000	0.000	0.013
496	1.30	1.20	0.00334	15.2	0.01310	0.09	1.36	0.12	2.10	25.48	209.64	0.25	0.00	0.000	0.000	0.013
497	1.20	1.10	0.00334	15.2	0.01310	0.09	1.44	0.12	2.10	25.48	209.64	0.25	0.00	0.000	0.000	0.013
498	1.10	1.00	0.00721	60.7	0.01702	0.07	1.51	0.16	2.64	42.34	264.05	0.42	0.00	0.000	0.000	0.017
499	1.00	0.90	0.00721	60.7	0.01702	0.07	1.58	0.16	2.64	42.34	264.05	0.42	0.00	0.000	0.000	0.017
500	0.90	0.80	0.00721	60.7	0.01702	0.07	1.65	0.16	2.64	42.34	264.05	0.42	0.00	0.000	0.000	0.017
501	0.80	0.70	0.00721	60.7	0.01702	0.07	1.72	0.16	2.64	42.34	264.05	0.42	0.00	0.000	0.000	0.017
502	0.70	0.60	0.00721	60.7	0.01702	0.07	1.78	0.16	2.64	42.34	264.05	0.42	0.00	0.000	0.000	0.017
503	0.60	0.50	0.00721	60.7	0.01702	0.07	1.85	0.16	2.64	42.34	264.05	0.42	0.00	0.000	0.000	0.017
504	0.50	0.40	0.00721	60.7	0.01702	0.07	1.92	0.16	2.64	42.34	264.05	0.42	0.00	0.000	0.000	0.017
505	0.40	0.30	0.00721	60.7	0.01702	0.07	1.99	0.16	2.64	42.34	264.05	0.42	0.00	0.000	0.000	0.017
506	0.30	0.20	0.00721	60.7	0.01702	0.07	2.06	0.16	2.64	42.34	264.05	0.42	0.00	0.000	0.000	0.017
507	0.20	0.10	0.00721	60.7	0.01702	0.07	2.12	0.16	2.64	42.34	264.05	0.42	0.00	0.000	0.000	0.017
508	0.10	0.00	0.00721	60.7	0.01702	0.07	2.19	0.16	2.64	42.34	264.05	0.42	0.00	0.000	0.000	0.017
TOT AVG					0.0143	2.19		0.14	2.29	856.63	6194.99	0.32				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECA	BOD1 SETT	ABOD1 DECA	BOD1 HYDR	BOD2 DECA	BOD2 SETT	ABOD2 DECA	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECA	NH3-N SETT	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECA	NCM DECA	NCM SETT	
482	2.600	8.94	7.29	0.08	0.43	0.00	0.00	0.00	0.00	0.00	0.13	0.24	0.24	0.03	0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00
483	2.500	8.94	7.29	0.08	0.43	0.00	0.00	0.00	0.00	0.00	0.13	0.24	0.24	0.03	0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00
484	2.400	8.94	7.29	0.08	0.43	0.00	0.00	0.00	0.00	0.00	0.13	0.24	0.24	0.03	0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00
485	2.300	8.94	7.29	0.08	0.43	0.00	0.00	0.00	0.00	0.00	0.13	0.23	0.23	0.03	0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00
486	2.200	8.94	7.29	0.08	0.43	0.00	0.00	0.00	0.00	0.00	0.13	0.23	0.23	0.03	0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00
487	2.100	8.94	7.29	0.08	0.43	0.00	0.00	0.00	0.00	0.00	0.13	0.22	0.22	0.03	0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.00	0.00	0.00	0.00
488	2.000	8.94	7.29	0.08	0.43	0.00	0.00	0.00	0.00	0.00	0.13	0.22	0.22	0.03	0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00	0.00
489	1.900	8.94	7.29	0.08	0.43	0.00	0.00	0.00	0.00	0.00	0.13	0.22	0.22	0.03	0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.00	0.00	0.00	0.00
490	1.800	8.94	7.29	0.08	0.43	0.00	0.00	0.00	0.00	0.00	0.13	0.22	0.22	0.03	0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00	0.00
491	1.700	8.94	7.29	0.08	0.43	0.00	0.00	0.00	0.00	0.00	0.13	0.21	0.21	0.03	0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.00	0.00	0.00	0.00	0.00
492	1.600	8.94	7.29	0.08	0.43	0.00	0.00	0.00	0.00	0.00	0.13	0.21	0.21	0.03	0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.00	0.00	0.00	0.00	0.00
493	1.500	8.94	7.29	0.08	0.43	0.00	0.00	0.00	0.00	0.00	0.13	0.21	0.21	0.03	0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.00	0.00	0.00	0.00	0.00
494	1.400	8.93	7.15	0.08	0.42	0.00	0.00	0.00	0.00	0.00	0.13	0.27	0.27	0.03	0.42	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.00
495	1.300	8.93	7.11	0.08	0.42	0.00	0.00	0.00	0.00	0.00	0.13	0.28	0.28	0.03	0.42	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.00	0.00	0.00	0.00	0.00
496	1.200	8.93	7.11	0.08	0.42	0.00	0.00	0.00	0.00	0.00	0.13	0.28	0.28	0.03	0.42	0.00	0.00	0.00	0.00	0.00	0.00	0.29	0.00	0.00	0.00	0.00	0.00
497	1.100	8.93	7.11	0.08	0.42	0.00	0.00	0.00	0.00	0.00	0.13	0.27	0.27	0.03	0.42	0.00	0.00	0.00	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00	0.00
498	1.000	8.93	5.75	0.08	0.32	0.00	0.00	0.00	0.00	0.00	0.13	0.50	0.50	0.03	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.00	0.00	0.00	0.00	0.00
499	0.900	8.93	5.75	0.08	0.32	0.00	0.00	0.00	0.00	0.00	0.13	0.49	0.49	0.03	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.35	0.00	0.00	0.00	0.00	0.00
500	0.800	8.93	5.75	0.08	0.32	0.00	0.00	0.00	0.00	0.00	0.13	0.48	0.48	0.03	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.00	0.00	0.00	0.00	0.00
501	0.700	8.93	5.75	0.08	0.32	0.00	0.00	0.00	0.00	0.00	0.13	0.47	0.47	0.03	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.00	0.00	0.00	0.00	0.00
502	0.600	8.93	5.75	0.08	0.32	0.00	0.00	0.00	0.00	0.00	0.13	0.47	0.47	0.03	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.00	0.00	0.00	0.00	0.00
503	0.500	8.93	5.75	0.08	0.32	0.00	0.00	0.00	0.00	0.00	0.13	0.46	0.46	0.03	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.42	0.00	0.00	0.00	0.00	0.00
504	0.400	8.93	5.75	0.08	0.32	0.00	0.00	0.00																			

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

***** WATER QUALITY CONSTITUENT VALUES *****																										
ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	NCM	
482	2.600	20.80	0.27	538.91	11.57	6.86	2.20	0.00	2.24	0.00	1.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.4	0.0	0.0	0.00
483	2.500	20.80	0.27	538.91	11.57	7.56	2.12	0.00	2.20	0.00	1.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.7	0.0	0.0	0.00
484	2.400	20.80	0.27	538.91	11.57	7.99	2.04	0.00	2.16	0.00	1.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.1	0.0	0.0	0.00	
485	2.300	20.80	0.27	538.91	11.57	8.25	1.97	0.00	2.13	0.00	1.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.5	0.0	0.0	0.00	
486	2.200	20.80	0.27	538.91	11.57	8.41	1.90	0.00	2.09	0.00	1.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.9	0.0	0.0	0.00	
487	2.100	20.80	0.27	538.91	11.57	8.51	1.83	0.00	2.06	0.00	1.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.2	0.0	0.0	0.00	
488	2.000	20.80	0.27	538.91	11.57	8.58	1.76	0.00	2.04	0.00	1.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.6	0.0	0.0	0.00	
489	1.900	20.80	0.27	538.91	11.57	8.62	1.70	0.00	2.02	0.00	1.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.0	0.0	0.0	0.00	
490	1.800	20.80	0.27	538.91	11.57	8.64	1.64	0.00	2.00	0.00	1.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.3	0.0	0.0	0.00	
491	1.700	20.80	0.27	538.91	11.57	8.66	1.58	0.00	1.98	0.00	1.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.7	0.0	0.0	0.00	
492	1.600	20.80	0.27	538.91	11.57	8.68	1.53	0.00	1.96	0.00	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.1	0.0	0.0	0.00	
493	1.500	20.80	0.27	538.91	11.57	8.69	1.48	0.00	1.95	0.00	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.4	0.0	0.0	0.00	
494	1.400	20.80	0.28	553.21	15.01	8.38	2.80	0.00	3.32	0.00	2.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.8	0.0	0.0	0.00	
495	1.300	20.80	0.28	556.26	15.75	8.41	2.99	0.00	3.55	0.00	2.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.2	0.0	0.0	0.00	
496	1.200	20.80	0.28	556.26	15.75	8.48	2.88	0.00	3.47	0.00	2.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.6	0.0	0.0	0.00	
497	1.100	20.80	0.28	556.26	15.75	8.54	2.77	0.00	3.41	0.00	2.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.9	0.0	0.0	0.00	
498	1.000	20.80	0.30	590.19	32.52	5.95	7.27	0.00	7.94	0.00	5.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.3	0.0	0.0	0.00	
499	0.900	20.80	0.30	590.19	32.52	6.62	7.08	0.00	7.79	0.00	5.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.7	0.0	0.0	0.00	
500	0.800	20.80	0.30	590.19	32.52	7.10	6.90	0.00	7.65	0.00	5.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.0	0.0	0.0	0.00	
501	0.700	20.80	0.30	590.19	32.52	7.46	6.72	0.00	7.51	0.00	5.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.4	0.0	0.0	0.00	
502	0.600	20.80	0.30	590.19	32.52	7.72	6.55	0.00	7.38	0.00	5.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.8	0.0	0.0	0.00	
503	0.500	20.80	0.30	590.19	32.52	7.91	6.39	0.00	7.26	0.00	5.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.1	0.0	0.0	0.00	
504	0.400	20.80	0.30	590.19	32.52	8.05	6.22	0.00	7.13	0.00	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.5	0.0	0.0	0.00	
505	0.300	20.80	0.30	590.19	32.52	8.15	6.07	0.00	7.01	0.00	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.9	0.0	0.0	0.00	
506	0.200	20.80	0.30	590.19	32.52	8.23	5.91	0.00	6.90	0.00	4.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.3	0.0	0.0	0.00	
507	0.100	20.80	0.30	590.19	32.52	8.29	5.76	0.00	6.79	0.00	4.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.6	0.0	0.0	0.00	
508	0.000	20.80	0.30	590.19	32.52	8.34	5.62	0.00	6.68	0.00	4.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	0.00	

***** PHYTOPLANKTON AND PERIPHYTON DATA *****																											
ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT PREF	PHYT LIT	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW	PHYT RESP	PHYT DEATH	PHYT SETT	PHYT P/R	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW	PERI RESP	PERI DEATH	PERI P/R	PERIP g/m ²
482	2.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
483	2.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
484	2.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
485	2.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
486	2.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
487	2.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
488	2.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
489	1.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
490	1.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
491	1.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
492	1.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	4.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
493	1.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	4.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
494	1.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	4.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
495	1.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	5.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
496	1.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	5.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
497	1.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	5.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
498	1.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
499	0.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
500	0.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
501	0.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.4	0.50	0.00	0.00</									

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL	NCM	
536	2.200	20.80	0.27	533.26	10.21	6.94	1.68	0.00	1.73	0.00	2.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.4	0.0	0.	0.00	
537	2.100	20.80	0.27	533.26	10.21	7.63	1.63	0.00	1.72	0.00	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.9	0.0	0.	0.00
538	2.000	20.80	0.27	533.26	10.21	8.05	1.58	0.00	1.71	0.00	2.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.3	0.0	0.	0.00
539	1.900	20.80	0.27	533.26	10.21	8.30	1.52	0.00	1.71	0.00	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.7	0.0	0.	0.00
540	1.800	20.80	0.27	533.26	10.21	8.46	1.48	0.00	1.71	0.00	2.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.2	0.0	0.	0.00
541	1.700	20.80	0.27	533.26	10.21	8.55	1.43	0.00	1.71	0.00	2.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.6	0.0	0.	0.00
542	1.600	20.80	0.27	533.26	10.21	8.61	1.39	0.00	1.71	0.00	1.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.0	0.0	0.	0.00
543	1.500	20.80	0.27	533.26	10.21	8.65	1.34	0.00	1.72	0.00	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.5	0.0	0.	0.00
544	1.400	20.80	0.28	561.02	16.90	8.08	3.92	0.00	4.34	0.00	4.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.9	0.0	0.	0.00
545	1.300	20.80	0.28	561.02	16.90	8.25	3.78	0.00	4.24	0.00	4.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.3	0.0	0.	0.00
546	1.200	20.80	0.28	561.14	16.93	8.36	3.65	0.00	4.16	0.00	3.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.8	0.0	0.	0.00
547	1.100	20.80	0.28	561.14	16.93	8.44	3.51	0.00	4.07	0.00	3.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.2	0.0	0.	0.00
548	1.000	20.80	0.28	565.26	17.92	8.39	3.79	0.00	4.39	0.00	4.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.7	0.0	0.	0.00
549	0.900	20.80	0.28	565.26	17.92	8.45	3.65	0.00	4.30	0.00	4.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.1	0.0	0.	0.00
550	0.800	20.80	0.29	566.14	18.13	8.47	3.60	0.00	4.30	0.00	4.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.5	0.0	0.	0.00
551	0.700	20.80	0.29	566.55	18.23	8.50	3.51	0.00	4.26	0.00	4.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.0	0.0	0.	0.00
552	0.600	20.80	0.29	566.66	18.26	8.53	3.40	0.00	4.19	0.00	4.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.4	0.0	0.	0.00
553	0.500	20.80	0.29	567.29	18.41	8.54	3.34	0.00	4.18	0.00	4.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.8	0.0	0.	0.00
554	0.400	20.80	0.29	567.29	18.41	8.56	3.22	0.00	4.10	0.00	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.3	0.0	0.	0.00
555	0.300	20.80	0.29	568.92	18.80	8.54	3.27	0.00	4.20	0.00	4.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.7	0.0	0.	0.00
556	0.200	20.80	0.29	569.20	18.87	8.56	3.19	0.00	4.16	0.00	4.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.1	0.0	0.	0.00
557	0.100	20.80	0.29	573.07	19.80	8.48	3.47	0.00	4.50	0.00	4.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.6	0.0	0.	0.00
558	0.000	20.80	0.29	573.07	19.80	8.53	3.35	0.00	4.42	0.00	4.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.	0.00	

PHYTOPLANKTON AND PERIPHYTON DATA

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT DEATH 1/da	PHYT P/R	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI P LIM	PERI N&P LIM	PERI SPC	PERI TOT	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R	PERIP g/m²	
536	2.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.00	0.4	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
537	2.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.00	0.9	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
538	2.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.00	1.3	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
539	1.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.00	1.7	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
540	1.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.00	2.2	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
541	1.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.00	2.6	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
542	1.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.00	3.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
543	1.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.00	3.5	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
544	1.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.00	3.9	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
545	1.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.00	4.3	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
546	1.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.00	4.8	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
547	1.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.00	5.2	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
548	1.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.00	5.7	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
549	0.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.00	6.1	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
550	0.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.00	6.5	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
551	0.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.00	7.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
552	0.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.00	7.4	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
553	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.00	7.8	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
554	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.00	8.3	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
555	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.00	8.7	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
556	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.00	9.1	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
557	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.00	9.6	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
558	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.00	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE

0.000 0.000 0.000 0.000

0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT DRAINAGE DITCH 18
 REACH NO. 49 DD18

WATER QUALITY/HYDRAULIC MODEL FOR:
 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

REACH INPUTS

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
----------	------	------	------------	----------	------	----	---------	-----------	-----------	------------	------------	------------	------------	------------	------------	------------	--------------	-----

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

577	0.20	0.10	0.00292	3.0	0.01252	0.09	0.18	0.12	2.01	23.32	201.36	0.23	0.00	0.000	0.000	0.013
578	0.10	0.00	0.00292	3.0	0.01252	0.09	0.28	0.12	2.01	23.32	201.36	0.23	0.00	0.000	0.000	0.013
TOT						0.28				69.96	604.07					
AVG					0.0125			0.12	2.01			0.23				

BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR DECAT 1/da	BOD2 DECAT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAT 1/da	NH3-N SRCE 1/da	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da	
576	0.200	8.94	7.39	0.08	0.44	0.00	0.00	0.00	0.00	0.41	0.53	0.53	0.03	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00
577	0.100	8.94	7.39	0.08	0.44	0.00	0.00	0.00	0.00	0.41	0.52	0.52	0.03	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.00	
578	0.000	8.94	7.39	0.08	0.44	0.00	0.00	0.00	0.00	0.41	0.52	0.52	0.03	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00	
AVG	20 DEG C RATE		7.28	0.08	0.14	0.00	0.00	0.00	0.00	0.39			0.03	0.14	0.00	0.00	0.10	0.00	0.00	0.00			0.00	0.00	0.00	
*	g/m ² /d				**		mg/L/day																			

WATER QUALITY CONSTITUENT VALUES

ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	NCM
576	0.200	20.80	0.26	527.88	8.91	6.86	2.32	0.00	2.44	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.1	0.0	0.	0.00
577	0.100	20.80	0.26	527.88	8.91	7.45	2.29	0.00	2.52	0.00	1.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.1	0.0	0.	0.00
578	0.000	20.80	0.26	527.88	8.91	7.80	2.27	0.00	2.61	0.00	1.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.	0.00

PHYTOPLANKTON AND PERIPHYTON DATA

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW	PHYT RESP	PHYT DEATH 1/da	PHYT SETT P/R	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R	PERIP g/m ²	
576	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0
577	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0
578	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0
20	DEG C RATE								0.000	0.000	0.000	0.000									0.000	0.000	0.000		

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT DRAINAGE DITCH 19
REACH NO. 51 DD19

WATER QUALITY/HYDRAULIC MODEL FOR:
BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

REACH INPUTS

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
585	HDWTR	0.00283	20.80	0.26	520.90	7.23	6.00	1.71	0.00	1.71	0.00	0.78	0.00	0.00	0.00	0.00	0.00	0.00
585	WSTLD	0.00048	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	21.50	0.00	0.00	0.00	0.00	0.00	0.00

HYDRAULIC PARAMETER VALUES

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
585	1.40	1.30	0.00331	14.4	0.01306	0.09	0.09	0.12	2.09	25.33	209.05	0.25	0.00	0.000	0.000	0.013
586	1.30	1.20	0.00331	14.4	0.01306	0.09	0.18	0.12	2.09	25.33	209.05	0.25	0.00	0.000	0.000	0.013
587	1.20	1.10	0.00331	14.4	0.01306	0.09	0.27	0.12	2.09	25.33	209.05	0.25	0.00	0.000	0.000	0.013
588	1.10	1.00	0.00331	14.4	0.01306	0.09	0.35	0.12	2.09	25.33	209.05	0.25	0.00	0.000	0.000	0.013
589	1.00	0.90	0.00331	14.4	0.01306	0.09	0.44	0.12	2.09	25.33	209.05	0.25	0.00	0.000	0.000	0.013
590	0.90	0.80	0.00331	14.4	0.01306	0.09	0.53	0.12	2.09	25.33	209.05	0.25	0.00	0.000	0.000	0.013
591	0.80	0.70	0.00331	14.4	0.01306	0.09	0.62	0.12	2.09	25.33	209.05	0.25	0.00	0.000	0.000	0.013
592	0.70	0.60	0.00331	14.4	0.01306	0.09	0.71	0.12	2.09	25.33	209.05	0.25	0.00	0.000	0.000	0.013
593	0.60	0.50	0.00331	14.4	0.01306	0.09	0.80	0.12	2.09	25.33	209.05	0.25	0.00	0.000	0.000	0.013
594	0.50	0.40	0.00331	14.4	0.01306	0.09	0.89	0.12	2.09	25.33	209.05	0.25	0.00	0.000	0.000	0.013
595	0.40	0.30	0.00331	14.4	0.01306	0.09	0.97	0.12	2.09	25.33	209.05	0.25	0.00	0.000	0.000	0.013
596	0.30	0.20	0.00331	14.4	0.01306	0.09	1.06	0.12	2.09	25.33	209.05	0.25	0.00	0.000	0.000	0.013
597	0.20	0.10	0.00331	14.4	0.01306	0.09	1.15	0.12	2.09	25.33	209.05	0.25	0.00	0.000	0.000	0.013
598	0.10	0.00	0.00331	14.4	0.01306	0.09	1.24	0.12	2.09	25.33	209.05	0.25	0.00	0.000	0.000	0.013
TOT	AVG						1.24			354.57	2926.75			0.25		

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAy 1/da	BOD1 SETT 1/da	ABOD1 DECAy 1/da	BOD1 DECAy 1/da	BOD2 DECAy 1/da	ABOD2 DECAy 1/da	BKGD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAy 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO **	PERIP **	COLI DECAy 1/da	NCM DECAy 1/da	NCM SETT 1/da			
585	1.300	8.93	7.13	0.08	0.42	0.00	0.00	0.00	0.00	0.41	0.64	0.64	0.03	0.42	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00			
586	1.200	8.93	7.13	0.08	0.42	0.00	0.00	0.00	0.00	0.41	0.64	0.64	0.03	0.42	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00			
587	1.100	8.93	7.13	0.08	0.42	0.00	0.00	0.00	0.00	0.41	0.63	0.63	0.03	0.42	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00			
588	1.000	8.93	7.13	0.08	0.42	0.00	0.00	0.00	0.00	0.41	0.62	0.62	0.03	0.42	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00			
589	0.900	8.93	7.13	0.08	0.42	0.00	0.00	0.00	0.00	0.41	0.62	0.62	0.03	0.42	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00			
590	0.800	8.93	7.13	0.08	0.42	0.00	0.00	0.00	0.00	0.41	0.61	0.61	0.03	0.42	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00			
591	0.700	8.93	7.13	0.08	0.42	0.00	0.00	0.00	0.00	0.41	0.61	0.61	0.03	0.42	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00			
592	0.600	8.93	7.13	0.08	0.42	0.00	0.00	0.00	0.00	0.41	0.60	0.60	0.03	0.42	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00			
593	0.500	8.93	7.13	0.08	0.42	0.00	0.00	0.00	0.00	0.41	0.60	0.60	0.03	0.42	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.00			
594	0.400	8.93	7.13	0.08	0.42	0.00	0.00	0.00	0.00	0.41	0.59	0.59	0.03	0.42	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.00	0.00	0.00			
595	0.300	8.93	7.13	0.08	0.42	0.00	0.00	0.00	0.00	0.41	0.59	0.59	0.03	0.42	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00			
596	0.200	8.93	7.13	0.08	0.42	0.00	0.00	0.00	0.00	0.41	0.58	0.58	0.03	0.42	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.00			
597	0.100	8.93	7.13	0.08	0.42	0.00	0.00	0.00	0.00	0.41	0.58	0.58	0.03	0.42	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.00	0.00	0.00			
598	0.000	8.93	7.13	0.08	0.42	0.00	0.00	0.00	0.00	0.41	0.57	0.57	0.03	0.42	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00			
AVG 20 DEG C RATE			7.02	0.08	0.03	0.00	0.00	0.00	0.00	0.39	0.03			0.03	0.00	0.00	0.10	0.00	0.00	0.00	0.00			0.00	0.00	0.00		
* g/m ² /d			** mg/L/day																									

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	ORG-P mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	ORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	NCM
585	1.300	20.80	0.28	554.41	15.30	6.47	4.63	0.00	4.66	0.00	3.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.2	0.0	0.00
586	1.200	20.80	0.28	554.41	15.30	7.11	4.49	0.00	4.54	0.00	3.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.5	0.0	0.00
587	1.100	20.80	0.28	554.41	15.30	7.51	4.36	0.00	4.44	0.00	3.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.7	0.0	0.00
588	1.000	20.80	0.28	554.41	15.30	7.76	4.24	0.00	4.33	0.00	3.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.9	0.0	0.00
589	0.900	20.80	0.28	554.41	15.30	7.92	4.12	0.00	4.24	0.00	3.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.1	0.0	0.00	
590	0.800	20.80	0.28	554.41	15.30	8.02	4.00	0.00	4.15	0.00	3.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.4	0.0	0.00	
591	0.700	20.80	0.28	554.41	15.30	8.08	3.89	0.00	4.06	0.00	3.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.6	0.0	0.00	
592	0.600	20.80	0.28	554.41	15.30	8.13	3.78	0.00	3.98	0.00	2.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.8	0.0	0.00	
593	0.500	20.80	0.28	554.41	15.30	8.16	3.68	0.00	3.90	0.00	2.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.1	0.0	0.00	
594	0.400	20.80	0.28	554.41	15.30	8.18	3.59	0.00	3.83	0.00	2.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.3	0.0	0.00	
595	0.300	20.80	0.28	554.41	15.30	8.20	3.49	0.00	3.76	0.00	2.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.5	0.0	0.00	
596	0.200	20.80	0.28	554.41	15.30	8.21	3.40	0.00	3.70	0.00	2.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.7	0.0	0.00	
597	0.100	20.80	0.28	554.41	15.30	8.22	3.32	0.00	3.64	0.00	2.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.0	0.0	0.00	
598	0.000	20.80	0.28	554.41	15.30	8.23	3.24	0.00	3.58	0.00	2.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.00	

***** PHYTOPLANKTON AND PERIPHYTE DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²	
585	1.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
586	1.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
587	1.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.7	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
588	1.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.9	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
589	0.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.1	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
590	0.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.4	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
591	0.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.6	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
592	0.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.8	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
593	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.1	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
594	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.3	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
595	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.5	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
596	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.7	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
597	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
598	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
20 DEG C RATE				0.000										0.000										0.000		

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT DRAINAGE DITCH 4 WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 53 DD04 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
601	HDWTR	0.00283	20.80	0.26	520.90	7.23	6.00	1.71	0.00	1.71	0.00	0.78	0.00	0.00	0.00	0.00	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

601	WSTLD	0.00005	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
602	WSTLD	0.00001	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
611	WSTLD	0.00000	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
614	WSTLD	0.00001	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
615	WSTLD	0.00002	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
616	WSTLD	0.00087	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	25.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00
617	WSTLD	0.00000	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
619	WSTLD	0.00011	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
620	WSTLD	0.00023	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
621	WSTLD	0.00003	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
625	WSTLD	0.00001	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
633	WSTLD	0.01522	30.00	0.30	582.30	52.50	2.00	23.00	0.00	23.00	0.00	8.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST Km	ENDING DIST Km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
601	4.20	4.10	0.00288	1.6	0.01246	0.09	0.09	0.12	2.01	23.11	200.51	0.23	0.00	0.000	0.000	0.012
602	4.10	4.00	0.00289	1.9	0.01247	0.09	0.19	0.12	2.01	23.14	200.65	0.23	0.00	0.000	0.000	0.012
603	4.00	3.90	0.00289	1.9	0.01247	0.09	0.28	0.12	2.01	23.14	200.65	0.23	0.00	0.000	0.000	0.012
604	3.90	3.80	0.00289	1.9	0.01247	0.09	0.37	0.12	2.01	23.14	200.65	0.23	0.00	0.000	0.000	0.012
605	3.80	3.70	0.00289	1.9	0.01247	0.09	0.46	0.12	2.01	23.14	200.65	0.23	0.00	0.000	0.000	0.012
606	3.70	3.60	0.00289	1.9	0.01247	0.09	0.56	0.12	2.01	23.14	200.65	0.23	0.00	0.000	0.000	0.012
607	3.60	3.50	0.00289	1.9	0.01247	0.09	0.65	0.12	2.01	23.14	200.65	0.23	0.00	0.000	0.000	0.012
608	3.50	3.40	0.00289	1.9	0.01247	0.09	0.74	0.12	2.01	23.14	200.65	0.23	0.00	0.000	0.000	0.012
609	3.40	3.30	0.00289	1.9	0.01247	0.09	0.84	0.12	2.01	23.14	200.65	0.23	0.00	0.000	0.000	0.012
610	3.30	3.20	0.00289	1.9	0.01247	0.09	0.93	0.12	2.01	23.14	200.65	0.23	0.00	0.000	0.000	0.012
611	3.20	3.10	0.00289	1.9	0.01247	0.09	1.02	0.12	2.01	23.15	200.69	0.23	0.00	0.000	0.000	0.012
612	3.10	3.00	0.00289	1.9	0.01247	0.09	1.11	0.12	2.01	23.15	200.69	0.23	0.00	0.000	0.000	0.012
613	3.00	2.90	0.00289	1.9	0.01247	0.09	1.21	0.12	2.01	23.15	200.69	0.23	0.00	0.000	0.000	0.012
614	2.90	2.80	0.00290	2.3	0.01249	0.09	1.30	0.12	2.01	23.21	200.92	0.23	0.00	0.000	0.000	0.012
615	2.80	2.70	0.00292	3.0	0.01252	0.09	1.39	0.12	2.01	23.31	201.33	0.23	0.00	0.000	0.000	0.013
616	2.70	2.60	0.00378	25.1	0.01367	0.08	1.48	0.13	2.18	27.67	217.64	0.28	0.00	0.000	0.000	0.014
617	2.60	2.50	0.00378	25.2	0.01367	0.08	1.56	0.13	2.18	27.68	217.66	0.28	0.00	0.000	0.000	0.014
618	2.50	2.40	0.00378	25.2	0.01367	0.08	1.65	0.13	2.18	27.68	217.66	0.28	0.00	0.000	0.000	0.014
619	2.40	2.30	0.00389	27.3	0.01381	0.08	1.73	0.13	2.20	28.20	219.52	0.28	0.00	0.000	0.000	0.014
620	2.30	2.20	0.00412	31.3	0.01408	0.08	1.81	0.13	2.23	29.27	223.28	0.29	0.00	0.000	0.000	0.014
621	2.20	2.10	0.00415	31.8	0.01411	0.08	1.89	0.13	2.24	29.41	223.76	0.29	0.00	0.000	0.000	0.014
622	2.10	2.00	0.00415	31.8	0.01411	0.08	1.98	0.13	2.24	29.41	223.76	0.29	0.00	0.000	0.000	0.014
623	2.00	1.90	0.00415	31.8	0.01411	0.08	2.06	0.13	2.24	29.41	223.76	0.29	0.00	0.000	0.000	0.014
624	1.90	1.80	0.00415	31.8	0.01411	0.08	2.14	0.13	2.24	29.41	223.76	0.29	0.00	0.000	0.000	0.014
625	1.80	1.70	0.00416	31.8	0.01412	0.08	2.22	0.13	2.24	29.44	223.85	0.29	0.00	0.000	0.000	0.014
626	1.70	1.60	0.00416	31.8	0.01412	0.08	2.30	0.13	2.24	29.44	223.85	0.29	0.00	0.000	0.000	0.014
627	1.60	1.50	0.00416	31.8	0.01412	0.08	2.39	0.13	2.24	29.44	223.85	0.29	0.00	0.000	0.000	0.014
628	1.50	1.40	0.00416	31.8	0.01412	0.08	2.47	0.13	2.24	29.44	223.85	0.29	0.00	0.000	0.000	0.014
629	1.40	1.30	0.00416	31.8	0.01412	0.08	2.55	0.13	2.24	29.44	223.85	0.29	0.00	0.000	0.000	0.014
630	1.30	1.20	0.00416	31.8	0.01412	0.08	2.63	0.13	2.24	29.44	223.85	0.29	0.00	0.000	0.000	0.014
631	1.20	1.10	0.00416	31.8	0.01412	0.08	2.71	0.13	2.24	29.44	223.85	0.29	0.00	0.000	0.000	0.014
632	1.10	1.00	0.00416	31.8	0.01412	0.08	2.80	0.13	2.24	29.44	223.85	0.29	0.00	0.000	0.000	0.014
633	1.00	0.90	0.01938	85.4	0.02383	0.05	2.84	0.23	3.55	81.34	355.29	0.81	0.00	0.000	0.000	0.024
634	0.90	0.80	0.01938	85.4	0.02383	0.05	2.89	0.23	3.55	81.34	355.29	0.81	0.00	0.000	0.000	0.024
635	0.80	0.70	0.01938	85.4	0.02383	0.05	2.94	0.23	3.55	81.34	355.29	0.81	0.00	0.000	0.000	0.024
636	0.70	0.60	0.01938	85.4	0.02383	0.05	2.99	0.23	3.55	81.34	355.29	0.81	0.00	0.000	0.000	0.024
637	0.60	0.50	0.01938	85.4	0.02383	0.05	3.04	0.23	3.55	81.34	355.29	0.81	0.00	0.000	0.000	0.024
638	0.50	0.40	0.01938	85.4	0.02383	0.05	3.09	0.23	3.55	81.34	355.29	0.81	0.00	0.000	0.000	0.024
639	0.40	0.30	0.01938	85.4	0.02383	0.05	3.14	0.23	3.55	81.34	355.29	0.81	0.00	0.000	0.000	0.024
640	0.30	0.20	0.01938	85.4	0.02383	0.05	3.18	0.23	3.55	81.34	355.29	0.81	0.00	0.000	0.000	0.024
641	0.20	0.10	0.01938	85.4	0.02383	0.05	3.23	0.23	3.55	81.34	355.29	0.81	0.00	0.000	0.000	0.024
642	0.10	0.00	0.01938	85.4	0.02383	0.05	3.28	0.23	3.55	81.34	355.29	0.81	0.00	0.000	0.000	0.024
TOT																
AVG					0.0148			3.28		1654.37	10345.13		0.39			

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 SETTT 1/da	BOD1 DECAT 1/da	BOD1 ABOD1 1/da	BOD1 DECAT 1/da	BOD2 HYDR DECAT 1/da	BOD2 SETTT 1/da	BOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N 1/da	ORG-N HYDR DECAT 1/da	NH3-N 1/da	NH3-N SETTT 1/da	DENIT SRCE 1/da	ORG-P HYDR DECAT 1/da	ORG-P SETTT 1/da	PO4 SOD *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETTT 1/da		
601	4.100	8.94	7.42	0.08	0.44	0.00	0.00	0.00	0.00	0.00	0.41	0.51	0.51	0.03	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
602	4.000	8.94	7.42	0.08	0.44	0.00	0.00	0.00	0.00	0.00	0.41	0.51	0.51	0.03	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	
603	3.900	8.94	7.42	0.08	0.44	0.00	0.00	0.00	0.00	0.00	0.41	0.51	0.51	0.03	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	
604	3.800	8.94	7.42	0.08	0.44	0.00	0.00	0.00	0.00	0.00	0.41	0.51	0.51	0.03	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	
605	3.700	8.94	7.42	0.08	0.44	0.00	0.00	0.00	0.00	0.00	0.41	0.50	0.50	0.03	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	
606	3.600	8.94	7.42	0.08	0.44	0.00	0.00	0.00	0.00	0.00	0.41	0.50	0.50	0.03	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	
607	3.500	8.94	7.42	0.08	0.44	0.00	0.00	0.00	0.00	0.00	0.41	0.50	0.50	0.03	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	
608	3.400	8.94	7.42	0.08	0.44	0.00	0.00	0.00																				

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

612	3.000	8.94	7.42	0.08	0.44	0.00	0.00	0.00	0.00	0.00	0.41	0.49	0.49	0.03	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	
613	2.900	8.94	7.42	0.08	0.44	0.00	0.00	0.00	0.00	0.00	0.41	0.49	0.49	0.03	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00
614	2.800	8.94	7.41	0.08	0.44	0.00	0.00	0.00	0.00	0.00	0.41	0.49	0.49	0.03	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	
615	2.700	8.94	7.39	0.08	0.44	0.00	0.00	0.00	0.00	0.00	0.41	0.50	0.50	0.03	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	
616	2.600	8.93	6.87	0.08	0.40	0.00	0.00	0.00	0.00	0.00	0.41	0.74	0.74	0.03	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	
617	2.500	8.93	6.87	0.08	0.40	0.00	0.00	0.00	0.00	0.00	0.41	0.73	0.73	0.03	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	
618	2.400	8.93	6.87	0.08	0.40	0.00	0.00	0.00	0.00	0.00	0.41	0.71	0.71	0.03	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	
619	2.300	8.93	6.81	0.08	0.40	0.00	0.00	0.00	0.00	0.00	0.41	0.73	0.73	0.03	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	
620	2.200	8.93	6.70	0.08	0.39	0.00	0.00	0.00	0.00	0.00	0.41	0.76	0.76	0.03	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	
621	2.100	8.93	6.69	0.08	0.39	0.00	0.00	0.00	0.00	0.00	0.41	0.76	0.76	0.03	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	
622	2.000	8.93	6.69	0.08	0.39	0.00	0.00	0.00	0.00	0.00	0.41	0.75	0.75	0.03	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	
623	1.900	8.93	6.69	0.08	0.39	0.00	0.00	0.00	0.00	0.00	0.41	0.74	0.74	0.03	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	
624	1.800	8.93	6.69	0.08	0.39	0.00	0.00	0.00	0.00	0.00	0.41	0.73	0.73	0.03	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	
625	1.700	8.93	6.69	0.08	0.39	0.00	0.00	0.00	0.00	0.00	0.41	0.72	0.72	0.03	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	
626	1.600	8.93	6.69	0.08	0.39	0.00	0.00	0.00	0.00	0.00	0.41	0.71	0.71	0.03	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	
627	1.500	8.93	6.69	0.08	0.39	0.00	0.00	0.00	0.00	0.00	0.41	0.70	0.70	0.03	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.00	
628	1.400	8.93	6.69	0.08	0.39	0.00	0.00	0.00	0.00	0.00	0.41	0.69	0.69	0.03	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.00	
629	1.300	8.93	6.69	0.08	0.39	0.00	0.00	0.00	0.00	0.00	0.41	0.68	0.68	0.03	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.00	
630	1.200	8.93	6.69	0.08	0.39	0.00	0.00	0.00	0.00	0.00	0.41	0.67	0.67	0.03	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.00	0.00	0.00	
631	1.100	8.93	6.69	0.08	0.39	0.00	0.00	0.00	0.00	0.00	0.41	0.66	0.66	0.03	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.00	0.00	0.00	
632	1.000	8.93	6.69	0.08	0.39	0.00	0.00	0.00	0.00	0.00	0.41	0.66	0.66	0.03	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00	
633	0.900	8.93	4.46	0.08	0.22	0.00	0.00	0.00	0.00	0.00	0.41	1.37	1.37	0.03	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00	
634	0.800	8.93	4.46	0.08	0.22	0.00	0.00	0.00	0.00	0.00	0.41	1.35	1.35	0.03	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00	
635	0.700	8.93	4.46	0.08	0.22	0.00	0.00	0.00	0.00	0.00	0.41	1.34	1.34	0.03	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.00	
636	0.600	8.93	4.46	0.08	0.22	0.00	0.00	0.00	0.00	0.00	0.41	1.33	1.33	0.03	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.00	
637	0.500	8.93	4.46	0.08	0.22	0.00	0.00	0.00	0.00	0.00	0.41	1.31	1.31	0.03	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.00	0.00	0.00	
638	0.400	8.93	4.46	0.08	0.22	0.00	0.00	0.00	0.00	0.00	0.41	1.30	1.30	0.03	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.00	0.00	0.00	
639	0.300	8.93	4.46	0.08	0.22	0.00	0.00	0.00	0.00	0.00	0.41	1.29	1.29	0.03	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.00	0.00	0.00	
640	0.200	8.93	4.46	0.08	0.22	0.00	0.00	0.00	0.00	0.00	0.41	1.28	1.28	0.03	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.00	0.00	
641	0.100	8.93	4.46	0.08	0.22	0.00	0.00	0.00	0.00	0.00	0.41	1.26	1.26	0.03	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.00	0.00	
642	0.000	8.93	4.46	0.08	0.22	0.00	0.00	0.00	0.00	0.00	0.41	1.25	1.25	0.03	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00	

AVG 20 DEG C RATE 6.33 0.08 0.01 0.00 0.00 0.00 0.00 0.00 0.00 0.39 0.03 0.01 0.00 0.00 0.10 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	NCM
601	4.100	20.80	0.26	524.70	8.15	6.90	2.01	0.00	2.02	0.00	1.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.1	0.0	0.	0.00
602	4.000	20.80	0.26	525.21	8.27	7.47	2.01	0.00	2.03	0.00	1.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.2	0.0	0.	0.00
603	3.900	20.80	0.26	525.21	8.27	7.82	1.97	0.00	2.00	0.00	1.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.2	0.0	0.	0.00
604	3.800	20.80	0.26	525.21	8.27	8.02	1.93	0.00	1.96	0.00	1.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.3	0.0	0.	0.00
605	3.700	20.80	0.26	525.21	8.27	8.14	1.89	0.00	1.93	0.00	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.4	0.0	0.	0.00
606	3.600	20.80	0.26	525.21	8.27	8.22	1.85	0.00	1.90	0.00	1.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.5	0.0	0.	0.00
607	3.500	20.80	0.26	525.21	8.27	8.26	1.82	0.00	1.88	0.00	1.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.5	0.0	0.	0.00
608	3.400	20.80	0.26	525.21	8.27	8.29	1.79	0.00	1.85	0.00	1.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.6	0.0	0.	0.00
609	3.300	20.80	0.26	525.21	8.27	8.31	1.75	0.00	1.83	0.00	1.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.7	0.0	0.	0.00
610	3.200	20.80	0.26	525.21	8.27	8.32	1.72	0.00	1.80	0.00	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.0	0.	0.00
611	3.100	20.80	0.26	525.38	8.31	8.33	1.71	0.00	1.80	0.00	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.0	0.	0.00
612	3.000	20.80	0.26	525.38	8.31	8.33	1.68	0.00	1.78	0.00	1.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.9	0.0	0.	0.00
613	2.900	20.80	0.26	525.38	8.31	8.34	1.65	0.00	1.76	0.00	1.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.0	0.	0.00
614	2.800	20.80	0.26	526.24	8.52	8.32	1.70	0.00	1.82	0.00	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.1	0.0	0.	0.00
615	2.700	20.80	0.26	527.77	8.89	8.30	1.81	0.00	1.93	0.00	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.1	0.0	0.	0.00
616	2.600	20.80	0.29	579.42	21.33	7.28	6.43	0.00	6.56	0.00	6.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.2	0.0	0.	0.00
617	2.500	20.80	0.29	579.46	21.34	7.54	6.22	0.00	6.36	0.00	6.51	0.00	0												

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P N&P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
601	4.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.1	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
602	4.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.2	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
603	3.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.2	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
604	3.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.3	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
605	3.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.4	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
606	3.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.5	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
607	3.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.5	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
608	3.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.6	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
609	3.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.7	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
610	3.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.8	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
611	3.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.8	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
612	3.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.9	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
613	2.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
614	2.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.1	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
615	2.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.1	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
616	2.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.2	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
617	2.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.3	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
618	2.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.4	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
619	2.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.4	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
620	2.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.5	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
621	2.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.6	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
622	2.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.7	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
623	1.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.8	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
624	1.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.8	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
625	1.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.9	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
626	1.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
627	1.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.1	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
628	1.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.1	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
629	1.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.2	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
630	1.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.3	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
631	1.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.4	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
632	1.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.4	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
633	0.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.5	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
634	0.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.6	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
635	0.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.7	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
636	0.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.7	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
637	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.8	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
638	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.9	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
639	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
640	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
641	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.1	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
642	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT TRIBUTARY 9 WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 58 DRAINAGE DITCH 3 - UPLAND BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
667	HDWTR	0.00283	20.80	0.26	520.90	7.23	6.00	1.71	0.00	1.71	0.00	0.78	0.00	0.00	0.00	0.00	0.00	0.00
667	WSTLD	0.00001	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
667	0.50	0.40	0.00284	0.3	0.01240	0.09	0.09	0.11	2.00	22.91	199.73					

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECA	BOD1 SETT	ABOD1 DECA	BOD1 HYDR	BOD2 DECA	BOD2 SETT	ABOD2 DECA	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECA	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECA	NCM DECA	NCM SETT			
		mg/L	1/da	1/da	1/da	1/da	1/da	1/da	1/da	1/da	*	*	*	1/da	1/da	1/da	*	1/da	1/da	1/da	*	**	**	1/da	1/da	1/da			
667	0.400	8.94	7.45	0.08	0.44	0.00	0.00	0.00	0.00	0.00	0.41	0.50	0.50	0.03	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
668	0.300	8.91	7.45	0.08	0.44	0.00	0.00	0.00	0.00	0.00	0.41	0.65	0.65	0.03	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
AVG 20 DEG C RATE		7.33	0.08	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.39				0.03	0.22	0.00	0.00	0.10	0.00	0.00			0.00	0.00	0.00			
* g/m ² /d				** mg/L/day																									

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	NCM	
667	0.400	20.80	0.26	521.70	7.42	6.95	1.79	0.00	1.79	0.00	1.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.00
668	0.300	20.80	0.78	1452.96	317.47	7.22	4.78	0.00	4.78	0.00	1.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.00

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT	PHYT N LIM	PHYT P	PHYT N&P	PHYT TOT LIM	PHYT GROW	PHYT RESP	PHYT DEATH	PHYT SETT	PHYT P/R	PHYTO µg/L	PERI N PREF	PERI LIT	PERI N LIM	PERI P	PERI N&P	PERI SPC	PERI TOT	PERI GROW	PERI RESP	PERI DEATH	PERI P/R	PERIP g/m ²					
667	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0					
668	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0					
20 DEG C RATE										0.000	0.000	0.000	0.000													0.000	0.000	0.000				

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT TRIBUTARY 9 WATER QUALITY/HYDRAULIC MODEL FOR:
REACH NO. 59 TRIBUTARY 9 - TIDAL BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
669	UPR RCH	0.00284	20.80	0.78	1452.96	317.47	7.22	4.78	0.00	4.78	0.00	1.93	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
669	0.30	0.20	0.00284	0.3	0.00022	5.21	5.40	0.80	16.00	1280.00	1600.00	12.80	160.00	0.000	0.061	0.000
670	0.20	0.10	0.00284	0.3	0.00022	5.21	10.61	0.80	16.00	1280.00	1600.00	12.80	320.00	0.001	0.117	0.001
671	0.10	0.00	0.00284	0.3	0.00022	5.21	15.83	0.80	16.00	1280.00	1600.00	12.80	480.00	0.001	0.175	0.001
TOT AVG						15.64			0.80	16.00	3840.00	4800.00	12.80			

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECA	BOD1 SETT	ABOD1 DECA	BOD1 HYDR	BOD2 DECA	BOD2 SETT	ABOD2 DECA	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECA	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECA	NCM DECA	NCM SETT			
		mg/L	1/da	1/da	1/da	1/da	1/da	1/da	1/da	1/da	*	*	*	1/da	1/da	1/da	*	1/da	1/da	1/da	*	**	**	1/da	1/da	1/da			
669	0.200	8.89	0.89	0.08	0.06	0.00	0.00	0.00	0.00	0.00	0.41	0.77	0.77	0.03	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00			
670	0.100	8.88	0.89	0.08	0.06	0.00	0.00	0.00	0.00	0.00	0.41	0.88	0.88	0.03	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.00			
671	0.000	8.87	0.89	0.08	0.06	0.00	0.00	0.00	0.00	0.00	0.41	1.01	1.01	0.03	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00			
AVG 20 DEG C RATE		0.88	0.08	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.39				0.03	0.02	0.00	0.00	0.10	0.00	0.00			0.00	0.00	0.00			
* g/m ² /d				** mg/L/day																									

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	NCM	
669	0.200	20.80	1.16	2125.46	541.36	6.97	7.05	0.00	7.16	0.00	2.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.1	0.0
670	0.100	20.80	1.38	2524.10	674.08	6.64	9.26	0.00	9.48	0.00	2.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.1	0.0
671	0.000	20.80	1.55	2828.81	775.52	6.26	11.73	0.00	12.08	0.00	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
669	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
670	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
671	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT TRIBUTARY 6 WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 61 DRAINAGE DITCH 11 - UPLAND BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
680	HDWTR	0.00283	20.80	0.26	520.90	7.23	6.00	1.71	0.00	0.00	0.00	0.78	0.00	0.00	0.00	0.00	0.00	0.00
680	WSTLD	0.00004	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
680	1.60	1.50	0.00288	1.5	0.01246	0.09	0.09	0.12	2.00	23.09	200.45	0.23	0.00	0.000	0.000	0.012
681	1.50	1.40	0.00288	1.5	0.01246	0.09	0.19	0.12	2.00	23.09	200.45	0.23	0.00	0.000	0.000	0.012
682	1.40	1.30	0.00288	1.5	0.01246	0.09	0.28	0.12	2.00	23.09	200.45	0.23	0.00	0.000	0.000	0.012
683	1.30	1.20	0.00288	1.5	0.01246	0.09	0.37	0.12	2.00	23.09	200.45	0.23	0.00	0.000	0.000	0.012
684	1.20	1.10	0.00288	1.5	0.01246	0.09	0.46	0.12	2.00	23.09	200.45	0.23	0.00	0.000	0.000	0.012
685	1.10	1.00	0.00288	1.5	0.01246	0.09	0.56	0.12	2.00	23.09	200.45	0.23	0.00	0.000	0.000	0.012
686	1.00	0.90	0.00288	1.5	0.01246	0.09	0.65	0.12	2.00	23.09	200.45	0.23	0.00	0.000	0.000	0.012
687	0.90	0.80	0.00288	1.5	0.01246	0.09	0.74	0.12	2.00	23.09	200.45	0.23	0.00	0.000	0.000	0.012
688	0.80	0.70	0.00288	1.5	0.01246	0.09	0.84	0.12	2.00	23.09	200.45	0.23	0.00	0.000	0.000	0.012
689	0.70	0.60	0.00288	1.5	0.01246	0.09	0.93	0.12	2.00	23.09	200.45	0.23	0.00	0.000	0.000	0.012
TOT AVG					0.0125	0.93		0.12	2.00	230.89	2004.47		0.23			

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT mg/L	REAER RATE 1/da	BOD1 DECA 1/da	BOD1 SETT 1/da	ABOD1 DECA 1/da	BOD1 HYDR 1/da	BOD2 DECA 1/da	BOD2 SETT 1/da	ABOD2 DECA 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECA 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 PROD *	PHYTO PROD **	PERIP PROD **	COLI DECA 1/da	NCM DECA 1/da	NCM SETT 1/da	
680	1.500	8.94	7.43	0.08	0.44	0.00	0.00	0.00	0.00	0.00	0.41	0.51	0.51	0.03	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
681	1.400	8.94	7.43	0.08	0.44	0.00	0.00	0.00	0.00	0.00	0.41	0.51	0.51	0.03	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
682	1.300	8.94	7.43	0.08	0.44	0.00	0.00	0.00	0.00	0.00	0.41	0.51	0.51	0.03	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
683	1.200	8.94	7.43	0.08	0.44	0.00	0.00	0.00	0.00	0.00	0.41	0.51	0.51	0.03	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
684	1.100	8.94	7.43	0.08	0.44	0.00	0.00	0.00	0.00	0.00	0.41	0.51	0.51	0.03	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
685	1.000	8.94	7.43	0.08	0.44	0.00	0.00	0.00	0.00	0.00	0.41	0.51	0.51	0.03	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
686	0.900	8.94	7.43	0.08	0.44	0.00	0.00	0.00	0.00	0.00	0.41	0.51	0.51	0.03	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
687	0.800	8.94	7.43	0.08	0.44	0.00	0.00	0.00	0.00	0.00	0.41	0.51	0.51	0.03	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
688	0.700	8.94	7.43	0.08	0.44	0.00	0.00	0.00	0.00	0.00	0.41	0.51	0.51	0.03	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
689	0.600	8.92	7.43	0.08	0.44	0.00	0.00	0.00	0.00	0.00	0.41	0.55	0.55	0.03	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			7.31	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.39			0.03	0.04	0.00	0.00	0.10	0.00	0.00	0.00			0.00	0.00	0.00	0.00

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL	NCM
680	1.500	20.80	0.26	524.44	8.08	6.91	2.02	0.00	2.02	0.00	1.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.00
681	1.400	20.80	0.26	524.44	8.08	7.48	2.01	0.00	2.01	0.00	1.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.00
682	1.300	20.80	0.26	524.44	8.08	7.82	2.01	0.00	2.01	0.00	1.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.00
683	1.200	20.80	0.26	524.44	8.08	8.02	2.00	0.00	2.00	0.00	1.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.00
684	1.100	20.80	0.26	524.44	8.08	8.14	1.99	0.00	1.99	0.00	1.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.00
685	1.000	20.80	0.26	524.44	8.08	8.21	1.98	0.00	1.98	0.00	1.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

	frac	m	PREF	LIM	LIM	LIM	LIM	LIM	LIM	1/da	1/da	1/da	1/da	RATIO	µg/L	PREF	LIM	LIM	LIM	LIM	LIM	LIM	LIM	1/da	1/da	1/da	RATIO	g/m²
698	0.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
699	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
700	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
701	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
702	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
20 DEG C RATE										0.000	0.000	0.000	0.000									0.000	0.000	0.000				

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT TRIBUTARY 10 WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 65 TRIBUTARY 10 - TIDAL BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
703	UPR RCH	0.00286	20.80	0.86	1594.61	364.74	7.70	4.87	0.00	4.87	0.00	1.78	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
703	0.20	0.10	0.00286	1.1	0.00034	3.42	3.88	0.65	13.00	845.00	1300.00	8.45	130.00	0.000	0.066	0.000
704	0.10	0.00	0.00286	1.1	0.00034	3.42	7.30	0.65	13.00	845.00	1300.00	8.45	260.00	0.001	0.122	0.001
TOT AVG						6.83		0.65	13.00	1690.00	2600.00	8.45				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECA	BOD1 SETT	ABOD1 DECA	BOD1 HYDR	BOD2 DECA	BOD2 SETT	ABOD2 DECA	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECA	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECA	NCM DECA	NCM SETT	
703	0.100	8.87	1.09	0.08	0.08	0.00	0.00	0.00	0.00	0.00	0.41	0.82	0.82	0.03	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00
704	0.000	8.85	1.09	0.08	0.08	0.00	0.00	0.00	0.00	0.00	0.41	0.99	0.99	0.03	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			1.08	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.39			0.03	0.04	0.00	0.00	0.10	0.00	0.00	0.00			0.00	0.00	0.00	0.00

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL	NCM
703	0.100	20.80	1.47	2691.57	730.22	7.09	8.04	0.00	8.21	0.00	2.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.6	0.0	0.	0.00
704	0.000	20.80	1.91	3471.56	990.10	6.62	11.40	0.00	11.75	0.00	3.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.	0.00

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT P/R 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N	PERI LIT	PERI N LIM	PERI P N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
703	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.6	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
704	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT TRIBUTARY 8 WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 68 TRIBUTARY 8 - UPLAND BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
----------	------	------	------------	----------	------	----	---------	-----------	-----------	------------	------------	------------	------------	------------	------------	------------	--------------	-----

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

715	HDWTR	0.00283	20.80	0.26	520.90	7.23	6.00	1.71	0.00	1.71	0.00	0.78	0.00	0.00	0.00	0.00	0.00
715	WSTLD	0.00001	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
715	0.60	0.50	0.00284	0.4	0.01241	0.09	0.09	0.11	2.00	22.91	199.76	0.23	0.00	0.0000	0.0000	0.012
716	0.50	0.40	0.00284	0.4	0.01241	0.09	0.19	0.11	2.00	22.91	199.76	0.23	0.00	0.0000	0.0000	0.012
717	0.40	0.30	0.00284	0.4	0.01241	0.09	0.28	0.11	2.00	22.91	199.76	0.23	0.00	0.0000	0.0000	0.012
718	0.30	0.20	0.00284	0.4	0.01241	0.09	0.37	0.11	2.00	22.91	199.76	0.23	0.00	0.0000	0.0000	0.012
719	0.20	0.10	0.00284	0.4	0.01241	0.09	0.47	0.11	2.00	22.91	199.76	0.23	0.00	0.0000	0.0000	0.012
TOT AVG					0.0124	0.47		0.11	2.00	114.57	998.78	0.23				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECAT	BOD1 DECAT	ABOD1 DECAT	BOD1 DECAT	BOD2 DECAT	BOD2 DECAT	ABOD2 DECAT	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECAT	NH3-N DECAT	DECAT	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECAT	NCM DECAT	NCM DECAT		
715	0.500	8.94	7.45	0.08	0.44	0.00	0.00	0.00	0.00	0.00	0.41	0.50	0.50	0.03	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
716	0.400	8.94	7.45	0.08	0.44	0.00	0.00	0.00	0.00	0.00	0.41	0.50	0.50	0.03	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
717	0.300	8.94	7.45	0.08	0.44	0.00	0.00	0.00	0.00	0.00	0.41	0.50	0.50	0.03	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
718	0.200	8.94	7.45	0.08	0.44	0.00	0.00	0.00	0.00	0.00	0.41	0.50	0.50	0.03	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
719	0.100	8.89	7.45	0.08	0.44	0.00	0.00	0.00	0.00	0.00	0.41	0.66	0.66	0.03	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			7.33	0.08	0.09	0.00	0.00	0.00	0.00	0.00	0.39			0.03	0.09	0.00	0.00	0.10	0.00	0.00	0.00			0.00	0.00	0.00		

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	NCM
715	0.500	20.80	0.26	521.79	7.44	6.95	1.80	0.00	1.80	0.00	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00
716	0.400	20.80	0.26	521.79	7.44	7.51	1.80	0.00	1.80	0.00	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00
717	0.300	20.80	0.26	521.79	7.44	7.85	1.80	0.00	1.80	0.00	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00
718	0.200	20.80	0.26	521.79	7.44	8.04	1.81	0.00	1.81	0.00	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00
719	0.100	20.80	1.05	1938.60	479.60	7.81	4.86	0.00	4.86	0.00	1.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW	PHYT RESP	PHYT DEATH	PHYT SETT	PHYT P/R	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW	PERI RESP	PERI DEATH	PERI P/R	PERIP g/m ²
715	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
716	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
717	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
718	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
719	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20 DEG C RATE									0.000	0.000	0.000	0.000									0.000	0.000	0.000		

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT TRIBUTARY 8 WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 69 TRIBUTARY 8 - TIDAL BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
720	UPR RCH	0.00284	20.80	1.05	1938.60	479.60	7.81	4.86	0.00	4.86	0.00	1.70	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
----------	---------------	----------------	------------------------	---------	-----------------	------------------	---------------	---------	---------	-----------------------	-----------------------------	----------------------------	----------------------------	----------------	---------------------------	---------------

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

720	0.10	0.00	0.00284	0.4	0.00057	2.04	2.50	0.50	10.00	500.00	1000.00	5.00	100.00	0.001	0.075	0.001
TOT						2.04				500.00	1000.00					
AVG					0.0006			0.50	10.00			5.00				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECA	BOD1 SETT	ABOD1 DECA	BOD1 HYDR	BOD2 DECA	BOD2 SETT	ABOD2 DECA	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECA	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECA	NCM DECA	NCM SETT	
720	0.000	8.83	1.42	0.08	0.10	0.00	0.00	0.00	0.00	0.00	0.41	0.90	0.90	0.03	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			1.40	0.08	0.10	0.00	0.00	0.00	0.00	0.00	0.39			0.03	0.10	0.00	0.00	0.10	0.00	0.00	0.00				0.00	0.00	0.00
*	g/m ² /d		**	mg/L/day																							

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	NCM	
720	0.000	20.80	2.26	4098.59	1199.43	7.19	9.74	0.00	10.80	0.00	2.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.	0.00

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREP	PHYT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT DEATH 1/da	PHYT P/R 1/da	PHYT RATIO	PHYTO µg/L	PERI N PREP	PERI LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT 1/da	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
720	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20 DEG C RATE										0.000	0.000	0.000	0.000								0.000	0.000	0.000			

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT MARINA 1
REACH NO. 71 MARINA 1 - TIDAL

WATER QUALITY/HYDRAULIC MODEL FOR:
BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
727	HDWTR	0.00283	20.80	0.26	520.90	7.23	6.00	1.71	0.00	1.71	0.00	0.78	0.00	0.00	0.00	0.00	0.00	0.00
728	WSTLD	0.00000	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
727	0.20	0.10	0.00283	0.0	0.00007	15.69	15.69	1.20	32.00	3840.00	3200.00	38.40	320.00	0.000	0.055	0.000
728	0.10	0.00	0.00283	0.0	0.00007	15.69	31.38	1.20	32.00	3840.00	3200.00	38.40	640.00	0.000	0.109	0.000
TOT						31.38				7680.00	6400.00					
AVG						0.0001		1.20	32.00			38.40				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECA	BOD1 SETT	ABOD1 DECA	BOD1 HYDR	BOD2 DECA	BOD2 SETT	ABOD2 DECA	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECA	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECA	NCM DECA	NCM SETT
727	0.100	8.83	0.59	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.41	0.79	0.79	0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.00	0.00	0.00
728	0.000	8.82	0.59	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.41	0.86	0.86	0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.35	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.58	0.08	0.02	0.00	0.00	0.00	0.00	0.00	0.39			0.03	0.02	0.00	0.00	0.10	0.00	0.00	0.00				0.00	0.00
*	g/m ² /d		**	mg/L/day																						

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	NCM
----------	-------------	------------	----------	------	----	---------	-----------	-----------	------------	------------	------------	------------	------------	------------	-------------	-------------	------------	------------	------------	-------------	-------------	------------	------------------------	--------------	-----

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

747 0.000 8.81 0.59 0.08 0.04 0.00 0.00 0.00 0.00 0.00 0.41 0.87 0.87 0.03 0.04 0.00 0.00 0.00 0.00 0.00 0.00 0.35 0.00 0.00 0.00 0.00
 AVG 20 DEG C RATE 0.58 0.08 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.39 0.03 0.00 0.00 0.00 0.10 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
 * g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	NCM	
730	1.700	20.80	1.87	3403.03	967.84	7.51	2.94	0.00	2.98	0.00	1.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.4	0.0	0.0	0.00
731	1.600	20.80	2.02	3663.16	1054.54	7.55	3.11	0.00	3.19	0.00	1.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.0	0.0	0.00
732	1.500	20.80	2.11	3833.72	1111.38	7.56	3.28	0.00	3.40	0.00	1.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.1	0.0	0.0	0.00
733	1.400	20.80	2.19	3962.10	1154.17	7.55	3.46	0.00	3.62	0.00	1.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.5	0.0	0.0	0.00
734	1.300	20.80	2.24	4065.78	1188.73	7.53	3.65	0.00	3.86	0.00	1.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.9	0.0	0.0	0.00
735	1.200	20.80	2.29	4153.12	1217.84	7.51	3.87	0.00	4.11	0.00	1.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.3	0.0	0.0	0.00
736	1.100	20.80	2.34	4228.82	1243.07	7.49	4.11	0.00	4.39	0.00	1.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.6	0.0	0.0	0.00
737	1.000	20.80	2.37	4295.77	1265.38	7.46	4.38	0.00	4.70	0.00	1.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.0	0.0	0.0	0.00
738	0.900	20.80	2.41	4355.90	1285.42	7.42	4.67	0.00	5.04	0.00	1.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.4	0.0	0.0	0.00
739	0.800	20.80	2.44	4410.55	1303.64	7.39	5.00	0.00	5.40	0.00	1.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.8	0.0	0.0	0.00
740	0.700	20.80	2.47	4460.69	1320.35	7.36	5.36	0.00	5.80	0.00	1.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.2	0.0	0.0	0.00
741	0.600	20.80	2.49	4507.06	1335.80	7.32	5.76	0.00	6.24	0.00	2.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.5	0.0	0.0	0.00
742	0.500	20.80	2.52	4550.21	1350.19	7.29	6.20	0.00	6.72	0.00	2.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.9	0.0	0.0	0.00
743	0.400	20.80	2.54	4590.60	1363.65	7.27	6.68	0.00	7.24	0.00	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.3	0.0	0.0	0.00
744	0.300	20.80	2.56	4628.57	1376.30	7.25	7.21	0.00	7.81	0.00	2.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.7	0.0	0.0	0.00
745	0.200	20.80	2.58	4664.42	1388.25	7.25	7.78	0.00	8.43	0.00	2.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.0	0.0	0.0	0.00
746	0.100	20.80	2.60	4698.40	1399.58	7.27	8.41	0.00	9.10	0.00	2.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.4	0.0	0.0	0.00
747	0.000	20.80	2.62	4731.19	1410.51	7.31	9.10	0.00	9.83	0.00	2.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.8	0.0	0.0	0.00

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²	
730	1.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.4	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	0.0
731	1.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.8	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	0.0
732	1.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.1	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	0.0
733	1.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.5	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	0.0
734	1.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.9	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	0.0
735	1.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.3	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	0.0
736	1.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.6	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	0.0
737	1.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	0.0
738	0.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.4	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	0.0
739	0.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.8	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	0.0
740	0.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	4.2	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	0.0
741	0.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	4.5	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	0.0
742	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	4.9	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	0.0
743	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	5.3	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	0.0
744	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	5.7	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	0.0
745	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	0.0
746	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.4	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	0.0
747	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.8	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	0.0

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT HWY 190 WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 75 HWY 190 (DD13-PAQUET HEADWATERS) BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
762	HDWTR	0.00283	20.80	0.26	520.90	7.23	6.00	1.79	0.00	1.79	0.00	0.81	0.00	0.00	0.00	0.00	0.00	0.00
762	WSTLD	0.00003	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00	0.00	0.00
763	WSTLD	0.00001	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00	0.00	0.00
767	WSTLD	0.00013	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
762	8.60	8.50	0.00286	1.0	0.01243	0.09	0.09	0.11	2.00	23.00	200.10	0.23	0.00	0.000	0.000	0.012

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

775 7.200 0.00 Inf 1.00 0.00 0.00 0.00 0.00 0.00 0.000 0.000 0.000 0.000 0.0 0.0 0.50 0.00 0.00 0.00 0.00 0.00 0.00 0.000 0.000 0.000 0.0 0.0
 20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT HWY 190 WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 76 PAQUET FROM HWY 190 TO DD16 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
776	UPR RCH	0.00299	20.80	0.27	533.56	10.28	8.24	2.54	0.00	2.54	0.00	2.37	0.00	0.00	0.00	0.00	0.00	0.00
776	WSTLD	0.02832	20.80	0.26	520.90	7.23	6.00	1.76	0.00	1.76	0.00	0.77	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
776	7.20	7.10	0.03131	91.0	0.05697	0.02	1.31	0.18	3.08	54.97	308.49	0.55	0.00	0.000	0.000	0.057
777	7.10	7.00	0.03131	91.0	0.05697	0.02	1.33	0.18	3.08	54.97	308.49	0.55	0.00	0.000	0.000	0.057
778	7.00	6.90	0.03131	91.0	0.05697	0.02	1.35	0.18	3.08	54.97	308.49	0.55	0.00	0.000	0.000	0.057
779	6.90	6.80	0.03131	91.0	0.05697	0.02	1.37	0.18	3.08	54.97	308.49	0.55	0.00	0.000	0.000	0.057
780	6.80	6.70	0.03131	91.0	0.05697	0.02	1.39	0.18	3.08	54.97	308.49	0.55	0.00	0.000	0.000	0.057
781	6.70	6.60	0.03131	91.0	0.05697	0.02	1.41	0.18	3.08	54.97	308.49	0.55	0.00	0.000	0.000	0.057
782	6.60	6.50	0.03131	91.0	0.05697	0.02	1.43	0.18	3.08	54.97	308.49	0.55	0.00	0.000	0.000	0.057
783	6.50	6.40	0.03131	91.0	0.05697	0.02	1.45	0.18	3.08	54.97	308.49	0.55	0.00	0.000	0.000	0.057
784	6.40	6.30	0.03131	91.0	0.05697	0.02	1.47	0.18	3.08	54.97	308.49	0.55	0.00	0.000	0.000	0.057
785	6.30	6.20	0.03131	91.0	0.05697	0.02	1.49	0.18	3.08	54.97	308.49	0.55	0.00	0.000	0.000	0.057
786	6.20	6.10	0.03131	91.0	0.05697	0.02	1.51	0.18	3.08	54.97	308.49	0.55	0.00	0.000	0.000	0.057
787	6.10	6.00	0.03131	91.0	0.05697	0.02	1.53	0.18	3.08	54.97	308.49	0.55	0.00	0.000	0.000	0.057
788	6.00	5.90	0.03131	91.0	0.05697	0.02	1.55	0.18	3.08	54.97	308.49	0.55	0.00	0.000	0.000	0.057
789	5.90	5.80	0.03131	91.0	0.05697	0.02	1.57	0.18	3.08	54.97	308.49	0.55	0.00	0.000	0.000	0.057
790	5.80	5.70	0.03131	91.0	0.05697	0.02	1.59	0.18	3.08	54.97	308.49	0.55	0.00	0.000	0.000	0.057
791	5.70	5.60	0.03131	91.0	0.05697	0.02	1.62	0.18	3.08	54.97	308.49	0.55	0.00	0.000	0.000	0.057
792	5.60	5.50	0.03131	91.0	0.05697	0.02	1.64	0.18	3.08	54.97	308.49	0.55	0.00	0.000	0.000	0.057
793	5.50	5.40	0.03131	91.0	0.05697	0.02	1.66	0.18	3.08	54.97	308.49	0.55	0.00	0.000	0.000	0.057
794	5.40	5.30	0.03131	91.0	0.05697	0.02	1.68	0.18	3.08	54.97	308.49	0.55	0.00	0.000	0.000	0.057
795	5.30	5.20	0.03131	91.0	0.05697	0.02	1.70	0.18	3.08	54.97	308.49	0.55	0.00	0.000	0.000	0.057
796	5.20	5.10	0.03131	91.0	0.05697	0.02	1.72	0.18	3.08	54.97	308.49	0.55	0.00	0.000	0.000	0.057
TOT AVG					0.0570	0.43		0.18	3.08	1154.31	6478.31	0.55				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECA 1/da	BOD1 SETT 1/da	ABOD1 DECA 1/da	BOD1 HYDR 1/da	BOD2 DECA 1/da	BOD2 SETT 1/da	ABOD2 DECA 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECA 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECA 1/da	NCM DECA 1/da	NCM SETT 1/da	
776	7.100	8.94	8.43	0.08	0.29	0.00	0.00	0.00	0.00	0.00	0.43	0.52	0.52	0.03	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
777	7.000	8.94	8.43	0.08	0.29	0.00	0.00	0.00	0.00	0.00	0.43	0.52	0.52	0.03	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
778	6.900	8.94	8.43	0.08	0.29	0.00	0.00	0.00	0.00	0.00	0.43	0.52	0.52	0.03	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
779	6.800	8.94	8.43	0.08	0.29	0.00	0.00	0.00	0.00	0.00	0.43	0.52	0.52	0.03	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
780	6.700	8.94	8.43	0.08	0.29	0.00	0.00	0.00	0.00	0.00	0.43	0.52	0.52	0.03	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
781	6.600	8.94	8.43	0.08	0.29	0.00	0.00	0.00	0.00	0.00	0.43	0.52	0.52	0.03	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
782	6.500	8.94	8.43	0.08	0.29	0.00	0.00	0.00	0.00	0.00	0.43	0.52	0.52	0.03	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
783	6.400	8.94	8.43	0.08	0.29	0.00	0.00	0.00	0.00	0.00	0.43	0.52	0.52	0.03	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
784	6.300	8.94	8.43	0.08	0.29	0.00	0.00	0.00	0.00	0.00	0.43	0.52	0.52	0.03	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
785	6.200	8.94	8.43	0.08	0.29	0.00	0.00	0.00	0.00	0.00	0.43	0.52	0.52	0.03	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
786	6.100	8.94	8.43	0.08	0.29	0.00	0.00	0.00	0.00	0.00	0.43	0.52	0.52	0.03	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
787	6.000	8.94	8.43	0.08	0.29	0.00	0.00	0.00	0.00	0.00	0.43	0.52	0.52	0.03	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
788	5.900	8.94	8.43	0.08	0.29	0.00	0.00	0.00	0.00	0.00	0.43	0.52	0.52	0.03	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
789	5.800	8.94	8.43	0.08	0.29	0.00	0.00	0.00	0.00	0.00	0.43	0.52	0.52	0.03	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
790	5.700	8.94	8.43	0.08	0.29	0.00	0.00	0.00	0.00	0.00	0.43	0.52	0.52	0.03	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
791	5.600	8.94	8.43	0.08	0.29	0.00	0.00	0.00	0.00	0.00	0.43	0.52	0.52	0.03	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
792	5.500	8.94	8.43	0.08	0.29	0.00	0.00	0.00	0.00	0.00	0.43	0.52	0.52	0.03	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
793	5.400	8.94	8.43	0.08	0.29	0.00	0.00	0.00	0.00	0.00	0.43	0.52	0.52	0.03	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
794	5.300	8.94	8.43	0.08	0.29	0.00	0.00	0.00	0.00	0.00	0.43	0.52	0.52	0.03	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
795	5.200	8.94	8.43	0.08	0.29	0.00	0.00	0.00	0.00	0.00	0.43	0.52	0.52	0.03	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
796	5.100	8.94	8.43	0.08	0.29	0.00	0.00	0.00	0.00	0.00	0.43	0.52	0.52	0.03	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
AVG 20 DEG C RATE		8.30	0.08	0.01	0.00	0.00	0.00	0.00	0.00	0.41		0.03	0.01	0.00	0.00	0.10	0.00	0.00	0.00				0.00	0.00	0.00		

* g/m²/d ** mg/L/day

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

***** WATER QUALITY CONSTITUENT VALUES *****																										
ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL	NCM	
776	7.100	20.80	0.26	522.11	7.52	6.56	1.84	0.00	1.84	0.00	0.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
777	7.000	20.80	0.26	522.11	7.52	6.85	1.84	0.00	1.84	0.00	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
778	6.900	20.80	0.26	522.11	7.52	7.10	1.84	0.00	1.84	0.00	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
779	6.800	20.80	0.26	522.11	7.52	7.32	1.85	0.00	1.85	0.00	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
780	6.700	20.80	0.26	522.11	7.52	7.50	1.85	0.00	1.85	0.00	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
781	6.600	20.80	0.26	522.11	7.52	7.66	1.85	0.00	1.85	0.00	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
782	6.500	20.80	0.26	522.11	7.52	7.79	1.86	0.00	1.86	0.00	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
783	6.400	20.80	0.26	522.11	7.52	7.90	1.86	0.00	1.86	0.00	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
784	6.300	20.80	0.26	522.11	7.52	8.00	1.86	0.00	1.86	0.00	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
785	6.200	20.80	0.26	522.11	7.52	8.08	1.87	0.00	1.87	0.00	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
786	6.100	20.80	0.26	522.11	7.52	8.15	1.87	0.00	1.87	0.00	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
787	6.000	20.80	0.26	522.11	7.52	8.21	1.87	0.00	1.87	0.00	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
788	5.900	20.80	0.26	522.11	7.52	8.27	1.87	0.00	1.87	0.00	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
789	5.800	20.80	0.26	522.11	7.52	8.31	1.88	0.00	1.88	0.00	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
790	5.700	20.80	0.26	522.11	7.52	8.35	1.88	0.00	1.88	0.00	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
791	5.600	20.80	0.26	522.11	7.52	8.38	1.88	0.00	1.88	0.00	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
792	5.500	20.80	0.26	522.11	7.52	8.41	1.89	0.00	1.89	0.00	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
793	5.400	20.80	0.26	522.11	7.52	8.43	1.89	0.00	1.89	0.00	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
794	5.300	20.80	0.26	522.11	7.52	8.45	1.89	0.00	1.89	0.00	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
795	5.200	20.80	0.26	522.11	7.52	8.47	1.89	0.00	1.89	0.00	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
796	5.100	20.80	0.26	522.11	7.52	8.48	1.90	0.00	1.90	0.00	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

***** PHYTOPLANKTON AND PERIPHYTON DATA *****																										
ELEM NO.	ENDING DIST	BANK SHADE frac	SECCCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²		
776	7.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
777	7.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
778	6.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
779	6.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
780	6.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
781	6.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
782	6.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
783	6.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
784	6.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
785	6.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
786	6.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
787	6.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
788	5.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
789	5.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
790	5.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
791	5.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
792	5.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
793	5.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
794	5.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
795	5.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
796	5.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	

20 DEG C RATE

0.000 0.000 0.000 0.000

0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT HWY 190
 REACH NO. 78 PAQUET FROM RKM 5.1 TO DD17

WATER QUALITY/HYDRAULIC MODEL FOR:
 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****																		
ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
806	UPR RCH	0.03131	20.80	0.26	522.11	7.52	8.48	1.90	0.00	1.90	0.00	0.95	0.00	0.00	0.00	0.00	0.00	0.00
806	TRIB	0.00284	20.80	0.26	521.16	7.29	8.28	1.90	0.00	1.90	0.00	0.90	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****																
ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
806	5.10	5.00														

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

809	4.80	4.70	0.03415	83.4	0.05867	0.02	1.80	0.18	3.17	58.20	316.62	0.58	0.00	0.000	0.000	0.059
810	4.70	4.60	0.03415	83.4	0.05867	0.02	1.82	0.18	3.17	58.20	316.62	0.58	0.00	0.000	0.000	0.059
811	4.60	4.50	0.03415	83.4	0.05867	0.02	1.83	0.18	3.17	58.20	316.62	0.58	0.00	0.000	0.000	0.059
812	4.50	4.40	0.03415	83.4	0.05867	0.02	1.85	0.18	3.17	58.20	316.62	0.58	0.00	0.000	0.000	0.059
813	4.40	4.30	0.03415	83.4	0.05867	0.02	1.87	0.18	3.17	58.20	316.62	0.58	0.00	0.000	0.000	0.059
814	4.30	4.20	0.03415	83.4	0.05867	0.02	1.89	0.18	3.17	58.20	316.62	0.58	0.00	0.000	0.000	0.059
815	4.20	4.10	0.03415	83.4	0.05867	0.02	1.91	0.18	3.17	58.20	316.62	0.58	0.00	0.000	0.000	0.059
816	4.10	4.00	0.03415	83.4	0.05867	0.02	1.93	0.18	3.17	58.20	316.62	0.58	0.00	0.000	0.000	0.059
817	4.00	3.90	0.03415	83.4	0.05867	0.02	1.95	0.18	3.17	58.20	316.62	0.58	0.00	0.000	0.000	0.059
818	3.90	3.80	0.03415	83.4	0.05867	0.02	1.97	0.18	3.17	58.20	316.62	0.58	0.00	0.000	0.000	0.059
TOT										756.64	4116.02					
AVG					0.0587		0.26		0.18	3.17		0.58				

BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT DECAT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR DECAT 1/da	BOD2 DECAT 1/da	BOD2 SETT DECAT 1/da	ABOD2 DECAT 1/da	BKGD *	FULL SOD *	CORR SOD *	ORG-N 1/da	ORG-N 1/da	NH3-N 1/da	NH3-N 1/da	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da		
806	5.000	8.94	8.30	0.08	0.28	0.00	0.00	0.00	0.00	0.00	0.43	0.52	0.52	0.03	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
807	4.900	8.94	8.30	0.08	0.28	0.00	0.00	0.00	0.00	0.00	0.43	0.52	0.52	0.03	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
808	4.800	8.94	8.30	0.08	0.28	0.00	0.00	0.00	0.00	0.00	0.43	0.52	0.52	0.03	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
809	4.700	8.94	8.30	0.08	0.28	0.00	0.00	0.00	0.00	0.00	0.43	0.52	0.52	0.03	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
810	4.600	8.94	8.30	0.08	0.28	0.00	0.00	0.00	0.00	0.00	0.43	0.52	0.52	0.03	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
811	4.500	8.94	8.30	0.08	0.28	0.00	0.00	0.00	0.00	0.00	0.43	0.52	0.52	0.03	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
812	4.400	8.94	8.30	0.08	0.28	0.00	0.00	0.00	0.00	0.00	0.43	0.52	0.52	0.03	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
813	4.300	8.94	8.30	0.08	0.28	0.00	0.00	0.00	0.00	0.00	0.43	0.52	0.52	0.03	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
814	4.200	8.94	8.30	0.08	0.28	0.00	0.00	0.00	0.00	0.00	0.43	0.53	0.53	0.03	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
815	4.100	8.94	8.30	0.08	0.28	0.00	0.00	0.00	0.00	0.00	0.43	0.53	0.53	0.03	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
816	4.000	8.94	8.30	0.08	0.28	0.00	0.00	0.00	0.00	0.00	0.43	0.53	0.53	0.03	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
817	3.900	8.94	8.30	0.08	0.28	0.00	0.00	0.00	0.00	0.00	0.43	0.53	0.53	0.03	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
818	3.800	8.94	8.30	0.08	0.28	0.00	0.00	0.00	0.00	0.00	0.43	0.53	0.53	0.03	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
AVG 20 DEG C RATE			8.17	0.08	0.02	0.00	0.00	0.00	0.00	0.00	0.41			0.03	0.02	0.00	0.00	0.10	0.00	0.00	0.00			0.00	0.00	0.00		
*	g/m ² /d																											
**			mg/L/day																									

WATER QUALITY CONSTITUENT VALUES

ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	NCM
806	5.000	20.80	0.26	522.03	7.50	8.48	1.90	0.00	1.90	0.00	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.	0.00
807	4.900	20.80	0.26	522.03	7.50	8.49	1.90	0.00	1.90	0.00	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.	0.00
808	4.800	20.80	0.26	522.03	7.50	8.50	1.91	0.00	1.91	0.00	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.	0.00
809	4.700	20.80	0.26	522.03	7.50	8.51	1.91	0.00	1.91	0.00	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.	0.00
810	4.600	20.80	0.26	522.03	7.50	8.52	1.91	0.00	1.91	0.00	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.	0.00
811	4.500	20.80	0.26	522.03	7.50	8.53	1.92	0.00	1.92	0.00	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.	0.00
812	4.400	20.80	0.26	522.03	7.50	8.53	1.92	0.00	1.92	0.00	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.	0.00
813	4.300	20.80	0.26	522.03	7.50	8.54	1.92	0.00	1.92	0.00	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.	0.00
814	4.200	20.80	0.26	522.03	7.50	8.54	1.93	0.00	1.93	0.00	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.	0.00
815	4.100	20.80	0.26	522.03	7.50	8.55	1.93	0.00	1.93	0.00	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.	0.00
816	4.000	20.80	0.26	522.03	7.50	8.55	1.93	0.00	1.93	0.00	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.	0.00
817	3.900	20.80	0.26	522.03	7.50	8.55	1.93	0.00	1.93	0.00	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.	0.00
818	3.800	20.80	0.26	522.03	7.50	8.55	1.94	0.00	1.94	0.00	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.	0.00

PHYTOPLANKTON AND PERIPHYTON DATA

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
806	5.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
807	4.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
808	4.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
809	4.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
810	4.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
811	4.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
812	4.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
813	4.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
814	4.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00								

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

FINAL REPORT HWY 190
 REACH NO. 80 PAQUET FROM DD17 TO TIDAL REACH

WATER QUALITY/HYDRAULIC MODEL FOR:
 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
836	UPR RCH	0.03415	20.80	0.26	522.03	7.50	8.55	1.94	0.00	1.94	0.00	0.95	0.00	0.00	0.00	0.00	0.00	0.00
836	TRIB	0.00526	20.80	0.35	679.72	23.11	7.91	7.03	0.00	7.03	0.00	2.87	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
836	3.80	3.70	0.03941	78.4	0.06160	0.02	1.99	0.19	3.31	63.98	330.53	0.64	0.00	0.000	0.000	0.062
837	3.70	3.60	0.03941	78.4	0.06160	0.02	2.01	0.19	3.31	63.98	330.53	0.64	0.00	0.000	0.000	0.062
838	3.60	3.50	0.03941	78.4	0.06160	0.02	2.03	0.19	3.31	63.98	330.53	0.64	0.00	0.000	0.000	0.062
839	3.50	3.40	0.03941	78.4	0.06160	0.02	2.05	0.19	3.31	63.98	330.53	0.64	0.00	0.000	0.000	0.062
TOT AVG					0.0616	0.08				255.92	1322.12	0.64				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER 1/da	BOD1 1/da	BOD1 SETT 1/da	ABOD1 1/da	BOD1 1/da	BOD2 1/da	BOD2 SETT 1/da	ABOD2 1/da	BKGD *	PULL *	CORR *	ORG-N 1/da	ORG-N HYDR 1/da	NH3-N 1/da	NH3-N SETT 1/da	DENIT *	ORG-P 1/da	ORG-P SETT 1/da	PO4 PROD *	PHYTO **	PERIP **	COLI 1/da	NCM 1/da	NCM 1/da
836	3.700	8.94	8.11	0.08	0.26	0.00	0.00	0.00	0.00	0.00	0.43	0.56	0.56	0.03	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00
837	3.600	8.94	8.11	0.08	0.26	0.00	0.00	0.00	0.00	0.00	0.43	0.56	0.56	0.03	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00
838	3.500	8.94	8.11	0.08	0.26	0.00	0.00	0.00	0.00	0.00	0.43	0.56	0.56	0.03	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.00	0.00	0.00	0.00
839	3.400	8.94	8.11	0.08	0.26	0.00	0.00	0.00	0.00	0.00	0.43	0.67	0.67	0.03	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE		7.98	0.08	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.41			0.03	0.06	0.00	0.00	0.10	0.00	0.00	0.00			0.00	0.00	0.00

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL	NCM	
836	3.700	20.80	0.27	543.09	9.59	8.48	2.61	0.00	2.88	0.00	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.5	0.0	0.0
837	3.600	20.80	0.27	543.09	9.59	8.49	2.60	0.00	3.13	0.00	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.0	0.0	0.0
838	3.500	20.80	0.27	543.09	9.59	8.51	2.59	0.00	3.39	0.00	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.5	0.0	0.0
839	3.400	20.80	0.27	547.67	11.12	8.33	4.69	0.00	5.76	0.00	1.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
836	3.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
837	3.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	5.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
838	3.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
839	3.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20 DEG C RATE										0.000	0.000	0.000	0.000										0.000	0.000	0.000		

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT HWY 190
 REACH NO. 81 PAQUET TIDAL REACH TO BP02

WATER QUALITY/HYDRAULIC MODEL FOR:
 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
840	UPR RCH	0.03941	20.80	0.27	547.67	11.12	8.33	4.69	0.00	5.76	0.00	1.58	0.00	0.00	0.00	10.00	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
840	3.40	3.30	0.03941	78.4	0.00190	0.61	2.66	1.10	18.90	2079.00	1890.00	20.79	189.00	0.000	0.410	0.002
841	3.30	3.20	0.03941	78.4	0.00190	0.61	3.27	1.10	18.90	2079.00	1890.00	20.79	378.00	0.001	0.410	0.002
842	3.20	3.10	0.03941	78.4	0.00190	0.61	3.88	1.10	18.90	2079.00	1890.00	20.79	567.00	0.001	0.410	0.002
843	3.10	3.00	0.03941	78.4	0.00190	0.61	4.49	1.10	18.90	2079.00	1890.00	20.79	756.00	0.001	0.410	0.002
844	3.00	2.90	0.03941	78.4	0.00190	0.61	5.10	1.10	18.90	2079.00	1890.00	20.79	945.00	0.001	0.410	0.002
845	2.90	2.80	0.03941	78.4	0.00190	0.61	5.71	1.10	18.90	2079.00	1890.00	20.79	1134.00	0.002	0.431	0.002
846	2.80	2.70	0.03941	78.4	0.00190	0.61	6.32	1.10	18.90	2079.00	1890.00	20.79	1323.00	0.002	0.466	0.002
847	2.70	2.60	0.03941	78.4	0.00190	0.61	6.93	1.10	18.90	2079.00	1890.00	20.79	1512.00	0.002	0.507	0.002
848	2.60	2.50	0.03941	78.4	0.00190	0.61	7.54	1.10	18.90	2079.00	1890.00	20.79	1701.00	0.002	0.552	0.003
849	2.50	2.40	0.03941	78.4	0.00190	0.61	8.15	1.10	18.90	2079.00	1890.00	20.79	1890.00	0.003	0.599	0.003
TOT AVG					0.0019	6.11		1.10	18.90	20790.00	18900.00	20.79				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECA	BOD1 SETT	ABOD1 DECA	BOD1 HYDR	BOD2 DECA	BOD2 SETT	ABOD2 DECA	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECA	NH3-N SETT	SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECA	NCM DECA	NCM SETT		
840	3.300	8.94	0.65	0.08	0.05	0.00	0.00	0.00	0.00	0.00	0.27	0.61	0.61	0.03	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00	0.00	
841	3.200	8.93	0.65	0.08	0.05	0.00	0.00	0.00	0.00	0.00	0.27	0.67	0.67	0.03	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00	0.00	
842	3.100	8.93	0.65	0.08	0.05	0.00	0.00	0.00	0.00	0.00	0.27	0.73	0.73	0.03	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00	0.00	
843	3.000	8.93	0.65	0.08	0.05	0.00	0.00	0.00	0.00	0.00	0.27	0.78	0.78	0.03	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00	0.00	
844	2.900	8.93	0.65	0.08	0.05	0.00	0.00	0.00	0.00	0.00	0.27	0.83	0.83	0.03	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00	0.00	
845	2.800	8.93	0.65	0.08	0.05	0.00	0.00	0.00	0.00	0.00	0.27	0.88	0.88	0.03	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00	0.00	
846	2.700	8.93	0.65	0.08	0.05	0.00	0.00	0.00	0.00	0.00	0.27	0.92	0.92	0.03	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00	0.00	
847	2.600	8.93	0.65	0.08	0.05	0.00	0.00	0.00	0.00	0.00	0.27	0.95	0.95	0.03	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00	0.00	
848	2.500	8.93	0.65	0.08	0.05	0.00	0.00	0.00	0.00	0.00	0.27	0.98	0.98	0.03	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00	0.00	
849	2.400	8.93	0.65	0.08	0.05	0.00	0.00	0.00	0.00	0.00	0.27	0.99	0.99	0.03	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00	0.00	
AVG 20 DEG C RATE			0.64	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.26			0.03	0.00	0.00	0.00	0.10	0.00	0.00	0.00			0.00	0.00	0.00			
* g/m ² /d				** mg/L/day																									

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	NCM		
840	3.300	20.80	0.28	551.90	12.53	8.13	6.65	0.00	7.71	0.00	1.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	0.00
841	3.200	20.80	0.28	555.97	13.89	7.98	7.85	0.00	8.92	0.00	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	0.00
842	3.100	20.80	0.28	561.92	15.88	7.81	8.98	0.00	10.04	0.00	2.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	0.00
843	3.000	20.80	0.29	570.61	18.79	7.64	10.03	0.00	11.10	0.00	2.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	0.00
844	2.900	20.80	0.29	583.32	23.04	7.46	11.01	0.00	12.08	0.00	2.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	0.00
845	2.800	20.80	0.30	601.43	29.10	7.28	11.91	0.00	12.98	0.00	2.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	0.00
846	2.700	20.80	0.32	626.07	37.34	7.11	12.69	0.00	13.76	0.00	3.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	0.00
847	2.600	20.80	0.34	658.38	48.15	6.96	13.33	0.00	14.40	0.00	3.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	0.00
848	2.500	20.80	0.36	699.64	61.95	6.83	13.80	0.00	14.87	0.00	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	0.00
849	2.400	20.80	0.39	751.20	79.20	6.72	14.10	0.00	15.17	0.00	3.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	0.00

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE	SECCHI DEPTH	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW	PHYT RESP	PHYT DEATH	PHYT SETT	PHYT P/R	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW	PERI RESP	PERI DEATH	PERI P/R	PERIP g/m ²	
840	3.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	
841	3.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	
842	3.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	
843	3.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	
844	2.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	
845	2.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	
846	2.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	
847	2.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	
848	2.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	
849	2.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	
20 DEG C RATE										0.000	0.000	0.000	0.000											0.000	0.000	0.000		

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT HWY 190
 REACH NO. 82 PAQUET FROM BP02 TO BP03

WATER QUALITY/HYDRAULIC MODEL FOR:
 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
850	UPR RCH	0.03941	20.80	0.39	751.20	79.20	6.72	14.10	0.00	15.17	0.00	3.35	0.00	0.00	0.00	10.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
850	2.40	2.30	0.03941	78.4	0.00215	0.54	8.69	1.00	18.29	1829.00	1829.00	18.29	2072.90	0.003	0.678	0.003
851	2.30	2.20	0.03941	78.4	0.00215	0.54	9.23	1.00	18.29	1829.00	1829.00	18.29	2255.80	0.003	0.729	0.004
852	2.20	2.10	0.03941	78.4	0.00215	0.54	9.76	1.00	18.29	1829.00	1829.00	18.29	2438.70	0.004	0.780	0.004
853	2.10	2.00	0.03941	78.4	0.00215	0.54	10.30	1.00	18.29	1829.00	1829.00	18.29	2621.60	0.004	0.833	0.004
854	2.00	1.90	0.03941	78.4	0.00215	0.54	10.84	1.00	18.29	1829.00	1829.00	18.29	2804.50	0.004	0.885	0.004
855	1.90	1.80	0.03941	78.4	0.00215	0.54	11.38	1.00	18.29	1829.00	1829.00	18.29	2987.40	0.005	0.938	0.005
856	1.80	1.70	0.03941	78.4	0.00215	0.54	11.91	1.00	18.29	1829.00	1829.00	18.29	3170.30	0.005	0.992	0.005
857	1.70	1.60	0.03941	78.4	0.00215	0.54	12.45	1.00	18.29	1829.00	1829.00	18.29	3353.20	0.005	1.046	0.005
TOT AVG						4.30			1.00	18.29	14632.00	14632.00		18.29		

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT RATE mg/L	REAER 1/da	BOD1 1/da	BOD1 SETT 1/da	ABOD1 1/da	BOD1 HYDR DECY 1/da	BOD2 1/da	BOD2 SETT 1/da	ABOD2 1/da	BKGD *	PULL SOD *	CORR HYDR *	ORG-N 1/da	ORG-N SETT 1/da	NH3-N 1/da	NH3-N SETT 1/da	DENIT SRCE *	ORG-P 1/da	ORG-P SETT 1/da	PO4 PROD *	PHYTO PROD **	PERIP DECY **	COLI 1/da	NCM 1/da	NCM SETT 1/da	
850	2.300	8.93	0.81	0.08	0.05	0.00	0.00	0.00	0.00	0.00	0.65	1.37	1.37	0.03	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00	
851	2.200	8.92	0.81	0.08	0.05	0.00	0.00	0.00	0.00	0.00	0.65	1.38	1.38	0.03	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00	
852	2.100	8.92	0.81	0.08	0.05	0.00	0.00	0.00	0.00	0.00	0.65	1.38	1.38	0.03	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00	
853	2.000	8.92	0.81	0.08	0.05	0.00	0.00	0.00	0.00	0.00	0.65	1.39	1.39	0.03	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00	
854	1.900	8.91	0.81	0.08	0.05	0.00	0.00	0.00	0.00	0.00	0.65	1.39	1.39	0.03	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00	
855	1.800	8.91	0.81	0.08	0.05	0.00	0.00	0.00	0.00	0.00	0.65	1.39	1.39	0.03	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00	
856	1.700	8.90	0.81	0.08	0.05	0.00	0.00	0.00	0.00	0.00	0.65	1.39	1.39	0.03	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00	
857	1.600	8.90	0.81	0.08	0.05	0.00	0.00	0.00	0.00	0.00	0.65	1.39	1.39	0.03	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00	
AVG 20 DEG C RATE			0.80	0.08	0.01	0.00	0.00	0.00	0.00	0.00	0.62			0.03	0.01	0.00	0.00	0.10	0.00	0.00	0.00			0.00	0.00	0.00	
* g/m²/d			**	mg/L/day																							

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL	NCM
850	2.300	20.80	0.43	817.17	101.27	6.63	14.20	0.00	15.27	0.00	3.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	0.00
851	2.200	20.80	0.47	901.11	129.34	6.55	14.29	0.00	15.36	0.00	3.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	0.00
852	2.100	20.80	0.53	1003.34	163.54	6.49	14.37	0.00	15.44	0.00	3.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	0.00
853	2.000	20.80	0.60	1126.31	204.67	6.44	14.44	0.00	15.51	0.00	3.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	0.00
854	1.900	20.80	0.68	1272.64	253.62	6.41	14.50	0.00	15.56	0.00	3.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	0.00
855	1.800	20.80	0.78	1445.04	311.29	6.38	14.54	0.00	15.61	0.00	3.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	0.00
856	1.700	20.80	0.89	1646.41	378.64	6.37	14.57	0.00	15.63	0.00	3.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	0.00
857	1.600	20.80	1.02	1879.76	456.70	6.37	14.58	0.00	15.65	0.00	3.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	0.00

***** PHYTOPLANKTON AND PERIPLHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT PREF	PHYT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT P/R	PHYT RATIO	PHYTO µg/L	PERI PREF	PERI LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R	PERI RATIO	PERIP g/m²										
850	2.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
851	2.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
852	2.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
853	2.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
854	1.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
855	1.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
856	1.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
857	1.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	

20 DEG C RATE 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

FINAL REPORT HWY 190
 REACH NO. 83 PAQUET FROM BP03 TO TRIB 24

WATER QUALITY/HYDRAULIC MODEL FOR:
 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
858	UPR RCH	0.03941	20.80	1.02	1879.76	456.70	6.37	14.58	0.00	15.65	0.00	3.66	0.00	0.00	0.00	10.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
858	1.60	1.50	0.03941	78.4	0.00123	0.94	13.39	1.50	21.34	3201.00	2134.00	32.01	3566.60	0.003	0.888	0.003
859	1.50	1.40	0.03941	78.4	0.00123	0.94	14.33	1.50	21.34	3201.00	2134.00	32.01	3780.00	0.003	0.939	0.003
860	1.40	1.30	0.03941	78.4	0.00123	0.94	15.27	1.50	21.34	3201.00	2134.00	32.01	3993.40	0.004	0.990	0.004
TOT AVG					0.0012	2.82		1.50	21.34	9603.00	6402.00	32.01				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECA 1/da	BOD1 SETT 1/da	ABOD1 DECA 1/da	BOD1 HYDR 1/da	BOD2 DECA 1/da	BOD2 SETT 1/da	ABOD2 DECA 1/da	BKGD SOD *	FULL SOD *	CORR HYDR 1/da	ORG-N SETT 1/da	ORG-N DECA 1/da	NH3-N SRCE 1/da	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECA 1/da	NCM DECA 1/da	NCM SETT 1/da	
858	1.500	8.89	0.62	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.51	1.26	1.26	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00
859	1.400	8.88	0.62	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.51	1.25	1.25	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00
860	1.300	8.88	0.62	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.51	1.25	1.25	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.61	0.08	0.01	0.00	0.00	0.00	0.00	0.00	0.49		0.03	0.01	0.00	0.00	0.10	0.00	0.00	0.00			0.00	0.00	0.00	

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL	NCM	
858	1.500	20.80	1.14	2101.31	530.80	6.39	14.58	0.00	15.64	0.00	3.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	0.00
859	1.400	20.80	1.26	2311.31	601.05	6.41	14.55	0.00	15.62	0.00	3.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	0.00
860	1.300	20.80	1.39	2537.04	676.55	6.46	14.51	0.00	15.58	0.00	3.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	0.00

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT P/R 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²	
858	1.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0
859	1.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0
860	1.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0
20 DEG C RATE									0.000	0.000	0.000	0.000									0.000	0.000	0.000			

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT HWY 190
 REACH NO. 85 PAQUET FROM TRIB 24 TO TRIB 25

WATER QUALITY/HYDRAULIC MODEL FOR:
 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
865	UPR RCH	0.03941	20.80	1.39	2537.04	676.55	6.46	14.51	0.00	15.58	0.00	3.89	0.00	0.00	0.00	10.00	0.00	0.00
865	TRIB	0.00283	20.80	1.49	2716.13	736.55	6.55	13.70	0.00	14.77	0.00	3.81	0.00	0.00	0.00	10.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
----------	---------------	----------------	-----------	---------	-----------------	------------------	---------------	---------	---------	-----------	-----------------	----------------	----------------	----------------	--------------	---------------

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

865	1.30	1.20	0.04225	73.2	0.00132	0.88	16.15	1.50	21.34	3201.00	2134.00	32.01	5010.80	0.004	1.237	0.004
866	1.20	1.10	0.04225	73.2	0.00132	0.88	17.02	1.50	21.34	3201.00	2134.00	32.01	5224.20	0.005	1.288	0.005
867	1.10	1.00	0.04225	73.2	0.00132	0.88	17.90	1.50	21.34	3201.00	2134.00	32.01	5437.60	0.005	1.340	0.005
TOT							2.63			9603.00	6402.00					
AVG					0.0013			1.50	21.34			32.01				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECAT	BOD1 SETT	ABOD1 DECAT	BOD1 HYDR	BOD2 DECAT	BOD2 SETT	ABOD2 DECAT	BOD2 HYDR	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECAT	NH3-N SRCE	DNITR RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECAT	NCM DECAT	NCM SETT
865	1.200	8.87	0.62	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.99	0.99	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00
866	1.100	8.86	0.62	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.26	1.00	1.00	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00
867	1.000	8.86	0.62	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.26	1.00	1.00	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00
AVG	20 DEG C	RATE	0.61	0.08	0.01	0.00	0.00	0.00	0.00	0.00	0.24				0.03	0.01	0.00	0.00	0.10	0.00	0.00				0.00	0.00	0.00
*	g/m ² /d		**	mg/L/day																							

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	NCM
865	1.200	20.80	1.51	2757.55	750.31	6.52	14.45	0.00	15.52	0.00	3.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	0.00
866	1.100	20.80	1.64	2989.20	827.76	6.56	14.56	0.00	15.63	0.00	4.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	0.00
867	1.000	20.80	1.78	3235.01	909.95	6.61	14.56	0.00	15.63	0.00	4.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.0	0.00

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW	PHYT RESP	PHYT DEATH	PHYT SETT	PHYT P/R	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW	PERI RESP	PERI DEATH	PERI P/R	PERIP g/m ²
865	1.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
866	1.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
867	1.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
20 DEG C	RATE								0.000	0.000	0.000	0.000									0.000	0.000	0.000			

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT HWY 190
 REACH NO. 88 PAQUET FROM TRIB 25 TO BP04

WATER QUALITY/HYDRAULIC MODEL FOR:
 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
878	UPR RCH	0.04225	20.80	1.78	3235.01	909.95	6.61	14.56	0.00	15.63	0.00	4.05	0.00	0.00	0.00	10.00	0.00	0.00
878	TRIB	0.00283	20.80	1.89	3426.78	974.11	6.65	13.80	0.00	14.87	0.00	3.92	0.00	0.00	0.00	10.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
878	1.00	0.90	0.04508	68.6	0.00099	1.17	19.07	1.50	30.48	4572.00	3048.00	45.72	7854.60	0.005	1.350	0.005
879	0.90	0.80	0.04508	68.6	0.00099	1.17	20.25	1.50	30.48	4572.00	3048.00	45.72	8159.40	0.005	1.403	0.005
880	0.80	0.70	0.04508	68.6	0.00099	1.17	21.42	1.50	30.48	4572.00	3048.00	45.72	8464.20	0.005	1.455	0.005
881	0.70	0.60	0.04508	68.6	0.00099	1.17	22.60	1.50	30.48	4572.00	3048.00	45.72	8769.00	0.005	1.507	0.005
882	0.60	0.50	0.04508	68.6	0.00099	1.17	23.77	1.50	30.48	4572.00	3048.00	45.72	9073.80	0.006	1.559	0.006
883	0.50	0.40	0.04508	68.6	0.00099	1.17	24.94	1.50	30.48	4572.00	3048.00	45.72	9378.60	0.006	1.611	0.006
884	0.40	0.30	0.04508	68.6	0.00099	1.17	26.12	1.50	30.48	4572.00	3048.00	45.72	9683.40	0.006	1.664	0.006
885	0.30	0.20	0.04508	68.6	0.00099	1.17	27.29	1.50	30.48	4572.00	3048.00	45.72	9988.20	0.006	1.716	0.006
TOT						9.39				36576.00	24384.00					
AVG						0.0010		1.50	30.48			45.72				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM	ENDING	SAT	REAER	BOD1	BOD1	ABOD1	BOD1	BOD2	BOD2	ABOD2	BKGD	FULL	CORR	ORG-N	ORG-N	NH3-N	NH3-N	DNITR	ORG-P	ORG-P	PO4	PHYTO	PERIP	COLI	NCM	NCM
------	--------	-----	-------	------	------	-------	------	------	------	-------	------	------	------	-------	-------	-------	-------	-------	-------	-------	-----	-------	-------	------	-----	-----

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

NO.	DIST	D.O. mg/L	RATE 1/da	DECAY 1/da	SETT 1/da	DECAY 1/da	HYDR 1/da	DECAY 1/da	SETT 1/da	DECAY 1/da	SOD *	SOD *	SOD *	HYDR 1/da	SETT 1/da	DECAY 1/da	SRCE *	RATE 1/da	HYDR 1/da	SETT 1/da	SRCE *	PROD **	PROD **	DECAY 1/da	DECAY 1/da	SETT 1/da	
878	0.900	8.85	0.62	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.74	0.74	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00
879	0.800	8.84	0.62	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.74	0.74	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00
880	0.700	8.84	0.62	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.74	0.74	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00
881	0.600	8.83	0.62	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.74	0.74	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00
882	0.500	8.82	0.62	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.73	0.73	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00
883	0.400	8.82	0.62	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.71	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00
884	0.300	8.81	0.62	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.68	0.68	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00
885	0.200	8.80	0.62	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.65	0.65	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE		0.61	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03			0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00			0.00	0.00	
* g/m ² /d		** mg/L/day																									

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	NCM	
878	0.900	20.80	1.90	3452.51	982.67	6.67	14.48	0.00	15.55	0.00	4.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.00
879	0.800	20.80	2.02	3661.10	1052.39	6.72	14.61	0.00	15.68	0.00	4.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.00
880	0.700	20.80	2.14	3876.47	1124.37	6.78	14.62	0.00	15.69	0.00	4.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.00
881	0.600	20.80	2.26	4098.61	1198.62	6.84	14.50	0.00	15.57	0.00	3.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.00
882	0.500	20.80	2.39	4327.46	1275.11	6.91	14.25	0.00	15.32	0.00	3.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.00
883	0.400	20.80	2.52	4563.02	1353.85	6.98	13.87	0.00	14.94	0.00	3.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.00
884	0.300	20.80	2.66	4805.25	1434.81	7.07	13.36	0.00	14.43	0.00	3.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.00
885	0.200	20.80	2.80	5054.12	1517.99	7.16	12.72	0.00	13.79	0.00	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.00

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT P/R 1/da	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R 1/da	PERIP g/m ²	
878	0.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.00	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
879	0.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.00	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
880	0.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.00	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
881	0.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.00	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
882	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.00	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
883	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.00	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
884	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.00	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
885	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.00	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0

20 DEG C RATE 0.000

NOTE ON NITR PREP: 1.0=NO3 ; 0.0=NH3

FINAL REPORT HWY 190 WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 89 PAQUET FROM BP04 TO LIBERTY BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
886	UPR RCH	0.04508	20.80	2.80	5054.12	1517.99	7.16	12.72	0.00	13.79	0.00	3.30	0.00	0.00	0.00	10.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
886	0.20	0.10	0.04508	68.6	0.00099	1.17	28.47	1.50	30.48	4572.00	3048.00	45.72	10293.00	0.006	1.768	0.006
887	0.10	0.00	0.04508	68.6	0.00099	1.17	29.64	1.50	30.48	4572.00	3048.00	45.72	10597.80	0.007	1.820	0.006
TOT AVG						2.35		1.50	30.48	9144.00	6096.00		45.72			

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER 1/da	BOD1 1/da	BOD1 SETT 1/da	ABOD1 1/da	BOD1 1/da	BOD2 1/da	BOD2 SETT 1/da	ABOD2 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N 1/da	ORG-N HYDR 1/da	NH3-N 1/da	NH3-N 1/da	DENIT 1/da	ORG-P 1/da	ORG-P 1/da	PO4 SRCE *	PHYTO **	PERIP PROD **	COLI 1/da	NCM 1/da	NCM 1/da
886	0.100	8.80	0.62	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.61	0.61	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.44	0.00	0.00	0.00	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

887 0.000 8.79 0.62 0.08 0.03 0.00 0.00 0.00 0.00 0.00 0.53 0.53 0.03 0.03 0.00 0.00 0.00 0.00 0.00 0.00 0.35 0.00 0.00 0.00 0.00
AVG 20 DEG C RATE 0.61 0.08 0.02 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.03 0.02 0.00 0.00 0.10 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	NCM	
886	0.100	20.80	2.94	5309.61	1603.39	7.26	11.94	0.00	12.84	0.00	3.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.4	0.0	0.	0.00
887	0.000	20.80	3.09	5571.69	1690.98	7.37	10.31	0.00	11.03	0.00	2.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.8	0.0	0.	0.00

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
886	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	8.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0
887	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	6.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0
20 DEG C RATE										0.000	0.000	0.000	0.000								0.000	0.000	0.000			

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT DRAINAGE DITCH 16 WATER QUALITY/HYDRAULIC MODEL FOR:
REACH NO. 77 DD16 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
797	HDWTR	0.00283	20.80	0.26	520.90	7.23	6.00	1.79	0.00	1.79	0.00	0.81	0.00	0.00	0.00	0.00	0.00	0.00
797	WSTLD	0.00000	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	43.00	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
797	0.90	0.80	0.00284	0.1	0.01240	0.09	0.09	0.11	2.00	22.87	199.59	0.23	0.00	0.000	0.000	0.012
798	0.80	0.70	0.00284	0.1	0.01240	0.09	0.19	0.11	2.00	22.87	199.59	0.23	0.00	0.000	0.000	0.012
799	0.70	0.60	0.00284	0.1	0.01240	0.09	0.28	0.11	2.00	22.87	199.59	0.23	0.00	0.000	0.000	0.012
800	0.60	0.50	0.00284	0.1	0.01240	0.09	0.37	0.11	2.00	22.87	199.59	0.23	0.00	0.000	0.000	0.012
801	0.50	0.40	0.00284	0.1	0.01240	0.09	0.47	0.11	2.00	22.87	199.59	0.23	0.00	0.000	0.000	0.012
802	0.40	0.30	0.00284	0.1	0.01240	0.09	0.56	0.11	2.00	22.87	199.59	0.23	0.00	0.000	0.000	0.012
803	0.30	0.20	0.00284	0.1	0.01240	0.09	0.65	0.11	2.00	22.87	199.59	0.23	0.00	0.000	0.000	0.012
804	0.20	0.10	0.00284	0.1	0.01240	0.09	0.75	0.11	2.00	22.87	199.59	0.23	0.00	0.000	0.000	0.012
805	0.10	0.00	0.00284	0.1	0.01240	0.09	0.84	0.11	2.00	22.87	199.59	0.23	0.00	0.000	0.000	0.012
TOT AVG						0.84			2.00	205.86	1796.34	0.23				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT mg/L	REARER 1/da	BOD1 1/da	BOD1 SETT 1/da	ABOD1 1/da	BOD1 HYDR 1/da	BOD2 1/da	BOD2 SETT 1/da	ABOD2 1/da	BKGD * 1/da	FULL SOD * 1/da	CORR SOD * 1/da	ORG-N 1/da	ORG-N HYDR 1/da	NH3-N 1/da	NH3-N SETT 1/da	DENIT SRCE * 1/da	ORG-P 1/da	ORG-P HYDR 1/da	PO4 PROD * 1/da	PHYTO PROD ** 1/da	PERIP PROD ** 1/da	COLI 1/da	NCM 1/da	NCM DECAY 1/da
797	0.800	8.94	7.46	0.08	0.44	0.00	0.00	0.00	0.00	0.00	0.43	0.52	0.52	0.03	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
798	0.700	8.94	7.46	0.08	0.44	0.00	0.00	0.00	0.00	0.00	0.43	0.52	0.52	0.03	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
799	0.600	8.94	7.46	0.08	0.44	0.00	0.00	0.00	0.00	0.00	0.43	0.52	0.52	0.03	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
800	0.500	8.94	7.46	0.08	0.44	0.00	0.00	0.00	0.00	0.00	0.43	0.52	0.52	0.03	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
801	0.400	8.94	7.46	0.08	0.44	0.00	0.00	0.00	0.00	0.00	0.43	0.52	0.52	0.03	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
802	0.300	8.94	7.46	0.08	0.44	0.00	0.00	0.00	0.00	0.00	0.43	0.52	0.52	0.03	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
803	0.200	8.94	7.46	0.08	0.44	0.00	0.00	0.00	0.00	0.00	0.43	0.52	0.52	0.03	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
804	0.100	8.94	7.46	0.08	0.44	0.00	0.00	0.00	0.00	0.00	0.43	0.52	0.52	0.03	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
805	0.000	8.94	7.46	0.08	0.44	0.00	0.00	0.00	0.00	0.00	0.43	0.52	0.52	0.03	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
AVG 20 DEG C RATE		7.34	0.08	0.05	0.00	0.00	0.00	0.00	0.00	0.41			0.03	0.05	0.00	0.00	0.10	0.00	0.00	0.00			0.00	0.00	0.00	

* g/m²/d ** mg/L/day

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

***** WATER QUALITY CONSTITUENT VALUES *****																										
ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	NCM	
797	0.800	20.80	0.26	521.16	7.29	6.94	1.83	0.00	1.83	0.00	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.00
798	0.700	20.80	0.26	521.16	7.29	7.50	1.84	0.00	1.84	0.00	0.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.00
799	0.600	20.80	0.26	521.16	7.29	7.83	1.85	0.00	1.85	0.00	0.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.00
800	0.500	20.80	0.26	521.16	7.29	8.02	1.86	0.00	1.86	0.00	0.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.00
801	0.400	20.80	0.26	521.16	7.29	8.14	1.87	0.00	1.87	0.00	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.00
802	0.300	20.80	0.26	521.16	7.29	8.20	1.88	0.00	1.88	0.00	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.00
803	0.200	20.80	0.26	521.16	7.29	8.24	1.88	0.00	1.88	0.00	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.00
804	0.100	20.80	0.26	521.16	7.29	8.27	1.89	0.00	1.89	0.00	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.00
805	0.000	20.80	0.26	521.16	7.29	8.28	1.90	0.00	1.90	0.00	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.00

***** PHYTOPLANKTON AND PERIPHYTON DATA *****																										
ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²	
797	0.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0
798	0.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0
799	0.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0
800	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0
801	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0
802	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0
803	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0
804	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0
805	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000

FINAL REPORT DRAINAGE DITCH 17 REACH NO. 79 DD17 WATER QUALITY/HYDRAULIC MODEL FOR: BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****																										
ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM								
819	HDWTR	0.00283	20.80	0.26	520.90	7.23	6.00	1.79	0.00	1.79	0.00	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
819	WSTLD	0.00243	30.00	0.45	864.70	41.60	2.00	23.00	0.00	23.00	0.00	8.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****																										
ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s										
819	1.70	1.60	0.00526	46.2	0.01530	0.08	0.08	0.14	2.40	34.41	240.30	0.34	0.00	0.000	0.000	0.015										
820	1.60	1.50	0.00526	46.2	0.01530	0.08	0.15	0.14	2.40	34.41	240.30	0.34	0.00	0.000	0.000	0.015										
821	1.50	1.40	0.00526	46.2	0.01530	0.08	0.23	0.14	2.40	34.41	240.30	0.34	0.00	0.000	0.000	0.015										
822	1.40	1.30	0.00526	46.2	0.01530	0.08	0.30	0.14	2.40	34.41	240.30	0.34	0.00	0.000	0.000	0.015										
823	1.30	1.20	0.00526	46.2	0.01530	0.08	0.38	0.14	2.40	34.41	240.30	0.34	0.00	0.000	0.000	0.015										
824	1.20	1.10	0.00526	46.2	0.01530	0.08	0.45	0.14	2.40	34.41	240.30	0.34	0.00	0.000	0.000	0.015										
825	1.10	1.00	0.00526	46.2	0.01530	0.08	0.53	0.14	2.40	34.41	240.30	0.34	0.00	0.000	0.000	0.015										
826	1.00	0.90	0.00526	46.2	0.01530	0.08	0.61	0.14	2.40	34.41	240.30	0.34	0.00	0.000	0.000	0.015										
827	0.90	0.80	0.00526	46.2	0.01530	0.08	0.68	0.14	2.40	34.41	240.30	0.34	0.00	0.000	0.000	0.015										
828	0.80	0.70	0.00526	46.2	0.01530	0.08	0.76	0.14	2.40	34.41	240.30	0.34	0.00	0.000	0.000	0.015										
829	0.70	0.60	0.00526	46.2	0.01530	0.08	0.83	0.14	2.40	34.41	240.30	0.34	0.00	0.000	0.000	0.015										
830	0.60	0.50	0.00526	46.2	0.01530	0.08	0.91	0.14	2.40	34.41	240.30	0.34	0.00	0.000	0.000	0.015										
831	0.50	0.40	0.00526	46.2	0.01530	0.08	0.98	0.14	2.40	34.41	240.30	0.34	0.00	0.000	0.000	0.015										
832	0.40	0.30	0.00526	46.2	0.01530	0.08	1.06	0.14	2.40	34.41	240.30	0.34	0.00	0.000	0.000	0.015										
833	0.30	0.20	0.00526	46.2	0.01530	0.08	1.13	0.14	2.40	34.41	240.30	0.34	0.00	0.000	0.000	0.015										
834	0.20	0.10	0.00526	46.2	0.01530	0.08	1.21	0.14	2.40	34.41	240.30	0.34	0.00	0.000	0.000	0.015										
835	0.10	0.00	0.00526	46.2	0.01530	0.08	1.29	0.14	2.40	34.41	240.30	0.34	0.00	0.000	0.000	0.015										
TOT AVG						1.29				584.96	4085.13		0.34													

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****																										
ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECA 1/da	BOD1 SETT 1/da	ABOD1 DECA 1/da	BOD1 HYDR 1/da	BOD2 DECA 1/da	BOD2 SETT 1/da	ABOD2 DECA 1/da	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECA 1/da	NH3-N PROD 1/da	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4-SRCE 1/da	PHYTO PROD **	PERIP PROD **	COLI DECA 1/da	NCM DECA 1/da	NCM SETT 1/da
													*	*	1/da	1/da	*	1/da	1/da	1/da	*	**	**	1/da	1/da	1/da

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

861 HDWTR 0.00283 20.80 0.26 520.90 7.23 6.00 1.79 0.00 1.79 0.00 0.81 0.00 0.00 0.00 0.00 0.00 0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
861	0.40	0.30	0.00283	0.0	0.00019	6.08	6.08	0.74	20.10	1487.40	2010.00	14.87	201.00	0.000	0.061	0.000
862	0.30	0.20	0.00283	0.0	0.00019	6.08	12.16	0.74	20.10	1487.40	2010.00	14.87	402.00	0.001	0.118	0.001
863	0.20	0.10	0.00283	0.0	0.00019	6.08	18.24	0.74	20.10	1487.40	2010.00	14.87	603.00	0.001	0.177	0.001
864	0.10	0.00	0.00283	0.0	0.00019	6.08	24.32	0.74	20.10	1487.40	2010.00	14.87	804.00	0.002	0.236	0.002
TOT AVG				0.0002		24.32				5949.60	8040.00	14.87				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECA	BOD1 SETT	ABOD1 DECA	BOD1 HYDR	BOD2 DECA	BOD2 SETT	ABOD2 DECA	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECA	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECA	NCM DECA	NCM SETT	
861	0.300	8.89	0.96	0.08	0.07	0.00	0.00	0.00	0.00	0.00	0.43	0.79	0.79	0.03	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00	0.00
862	0.200	8.88	0.96	0.08	0.07	0.00	0.00	0.00	0.00	0.00	0.43	0.89	0.89	0.03	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00	0.00
863	0.100	8.88	0.96	0.08	0.07	0.00	0.00	0.00	0.00	0.00	0.43	1.00	1.00	0.03	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.00	0.00	0.00	0.00	0.00
864	0.000	8.87	0.96	0.08	0.07	0.00	0.00	0.00	0.00	0.00	0.43	1.13	1.13	0.03	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.95	0.08	0.02	0.00	0.00	0.00	0.00	0.00	0.41			0.03	0.02	0.00	0.00	0.10	0.00	0.00	0.00			0.00	0.00	0.00	0.00

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	NCM
861	0.300	20.80	1.08	1988.38	494.77	6.99	7.03	0.00	7.30	0.00	2.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.5	0.0	0.	0.00
862	0.200	20.80	1.26	2300.76	598.55	6.90	9.00	0.00	9.54	0.00	2.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.0	0.0	0.	0.00
863	0.100	20.80	1.38	2530.56	674.90	6.73	11.20	0.00	12.00	0.00	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.5	0.0	0.	0.00
864	0.000	20.80	1.49	2716.13	736.55	6.55	13.70	0.00	14.77	0.00	3.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.	0.00

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²	
861	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
862	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	5.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
863	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
864	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT REACH NO. 86 TRIBUTARY 25 TRIB 25 FROM TOP TO RKM 0.3

WATER QUALITY/HYDRAULIC MODEL FOR: BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
868	HDWTR	0.00283	20.80	0.26	520.90	7.23	6.00	1.79	0.00	1.79	0.00	0.81	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
868	1.00	0.90	0.00283	0.0	0.00018	6.32	6.32	0.94	16.46	1547.24	1646.00	15.47	164.60	0.000	0.060	0.000
869	0.90	0.80	0.00283	0.0	0.00018	6.32	12.65	0.94	16.46	1547.24	1646.00	15.47	329.20	0.001	0.114	0.001
870	0.80	0.70	0.00283	0.0	0.00018	6.32	18.97	0.94	16.46	1547.24	1646.00	15.47	493.80	0.001	0.170	0.001
871	0.70	0.60	0.00283	0.0	0.00018	6.32	25.29	0.94	16.46	1547.24	1646.00	15.47	658.40	0.001	0.226	0.001

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

872	0.60	0.50	0.00283	0.0	0.00018	6.32	31.62	0.94	16.46	1547.24	1646.00	15.47	823.00	0.001	0.283	0.001
873	0.50	0.40	0.00283	0.0	0.00018	6.32	37.94	0.94	16.46	1547.24	1646.00	15.47	987.60	0.002	0.340	0.002
874	0.40	0.30	0.00283	0.0	0.00018	6.32	44.26	0.94	16.46	1547.24	1646.00	15.47	1152.20	0.002	0.396	0.002
TOT						44.26				10830.68	11522.00					
AVG				0.0002				0.94	16.46			15.47				

BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REARER RATE 1/da	BOD1 DECA 1/da	BOD1 SETT 1/da	ABOD1 DECA 1/da	BOD1 HYDR 1/da	BOD2 DECA 1/da	BOD2 SETT 1/da	ABOD2 DECA 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECA 1/da	NH3-N SETT 1/da	SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4-SRCE	PHYTO PROD **	PERIP PROD **	COLI DECA 1/da	NCM DECA 1/da	NCM SETT 1/da		
868	0.900	8.89	0.76	0.08	0.05	0.00	0.00	0.00	0.00	0.00	0.43	0.62	0.62	0.03	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
869	0.800	8.88	0.76	0.08	0.05	0.00	0.00	0.00	0.00	0.00	0.43	0.66	0.66	0.03	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
870	0.700	8.88	0.76	0.08	0.05	0.00	0.00	0.00	0.00	0.00	0.43	0.69	0.69	0.03	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
871	0.600	8.87	0.76	0.08	0.05	0.00	0.00	0.00	0.00	0.00	0.43	0.73	0.73	0.03	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
872	0.500	8.87	0.76	0.08	0.05	0.00	0.00	0.00	0.00	0.00	0.43	0.78	0.78	0.03	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
873	0.400	8.86	0.76	0.08	0.05	0.00	0.00	0.00	0.00	0.00	0.43	0.83	0.83	0.03	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
874	0.300	8.86	0.76	0.08	0.05	0.00	0.00	0.00	0.00	0.00	0.43	0.89	0.89	0.03	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.74	0.08	0.01	0.00	0.00	0.00	0.00	0.00	0.41			0.03	0.01	0.00	0.00	0.10	0.00	0.00	0.00				0.00	0.00	0.00		

WATER QUALITY CONSTITUENT VALUES

ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL	NCM			
868	0.900	20.80	1.08	1980.18	492.78	7.26	3.82	0.00	3.82	0.00	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
869	0.800	20.80	1.25	2288.00	595.20	7.25	4.48	0.00	4.48	0.00	1.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
870	0.700	20.80	1.38	2515.84	671.01	7.15	5.20	0.00	5.20	0.00	2.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
871	0.600	20.80	1.48	2700.07	732.31	7.03	5.99	0.00	5.99	0.00	2.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
872	0.500	20.80	1.57	2856.66	784.41	6.91	6.88	0.00	6.88	0.00	2.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
873	0.400	20.80	1.64	2993.96	830.10	6.79	7.88	0.00	7.88	0.00	2.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
874	0.300	20.80	1.71	3116.94	871.01	6.71	9.01	0.00	9.01	0.00	2.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

PHYTOPLANKTON AND PERIPHYTON DATA

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²	
868	0.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
869	0.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
870	0.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
871	0.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
872	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
873	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
874	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

20 DEG C RATE 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT TRIBUTARY 25 WATER QUALITY/HYDRAULIC MODEL FOR:
REACH NO. 87 TRIB 25 FROM RKM 0.3 TO PAQUET BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

REACH INPUTS

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
875	UPR RCH	0.00283	20.80	1.71	3116.94	871.01	6.71	9.01	0.00	9.01	0.00	2.95	0.00	0.00	0.00	0.00	0.00	0.00

HYDRAULIC PARAMETER VALUES

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
875	0.30	0.20	0.00283	0.0	0.00011	10.07	54.33	0.77	32.00	2464.00	3200.00	24.64	1472.20	0.002	0.270	0.002
876	0.20	0.10	0.00283	0.0	0.00011	10.07	64.40	0.77	32.00	2464.00	3200.00	24.64	1792.20	0.002	0.328	0.002
877	0.10	0.00	0.00283	0.0	0.00011	10.07	74.47	0.77	32.00	2464.00	3200.00	24.64	2112.20	0.002	0.387	0.002
TOT AVG					0.0001	30.21		0.77	32.00	7392.00	9600.00	24.64				

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECA 1/da	BOD1 SETT 1/da	ABOD1 DECA 1/da	BOD1 HYDR 1/da	BOD2 DECA 1/da	BOD2 SETT 1/da	ABOD2 DECA 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECA 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECA 1/da	NCM DECA 1/da	NCM SETT 1/da	
875	0.200	8.86	0.92	0.08	0.07	0.00	0.00	0.00	0.00	0.00	0.43	0.95	0.95	0.03	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00	0.00
876	0.100	8.85	0.92	0.08	0.07	0.00	0.00	0.00	0.00	0.00	0.43	1.04	1.04	0.03	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.35	0.00	0.00	0.00	0.00	0.00
877	0.000	8.85	0.92	0.08	0.07	0.00	0.00	0.00	0.00	0.00	0.43	1.13	1.13	0.03	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.91	0.08	0.02	0.00	0.00	0.00	0.00	0.00	0.41				0.03	0.02	0.00	0.00	0.10	0.00	0.00				0.00	0.00	0.00

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	NCM
875	0.200	20.80	1.78	3232.04	909.31	6.68	10.32	0.00	10.67	0.00	3.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.3	0.0	0.	0.00
876	0.100	20.80	1.84	3336.29	944.00	6.65	11.94	0.00	12.65	0.00	3.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.7	0.0	0.	0.00
877	0.000	20.80	1.89	3426.78	974.11	6.65	13.80	0.00	14.87	0.00	3.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.0	0.0	0.	0.00

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREP	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R	PHYTO µg/L	PERI N PREP	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R	PERIP g/m ²
875	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
876	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
877	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

.....EXECUTION COMPLETED

Appendix D4 – Winter Justifications

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Winter Justification			
DATA TYPE 3 - PROGRAM CONSTANTS			
CONSTANT NAME	VALUE	UNITS	DATA SOURCE
K2 MAXIMUM	25	1/day at 20 deg C	EPA Policy in the absence of a measured value.
DISPERSION EQUATION	3		Equation used to account for all modes of transport.
TIDE HEIGHT	0.1		Calculated from Survey Data
TIDAL PERIOD	19.75		Calculated from Survey Data
PERIOD OF TIDAL RISE	10.5		Calculated from Survey Data
S OXYGEN DEPENDENCE THRESHOLD	1		Calibration
SOD MAXIMUM RATE	50		To verify reasonableness of model inputs
PHYTOPLANKTON OXYGEN PROD	0		Calibration
PERIPHYTON OXYGEN PROD	0		Calibration

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Winter Justification						
DATA TYPE 8 - REACH IDENTIFICATION DATA						
Reach	ID	Name	Upstream River Kilometer	Downstream River Kilometer	Element Length, meters	Data Source
1	DD	DRAINAGE DITCH 1	24.20	20.30	0.1000	ARC MAP Calc.
2	BV	VINCENT FROM RKM 20.3 TO BV01	20.30	19.50	0.1000	ARC MAP Calc.
3	BV	VINCENT FROM BV01 RKM 18.5	19.50	18.50	0.1000	ARC MAP Calc.
4	BV	VINCENT FROM RKM 18.5 TO BV02	18.50	17.60	0.1000	ARC MAP Calc.
5	DD	DRAINAGE DITCH 2	2.10	0.00	0.1000	ARC MAP Calc.
6	BV	VINCENT FROM BV02 TO DD 8	17.60	16.90	0.0500	ARC MAP Calc.
7	DD	DRAINAGE DITCH 8	0.80	0.00	0.1000	ARC MAP Calc.
8	BV	VINCENT FROM DD 8 TO DD 9	16.90	16.00	0.1000	ARC MAP Calc.
9	DD	DRAINAGE DITCH 9	2.10	0.00	0.1000	ARC MAP Calc.
10	BV	VINCENT FROM DD 9 TO RKM 15.2	16.00	15.20	0.1000	ARC MAP Calc.
11	BV	VINCENT FROM RKM 15.2 TO BV03	15.20	14.90	0.0500	ARC MAP Calc.
12	BV	VINCENT FROM BV03 TO BONFOUCA	14.90	14.40	0.1000	ARC MAP Calc.
13	UB	UPPER BONFOUCA FROM RKM 5.0 TO DD 23	5.00	2.60	0.1000	ARC MAP Calc.
14	DD	DRAINAGE DITCH 23	1.00	0.00	0.1000	ARC MAP Calc.
15	UB	UPPER BONFOUCA FROM DD 23 TO BB01	2.60	1.10	0.1000	ARC MAP Calc.
16	UB	UPPER BONFOUCA FROM BB01 TO BAYOU VINCENT	1.10	0.00	0.1000	ARC MAP Calc.
17	BB	BONFOUCA FROM BV TO HWY 190	14.40	14.20	0.1000	ARC MAP Calc.
18	DD	HWY 190 (DRAINAGE DITCH 5)	1.80	0.00	0.1000	ARC MAP Calc.
19	BB	BONFOUCA FROM HWY 190 TO BB02	14.20	13.30	0.1000	ARC MAP Calc.
20	BB	BONFOUCA FROM BB02 TO WD	13.30	12.10	0.1000	ARC MAP Calc.
21	WD	WEST DRAINAGE CANAL	0.30	0.00	0.1000	ARC MAP Calc.
22	BB	BONFOUCA FROM WD TO DD6	12.10	10.00	0.1000	ARC MAP Calc.
23	DD	DRAINAGE DITCH 6	0.30	0.00	0.1000	ARC MAP Calc.
24	BB	BONFOUCA FROM DD 6 TO TRIB 2	10.00	9.20	0.1000	ARC MAP Calc.
25	DD	DRAINAGE DITCH 7	1.50	0.50	0.1000	ARC MAP Calc.
26	TR	TRIBUTARY 2	0.50	0.00	0.1000	ARC MAP Calc.
27	BB	BONFOUCA FROM TRIB 2 TO BB03	9.20	8.60	0.1000	ARC MAP Calc.
28	BB	BONFOUCA FROM BB03 TO CANAL 26	8.60	7.80	0.1000	ARC MAP Calc.
29	C	CANAL 26	2.00	0.00	0.1000	ARC MAP Calc.
30	BB	BONFOUCA FROM CANAL 26 TO TRIB 4	7.80	7.60	0.1000	ARC MAP Calc.
31	TR	TRIBUTARY 4 - UPLAND	1.90	0.80	0.1000	ARC MAP Calc.
32	TR	TRIBUTARY 4 - TIDAL	0.80	0.00	0.1000	ARC MAP Calc.
33	BB	BONFOUCA FROM TRIB 4 TO BB04	7.60	6.80	0.1000	ARC MAP Calc.
34	BB	BONFOUCA FROM BB04 TO Rkm 5.6	6.80	5.60	0.1000	ARC MAP Calc.
35	BB	BONFOUCA FROM RKM 5.6 TO BB05	5.60	4.50	0.1000	ARC MAP Calc.
36	BB	BONFOUCA FROM BB05 TO RKM 2.7	4.50	2.70	0.1000	ARC MAP Calc.
37	BB	BONFOUCA FROM RKM 2.7 TO LIBERTY	2.70	0.80	0.1000	ARC MAP Calc.
38	BL	LIBERTY FROM RKM 15.0 TO TRIB 1	15.00	14.40	0.1000	ARC MAP Calc.
39	TR	TRIBUTARY 1	2.40	0.00	0.1000	ARC MAP Calc.
40	BL	LIBERTY FROM RKM 14.4 TO DD22	14.40	13.70	0.1000	ARC MAP Calc.
41	DD	DD22	0.30	0.00	0.1000	ARC MAP Calc.
42	BL	LIBERTY FROM DD22 TO DD20	13.70	12.80	0.1000	ARC MAP Calc.
43	DD	DD20	2.70	0.00	0.1000	ARC MAP Calc.
44	BL	LIBERTY FROM DD20 TO BL03	12.80	12.60	0.1000	ARC MAP Calc.
45	BL	LIBERTY FROM BL03 TO HWY 190	12.60	10.10	0.1000	ARC MAP Calc.

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Winter Justification						
DATA TYPE 8 - REACH IDENTIFICATION DATA						
Reach	ID	Name	Upstream River Kilometer	Downstream River Kilometer	Element Length, meters	Data Source
46	DD	HWY 190 (DRAINAGE DITCH 14)	2.30	0.00	0.1000	ARC MAP Calc.
47	BL	LIBERTY FROM HWY 190 TO BL04	10.10	10.00	0.1000	ARC MAP Calc.
48	BL	LIBERTY FROM BL04 TO DD18	10.00	8.40	0.1000	ARC MAP Calc.
49	DD	DD18	0.30	0.00	0.1000	ARC MAP Calc.
50	BL	LIBERTY FROM DD18 TO DD19	8.40	7.80	0.1000	ARC MAP Calc.
51	DD	DD19	1.40	0.00	0.1000	ARC MAP Calc.
52	BL	LIBERTY FROM DD19 TO DD04	7.80	7.60	0.1000	ARC MAP Calc.
53	DD	DD04	4.20	0.00	0.1000	ARC MAP Calc.
54	BL	LIBERTY FROM DD04 TO BL05	7.60	6.90	0.1000	ARC MAP Calc.
55	BL	LIBERTY FROM BL05 TO RKM 6.3	6.90	6.30	0.1000	ARC MAP Calc.
56	BL	LIBERTY FROM RKM 6.3 TO RKM 6.0	6.30	6.00	0.1000	ARC MAP Calc.
57	BL	LIBERTY FROM RKM 6.0 TO TRIB 9	6.00	5.20	0.1000	ARC MAP Calc.
58	DD	DRAINAGE DITCH 3	0.50	0.30	0.1000	ARC MAP Calc.
59	TR	TRIBUTARY 9	0.30	0.00	0.1000	ARC MAP Calc.
60	BL	LIBERTY FROM TRIB 9 TO TRIB 6	5.20	4.40	0.1000	ARC MAP Calc.
61	DD	DRAINAGE DITCH 11	1.60	0.60	0.1000	ARC MAP Calc.
62	TR	TRIBUTARY 6	0.60	0.00	0.1000	ARC MAP Calc.
63	BL	LIBERTY FROM TRIB 6 TO TO TRIB 10	4.40	4.20	0.1000	ARC MAP Calc.
64	TR	TRIBUTARY 10 - UPLAND	0.70	0.20	0.1000	ARC MAP Calc.
65	TR	TRIBUTARY 10 - TIDAL	0.20	0.00	0.1000	ARC MAP Calc.
66	BL	LIBERTY FROM TRIB 10 TO BL07	4.20	3.30	0.1000	ARC MAP Calc.
67	BL	LIBERTY FROM BL07 TO TRIB 8	3.30	3.20	0.1000	ARC MAP Calc.
68	TR	TRIBUTARY 8	0.60	0.10	0.1000	ARC MAP Calc.
69	TR	TRIBUTARY 8	0.10	0.00	0.1000	ARC MAP Calc.
70	BL	LIBERTY FROM TRIB 8 TO M1	3.20	2.60	0.1000	ARC MAP Calc.
71	M	MARINA 1	0.20	0.00	0.1000	ARC MAP Calc.
72	BL	LIBERTY FROM M1 TO M2	2.60	2.50	0.1000	ARC MAP Calc.
73	M	MARINA02	1.80	0.00	0.1000	ARC MAP Calc.
74	BL	LIBERTY FROM M2 TO B PAQUET	2.50	1.10	0.1000	ARC MAP Calc.
75	DD	HWY 190 (DD13) PAQUET HEADWATERS	8.60	7.20	0.1000	ARC MAP Calc.
76	BP	PAQUET FROM HWY 190 TO DD16	7.20	5.10	0.1000	ARC MAP Calc.
77	DD	DD16	0.90	0.00	0.1000	ARC MAP Calc.
78	BP	PAQUET FROM RKM 5.1 TO DD17	5.10	3.80	0.1000	ARC MAP Calc.
79	DD	DD17	1.70	0.00	0.1000	ARC MAP Calc.
80	BP	PAQUET FROM DD17 TO TIDAL REACH	3.80	3.40	0.1000	ARC MAP Calc.
81	BP	PAQUET (TIDAL) TO BP02	3.40	2.40	0.1000	ARC MAP Calc.
82	BP	PAQUET FROM BP02 TO BP03	2.40	1.60	0.1000	ARC MAP Calc.
83	BP	PAQUET FROM BP03 TO TRIB 24	1.60	1.30	0.1000	ARC MAP Calc.
84	C1	TRIB 24 FROM TOP TO PAQUET	0.40	0.00	0.1000	ARC MAP Calc.
85	BP	PAQUET FROM TRIB 24 TO TRIB 25	1.30	1.00	0.1000	ARC MAP Calc.
86	C2	TRIB 25 FROM TOP TO RKM 0.3	1.00	0.30	0.1000	ARC MAP Calc.
87	C2	TRIB 25 FROM RKM 0.3 TO PAQUET	0.30	0.00	0.1000	ARC MAP Calc.
88	BP	PAQUET FROM TRIB 25 TO BP04	1.00	0.20	0.1000	ARC MAP Calc.
89	BP	PAQUET FROM BP04 TO LIBERTY	0.20	0.00	0.1000	ARC MAP Calc.
90	BL	LIBERTY FROM PAQUET TO BONFOUCA	1.10	0.00	0.1000	ARC MAP Calc.
91	BB	BONFOUCA FROM LIBERTY TO PONTCHARTRAIN (INCL BB06)	0.80	0.00	0.1000	ARC MAP Calc.

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Winter Justification										
Reach	Name	Data Type 9 - Advective Hydraulic Coefficients				Data Source	Depth Coeff. "d"	Depth Exp. "e"	Depth Const. "f"	Data Source
		Width Coeff. "a"	Width Exp. "b"	Width Const. "c"						
1	DRAINAGE DITCH 1	11.5977	0.3	0.000	Generic ditch	0.9468	0.36	0.000	Generic ditch	
2	VINCENT FROM RKM 20.3 TO BV01	4.765	0.3	0.000	Bayou Vincent Reaches	0.3255	0.36	0.000	Bayou Vincent Reaches	
3	VINCENT FROM BV01 RKM 18.5	4.765	0.3	0.000	Bayou Vincent Reaches	0.3255	0.36	0.000	Bayou Vincent Reaches	
4	VINCENT FROM RKM 18.5 TO BV02	4.765	0.3	0.000	Bayou Vincent Reaches	0.3255	0.36	0.000	Bayou Vincent Reaches	
5	DRAINAGE DITCH 2	11.5977	0.3	0.000	Generic ditch	0.9468	0.36	0.000	Generic ditch	
6	VINCENT FROM BV02 TO DD 8	4.765	0.3	0.000	Bayou Vincent Reaches	0.3255	0.36	0.000	Bayou Vincent Reaches	
7	DRAINAGE DITCH 8	11.5977	0.3	0.000	Generic ditch	0.9468	0.36	0.000	Generic ditch	
8	VINCENT FROM DD 8 TO DD 9	4.765	0.3	0.000	Bayou Vincent Reaches	0.3255	0.36	0.000	Bayou Vincent Reaches	
9	DRAINAGE DITCH 9	11.5977	0.3	0.000	Generic ditch	0.9468	0.36	0.000	Generic ditch	
10	VINCENT FROM DD 9 TO RKM 15.2	4.765	0.3	0.000	Bayou Vincent Reaches	0.3255	0.36	0.000	Bayou Vincent Reaches	
11	VINCENT FROM RKM 15.2 TO BV03	0	0	4.724	Bayou Vincent Reaches	0	0	0.271	Bayou Vincent Reaches	
12	VINCENT FROM BV03 TO BONFOUCA	0	0	4.724	Bayou Vincent Reaches	0	0	0.271	Bayou Vincent Reaches	
13	UPPER BONFOUCA FROM RKM 5.0 TO DD 23	5.813	0.3	0.000	Upper Bayou Bonfouca Reaches	0.413	0.36	0.000	Upper Bayou Bonfouca Reaches	
14	DRAINAGE DITCH 23	11.5977	0.3	0.000	Generic ditch	0.9468	0.36	0.000	Generic ditch	
15	UPPER BONFOUCA FROM DD 23 TO BB01	5.813	0.3	0.000	Upper Bayou Bonfouca Reaches	0.413	0.36	0.000	Upper Bayou Bonfouca Reaches	

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Winter Justification									
Reach	Name	Data Type 9 - Advective Hydraulic Coefficients			Data Source	Depth Coeff. "d"	Depth Exp. "e"	Depth Const. "f"	Data Source
		Width Coeff. "a"	Width Exp. "b"	Width Const. "c"					
16	UPPER BONFOUCA FROM BB01 TO BAYOU VINCENT	8.719	0.3	0.000	Upper Bayou Bonfouca Reaches	0.62	0.36	0.000	Upper Bayou Bonfouca Reaches
17	BONFOUCA FROM BV TO HWY 190	0	0	10.840	Bayou Bonfouca Reaches	0	0	0.872	Bayou Bonfouca Reaches
18	HWY 190 (DRAINAGE DITCH 5)	11.5977	0.3	0.000	Generic ditch	0.9468	0.36	0.000	Generic ditch
19	BONFOUCA FROM HWY 190 TO BB02	0	0	10.840	Bayou Bonfouca Reaches	0	0	0.872	Bayou Bonfouca Reaches
20	BONFOUCA FROM BB02 TO WD	0	0	10.840	Bayou Bonfouca Reaches	0	0	0.872	Bayou Bonfouca Reaches
21	WEST DRAINAGE CANAL	0.000	0	3	Tidal Channel & Marine Reaches	0	0	0.150	Tidal Channel & Marine Reaches
22	BONFOUCA FROM WD TO DD6	0	0	54.250	Bayou Bonfouca Reaches	0	0	1.240	Bayou Bonfouca Reaches
23	DRAINAGE DITCH 6	11.5977	0.3	0.000	Generic ditch	0.9468	0.36	0.000	Generic ditch
24	BONFOUCA FROM DD 6 TO TRIB 2	0	0	93.080	Bayou Bonfouca Reaches	0	0	1.603	Bayou Bonfouca Reaches
25	DRAINAGE DITCH 7	11.5977	0.3	0.000	Generic ditch	0.9468	0.36	0.000	Generic ditch
26	TRIBUTARY 2	0	0	12.000	Tidal Channel & Marine Reaches	0	0	0.600	Tidal Channel & Marine Reaches
27	BONFOUCA FROM TRIB 2 TO BB03	0	0	93.080	Bayou Bonfouca Reaches	0	0	1.603	Bayou Bonfouca Reaches
28	BONFOUCA FROM BB03 TO CANAL 26	0	0	93.080	Bayou Bonfouca Reaches	0	0	1.603	Bayou Bonfouca Reaches
29	CANAL 26	0	0	114.000	Tidal Channel & Marine Reaches	0	0	1.000	Tidal Channel & Marine Reaches
30	BONFOUCA FROM CANAL 26 TO TRIB 4	0	0	76.510	Bayou Bonfouca Reaches	0	0	1.872	Bayou Bonfouca Reaches

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Winter Justification										
Reach	Name	Data Type 9 - Advective Hydraulic Coefficients				Data Source	Depth Coeff. "d"	Depth Exp. "e"	Depth Const. "f"	Data Source
		Width Coeff. "a"	Width Exp. "b"	Width Const. "c"	Width Const. "c"					
31	TRIBUTARY 4 - UPLAND	11.5977	0.3	0.000	Generic ditch	0.9468	0.36	0.000	Generic ditch	
32	TRIBUTARY 4 - TIDAL	0	0	18.000	Tidal Channel & Marine Reaches	0	0	0.900	Tidal Channel & Marine Reaches	
33	BONFOUCA FROM TRIB 4 TO BB04	0	0	76.510	Bayou Bonfouca Reaches	0	0	1.872	Bayou Bonfouca Reaches	
34	BONFOUCA FROM BB04 TO Rkm 5.6	0	0	91.440	Bayou Bonfouca Reaches	0	0	1.890	Bayou Bonfouca Reaches	
35	BONFOUCA FROM RKM 5.6 TO BB05	0	0	114.300	Bayou Bonfouca Reaches	0	0	1.670	Bayou Bonfouca Reaches	
36	BONFOUCA FROM BB05 TO RKM 2.7	0	0	77.700	Bayou Bonfouca Reaches	0	0	1.440	Bayou Bonfouca Reaches	
37	BONFOUCA FROM RKM 2.7 TO LIBERTY	0	0	88.000	Bayou Bonfouca Reaches	0	0	1.600	Bayou Bonfouca Reaches	
38	LIBERTY FROM RKM 15.0 TO TRIB 1	8.719	0.3	0.000	Bayou Liberty Reaches	0.62	0.36	0.000	Bayou Liberty Reaches	
39	TRIBUTARY 1	11.5977	0.3	0.000	Generic ditch	0.9468	0.36	0.000	Generic ditch	
40	LIBERTY FROM RKM 14.4 TO DD22	8.719	0.3	0.000	Bayou Liberty Reaches	0.62	0.36	0.000	Bayou Liberty Reaches	
41	DD22	11.5977	0.3	0.000	Generic ditch	0.9468	0.36	0.000	Generic ditch	
42	LIBERTY FROM DD22 TO DD20	17.4376	0.3	0.000	Bayou Liberty Reaches	0.992	0.36	0.000	Bayou Liberty Reaches	
43	DD20	11.5977	0.3	0.000	Generic ditch	0.9468	0.36	0.000	Generic ditch	
44	LIBERTY FROM DD20 TO BL03	0	0	8.840	Bayou Liberty Reaches	0	0	0.472	Bayou Liberty Reaches	
45	LIBERTY FROM BL03 TO HWY 190	0	0	8.840	Bayou Liberty Reaches	0	0	0.472	Bayou Liberty Reaches	

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Winter Justification									
Reach	Name	Data Type 9 - Advective Hydraulic Coefficients					Depth Exp. "e"	Depth Const. "f"	Data Source
		Width Coeff. "a"	Width Exp. "b"	Width Const. "c"	Data Source	Depth Coeff. "d"			
46	HWY 190 (DRAINAGE DITCH 14)	11.5977	0.3	0.000	Generic ditch	0.9468	0.36	0.000	Generic ditch
47	LIBERTY FROM HWY 190 TO BL04	0	0	18.600	Bayou Liberty Reaches	0	0	1.400	Bayou Liberty Reaches
48	LIBERTY FROM BL04 TO DD18	0	0	18.600	Bayou Liberty Reaches	0	0	1.400	Bayou Liberty Reaches
49	DD18	11.5977	0.3	0.000	Generic ditch	0.9468	0.36	0.000	Generic ditch
50	LIBERTY FROM DD18 TO DD19	0	0	18.600	Bayou Liberty Reaches	0	0	1.400	Bayou Liberty Reaches
51	DD19	11.5977	0.3	0.000	Generic ditch	0.9468	0.36	0.000	Generic ditch
52	LIBERTY FROM DD19 TO DD04	0	0	42.670	Bayou Liberty Reaches	0	0	2.280	Bayou Liberty Reaches
53	DD04	11.5977	0.3	0.000	Generic ditch	0.9468	0.36	0.000	Generic ditch
54	LIBERTY FROM DD04 TO BL05	0	0	42.670	Bayou Liberty Reaches	0	0	2.280	Bayou Liberty Reaches
55	LIBERTY FROM BL05 TO RKM 6.3	0	0	42.670	Bayou Liberty Reaches	0	0	2.280	Bayou Liberty Reaches
56	LIBERTY FROM RKM 6.3 TO RKM 6.0	0	0	39.690	Bayou Liberty Reaches	0	0	1.700	Bayou Liberty Reaches
57	LIBERTY FROM RKM 6.0 TO TRIB 9	0	0	47.550	Bayou Liberty Reaches	0	0	2.080	Bayou Liberty Reaches
58	DRAINAGE DITCH 3	11.5977	0.3	0.000	Generic ditch	0.9468	0.36	0.000	Generic ditch
59	TRIBUTARY 9	0	0	16.000	Tidal Channel & Marine Reaches	0	0	0.800	Tidal Channel & Marine Reaches
60	LIBERTY FROM TRIB 9 TO TRIB 6	0	0	47.550	Bayou Liberty Reaches	0	0	2.080	Bayou Liberty Reaches

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Winter Justification									
Reach	Name	Data Type 9 - Advective Hydraulic Coefficients					Depth Exp. "e"	Depth Const. "f"	Data Source
		Width Coeff. "a"	Width Exp. "b"	Width Const. "c"	Data Source	Depth Coeff. "d"			
61	DRAINAGE DITCH 11	11.5977	0.3	0.000	Generic ditch	0.9468	0.36	0.000	Generic ditch
62	TRIBUTARY 6	0	0	12.000	Tidal Channel & Marine Reaches	0	0	0.600	Tidal Channel & Marine Reaches
63	LIBERTY FROM TRIB 6 TO TO TRIB 10	0	0	52.730	Bayou Liberty Reaches	0	0	2.090	Bayou Liberty Reaches
64	TRIBUTARY 10 - UPLAND	11.5977	0.3	0.000	Generic ditch	0.9468	0.36	0.000	Generic ditch
65	TRIBUTARY 10 - TIDAL	0	0	13.000	Tidal Channel & Marine Reaches	0	0	0.650	Tidal Channel & Marine Reaches
66	LIBERTY FROM TRIB 10 TO BL07	0	0	52.120	Bayou Liberty Reaches	0	0	2.140	Bayou Liberty Reaches
67	LIBERTY FROM BL07 TO TRIB 8	0	0	52.120	Bayou Liberty Reaches	0	0	2.140	Bayou Liberty Reaches
68	TRIBUTARY 8	11.5977	0.3	0.000	Generic ditch	0.9468	0.36	0.000	Generic ditch
69	TRIBUTARY 8	0	0	10.000	Tidal Channel & Marine Reaches	0	0	0.500	Tidal Channel & Marine Reaches
70	LIBERTY FROM TRIB 8 TO M1	0	0	52.120	Bayou Liberty Reaches	0	0	2.140	Bayou Liberty Reaches
71	MARINA 1	0	0	32.000	Tidal Channel & Marine Reaches	0	0	1.200	Tidal Channel & Marine Reaches
72	LIBERTY FROM M1 TO M2	0	0	56.540	Bayou Liberty Reaches	0	0	2.130	Bayou Liberty Reaches
73	MARINA02	0	0	32.000	Tidal Channel & Marine Reaches	0	0	1.200	Tidal Channel & Marine Reaches
74	LIBERTY FROM M2 TO B PAQUET	0	0	60.960	Bayou Liberty Reaches	0	0	2.130	Bayou Liberty Reaches
75	HWY 190 (DD13) PAQUET HEADWATERS	11.5977	0.3	0.000	Generic ditch	0.9468	0.36	0.000	Generic ditch

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Winter Justification									
Reach	Name	Data Type 9 - Advective Hydraulic Coefficients			Data Source	Depth Coeff. "d"	Depth Exp. "e"	Depth Const. "f"	Data Source
		Width Coeff. "a"	Width Exp. "b"	Width Const. "c"					
76	PAQUET FROM HWY 190 TO DD16	8.72	0.3	0.000	Bayou Paquet Reaches	0.62	0.36	0.000	Bayou Paquet Reaches
77	DD16	11.5977	0.3	0.000	Generic ditch	0.9468	0.36	0.000	Generic ditch
78	PAQUET FROM RKM 5.1 TO DD17	8.72	0.3	0.000	Bayou Paquet Reaches	0.62	0.36	0.000	Bayou Paquet Reaches
79	DD17	11.5977	0.3	0.000	Generic ditch	0.9468	0.36	0.000	Generic ditch
80	PAQUET FROM DD17 TO TIDAL REACH	8.72	0.3	0.000	Bayou Paquet Reaches	0.62	0.36	0.000	Bayou Paquet Reaches
81	PAQUET (TIDAL) TO BP02	0	0	18.900	Bayou Paquet Reaches	0	0	1.100	Bayou Paquet Reaches
82	PAQUET FROM BP02 TO BP03	0	0	18.290	Bayou Paquet Reaches	0	0	1.000	Bayou Paquet Reaches
83	PAQUET FROM BP03 TO TRIB 24	0	0	21.340	Bayou Paquet Reaches	0	0	1.500	Bayou Paquet Reaches
84	TRIB 24 FROM TOP TO PAQUET	0	0	20.100	Tidal Channel & Marine Reaches	0	0	0.740	Tidal Channel & Marine Reaches
85	PAQUET FROM TRIB 24 TO TRIB 25	0	0	21.340	Bayou Paquet Reaches	0	0	1.450	Bayou Paquet Reaches
86	TRIB 25 FROM TOP TO RKM 0.3	0	0	16.460	Tidal Channel & Marine Reaches	0	0	0.940	Tidal Channel & Marine Reaches
87	TRIB 25 FROM RKM 0.3 TO PAQUET	0	0	32.000	Tidal Channel & Marine Reaches	0	0	0.770	Tidal Channel & Marine Reaches
88	PAQUET FROM TRIB 25 TO BP04	0	0	30.480	Bayou Paquet Reaches	0	0	1.500	Bayou Paquet Reaches
89	PAQUET FROM BP04 TO LIBERTY	0	0	30.480	Bayou Paquet Reaches	0	0	1.500	Bayou Paquet Reaches
90	LIBERTY FROM PAQUET TO BONFOUCA	0	0	60.960	Bayou Liberty Reaches	0	0	2.130	Bayou Liberty Reaches
91	BONFOUCA FROM LIBERTY TO PONTCHARTRAIN (INCL BB06)	0	0	105.590	Bayou Bonfouca Reaches	0	0	1.957	Bayou Bonfouca Reaches

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Winter Justification							
DATA TYPE 10 - DISPERSIVE HYDRAULIC COEFFICIENTS							
Reach	Tidal Range	Data Source	a	b	c	d	Data Source
1	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
2	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
3	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
4	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
5	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
6	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
7	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
8	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
9	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
10	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
11	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
12	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
13	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
14	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
15	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
16	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
17	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
18	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
19	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
20	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
21	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
22	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
23	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
24	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
25	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
26	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
27	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
28	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
29	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
30	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
31	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
32	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
33	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
34	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
35	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
36	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
37	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
38	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
39	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
40	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
41	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
42	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
43	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
44	1.0	Calibration	100.00	0.8333	0.0	1.0	Constant values used for advective dispersion
45	1.0	Calibration	100.00	0.8333	0.0	1.0	Constant values used for advective dispersion

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Winter Justification							
DATA TYPE 10 - DISPERSIVE HYDRAULIC COEFFICIENTS							
Reach	Tidal Range	Data Source	a	b	c	d	Data Source
46	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
47	1.0	Calibration	100.00	0.8333	0.0	1.0	Constant values used for advective dispersion
48	1.0	Calibration	100.00	0.8333	0.0	1.0	Constant values used for advective dispersion
49	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
50	1.0	Calibration	150.00	0.8333	0.0	1.0	Constant values used for advective dispersion
51	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
52	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
53	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
54	1.0	Calibration	250.00	0.8333	0.0	1.0	Constant values used for advective dispersion
55	1.0	Calibration	300.00	0.8333	0.0	1.0	Constant values used for advective dispersion
56	1.0	Calibration	300.00	0.8333	0.0	1.0	Constant values used for advective dispersion
57	1.0	Calibration	300.00	0.8333	0.0	1.0	Constant values used for advective dispersion
58	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
59	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
60	1.0	Calibration	300.00	0.8333	0.0	1.0	Constant values used for advective dispersion
61	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
62	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
63	1.0	Calibration	300.00	0.8333	0.0	1.0	Constant values used for advective dispersion
64	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
65	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
66	1.0	Calibration	300.00	0.8333	0.0	1.0	Constant values used for advective dispersion
67	1.0	Calibration	300.00	0.8333	0.0	1.0	Constant values used for advective dispersion
68	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
69	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
70	1.0	Calibration	300.00	0.8333	0.0	1.0	Constant values used for advective dispersion
71	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
72	1.0	Calibration	300.00	0.8333	0.0	1.0	Constant values used for advective dispersion
73	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
74	1.0	Calibration	300.00	0.8333	0.0	1.0	Constant values used for advective dispersion
75	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
76	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
77	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
78	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
79	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
80	0.0	Calibration	0.00	0.8333	0.0	1.0	Constant values used for advective dispersion
81	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
82	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
83	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
84	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
85	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
86	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
87	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
88	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
89	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion
90	1.0	Calibration	300.00	0.8333	0.0	1.0	Constant values used for advective dispersion
91	1.0	Calibration	200.00	0.8333	0.0	1.0	Constant values used for advective dispersion

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Winter Justification						
DATA TYPE 11-INITIAL CONDITIONS						
Reach	Name	Temp, deg C	Sal, ppt	DO, mg/l	Chlorophyll a	Data Source
1	DRAINAGE DITCH 1	20.80	0.26	3.00	0.00	90th Percentile Temp for WQN 0301
2	VINCENT FROM RKM 20.3 TO BV01	20.80	0.26	3.00	0.00	90th Percentile Temp for WQN 0301
3	VINCENT FROM BV01 RKM 18.5	20.80	0.26	3.00	0.00	90th Percentile Temp for WQN 0301
4	VINCENT FROM RKM 18.5 TO BV02	20.80	0.39	3.00	0.00	90th Percentile Temp for WQN 0301
5	DRAINAGE DITCH 2	20.80	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
6	VINCENT FROM BV02 TO DD 8	20.80	0.39	3.00	0.00	90th Percentile Temp for WQN 0301
7	DRAINAGE DITCH 8	20.80	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
8	VINCENT FROM DD 8 TO DD 9	20.80	0.28	3.00	0.00	90th Percentile Temp for WQN 0301
9	DRAINAGE DITCH 9	20.80	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
10	VINCENT FROM DD 9 TO RKM 15.2	20.80	0.17	3.00	0.00	90th Percentile Temp for WQN 0301
11	VINCENT FROM RKM 15.2 TO BV03	20.80	0.17	3.00	24.60	90th Percentile Temp for WQN 0301
12	VINCENT FROM BV03 TO BONFOUCA	20.80	0.17	3.00	24.60	90th Percentile Temp for WQN 0301
13	UPPER BONFOUCA FROM RKM 5.0 TO DD 23	20.80	0.17	3.00	0.00	90th Percentile Temp for WQN 0301
14	DRAINAGE DITCH 23	20.80	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
15	UPPER BONFOUCA FROM DD 23 TO BB01	20.80	0.17	3.00	0.00	90th Percentile Temp for WQN 0301
16	UPPER BONFOUCA FROM BB01 TO BAYOU VINCENT	20.80	0.17	3.00	0.00	90th Percentile Temp for WQN 0301
17	BONFOUCA FROM BV TO HWY 190	20.80	0.24	3.00	24.60	90th Percentile Temp for WQN 0301
18	HWY 190 (DRAINAGE DITCH 5)	20.80	0.27	3.00	0.00	90th Percentile Temp for WQN 0301
19	BONFOUCA FROM HWY 190 TO BB02	20.80	0.27	3.00	49.90	90th Percentile Temp for WQN 0301
20	BONFOUCA FROM BB02 TO WD	20.80	0.45	3.00	49.90	90th Percentile Temp for WQN 0301
21	WEST DRAINAGE CANAL	20.80	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
22	BONFOUCA FROM WD TO DD6	20.80	1.15	3.00	8.80	90th Percentile Temp for WQN 0301
23	DRAINAGE DITCH 6	20.80	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
24	BONFOUCA FROM DD 6 TO TRIB 2	20.80	2.10	3.00	8.80	90th Percentile Temp for WQN 0301
25	DRAINAGE DITCH 7	20.80	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
26	TRIBUTARY 2	20.80	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
27	BONFOUCA FROM TRIB 2 TO BB03	20.80	2.40	3.00	8.80	90th Percentile Temp for WQN 0301
28	BONFOUCA FROM BB03 TO CANAL 26	20.80	2.68	3.00	8.80	90th Percentile Temp for WQN 0301
29	CANAL 26	20.80	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
30	BONFOUCA FROM CANAL 26 TO TRIB 4	20.80	3.00	3.00	10.60	90th Percentile Temp for WQN 0301
31	TRIBUTARY 4 - UPLAND	20.80	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
32	TRIBUTARY 4 - TIDAL	20.80	0.30	3.00	10.60	90th Percentile Temp for WQN 0301
33	BONFOUCA FROM TRIB 4 TO BB04	20.80	3.10	3.00	11.30	90th Percentile Temp for WQN 0301
34	BONFOUCA FROM BB04 TO Rkm 5.6	20.80	3.30	3.00	11.30	90th Percentile Temp for WQN 0301
35	BONFOUCA FROM RKM 5.6 TO BB05	20.80	3.30	3.00	12.90	90th Percentile Temp for WQN 0301
36	BONFOUCA FROM BB05 TO RKM 2.7	20.80	3.62	3.00	12.90	90th Percentile Temp for WQN 0301
37	BONFOUCA FROM RKM 2.7 TO LIBERTY	20.80	3.82	3.00	10.20	90th Percentile Temp for WQN 0301
38	LIBERTY FROM RKM 15.0 TO TRIB 1	20.80	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
39	TRIBUTARY 1	20.80	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
40	LIBERTY FROM RKM 14.4 TO DD22	20.80	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
41	DD22	20.80	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
42	LIBERTY FROM DD22 TO DD20	20.80	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
43	DD20	20.80	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
44	LIBERTY FROM DD20 TO BL03	20.80	0.48	3.00	14.80	90th Percentile Temp for WQN 0301
45	LIBERTY FROM BL03 TO HWY 190	20.80	0.48	3.00	14.80	90th Percentile Temp for WQN 0301

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Winter Justification						
DATA TYPE 11-INITIAL CONDITIONS						
Reach	Name	Temp, deg C	Sal, ppt	DO, mg/l	Chlorophyll a	Data Source
46	HWY 190 (DRAINAGE DITCH 14)	20.80	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
47	LIBERTY FROM HWY 190 TO BL04	20.80	0.54	3.00	14.80	90th Percentile Temp for WQN 0301
48	LIBERTY FROM BL04 TO DD18	20.80	0.54	3.00	57.10	90th Percentile Temp for WQN 0301
49	DD18	20.80	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
50	LIBERTY FROM DD18 TO DD19	20.80	1.70	3.00	3.20	90th Percentile Temp for WQN 0301
51	DD19	20.80	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
52	LIBERTY FROM DD19 TO DD04	20.80	2.90	3.00	3.20	90th Percentile Temp for WQN 0301
53	DD04	20.80	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
54	LIBERTY FROM DD04 TO BL05	20.80	3.09	3.00	3.20	90th Percentile Temp for WQN 0301
55	LIBERTY FROM BL05 TO RKM 6.3	20.80	3.09	3.00	3.20	90th Percentile Temp for WQN 0301
56	LIBERTY FROM RKM 6.3 TO RKM 6.0	20.80	3.09	3.00	3.20	90th Percentile Temp for WQN 0301
57	LIBERTY FROM RKM 6.0 TO TRIB 9	20.80	3.09	3.00	3.20	90th Percentile Temp for WQN 0301
58	DRAINAGE DITCH 3	20.80	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
59	TRIBUTARY 9	20.80	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
60	LIBERTY FROM TRIB 9 TO TRIB 6	20.80	2.80	3.00	3.20	90th Percentile Temp for WQN 0301
61	DRAINAGE DITCH 11	20.80	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
62	TRIBUTARY 6	20.80	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
63	LIBERTY FROM TRIB 6 TO TO TRIB 10	20.80	2.40	3.00	3.20	90th Percentile Temp for WQN 0301
64	TRIBUTARY 10 - UPLAND	20.80	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
65	TRIBUTARY 10 - TIDAL	20.80	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
66	LIBERTY FROM TRIB 10 TO BL07	20.80	2.12	3.00	3.20	90th Percentile Temp for WQN 0301
67	LIBERTY FROM BL07 TO TRIB 8	20.80	2.12	3.00	65.20	90th Percentile Temp for WQN 0301
68	TRIBUTARY 8	20.80	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
69	TRIBUTARY 8	20.80	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
70	LIBERTY FROM TRIB 8 TO M1	20.80	2.80	3.00	65.20	90th Percentile Temp for WQN 0301
71	MARINA 1	20.80	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
72	LIBERTY FROM M1 TO M2	20.80	3.50	3.00	6.80	90th Percentile Temp for WQN 0301
73	MARINA02	20.80	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
74	LIBERTY FROM M2 TO B PAQUET	20.80	4.16	3.00	6.80	90th Percentile Temp for WQN 0301
75	HWY 190 (DD13) PAQUET HEADWATERS	20.80	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
76	PAQUET FROM HWY 190 TO DD16	20.80	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
77	DD16	20.80	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
78	PAQUET FROM RKM 5.1 TO DD17	20.80	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
79	DD17	20.80	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
80	PAQUET FROM DD17 TO TIDAL REACH	20.80	1.60	3.00	0.00	90th Percentile Temp for WQN 0301
81	PAQUET (TIDAL) TO BP02	20.80	3.17	3.00	14.60	90th Percentile Temp for WQN 0301
82	PAQUET FROM BP02 TO BP03	20.80	3.32	3.00	14.60	90th Percentile Temp for WQN 0301
83	PAQUET FROM BP03 TO TRIB 24	20.80	3.47	3.00	14.60	90th Percentile Temp for WQN 0301
84	TRIB 24 FROM TOP TO PAQUET	20.80	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
85	PAQUET FROM TRIB 24 TO TRIB 25	20.80	3.70	3.00	13.60	90th Percentile Temp for WQN 0301
86	TRIB 25 FROM TOP TO RKM 0.3	20.80	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
87	TRIB 25 FROM RKM 0.3 TO PAQUET	20.80	0.30	3.00	0.00	90th Percentile Temp for WQN 0301
88	PAQUET FROM TRIB 25 TO BP04	20.80	3.94	3.00	13.60	90th Percentile Temp for WQN 0301
89	PAQUET FROM BP04 TO LIBERTY	20.80	3.94	3.00	13.60	90th Percentile Temp for WQN 0301
90	LIBERTY FROM PAQUET TO BONFOUCA	20.80	4.16	3.00	6.80	90th Percentile Temp for WQN 0301
91	BONFOUCA FROM LIBERTY TO PONTCHARTRAIN (INCL BB06)	20.80	4.00	3.00	7.40	90th Percentile Temp for WQN 0301

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Winter Justification					Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Winter				
DATA TYPE 12 - REAERATION, SEDIMENT OXYGEN DEMAND AND BOD COEFFICIENTS					DATA TYPE 12 - REAERATION, SEDIMENT OXYGEN DEMAND AND BOD COEFFICIENTS				
REACH	NAME	K2 OPT	Data Source	a	BKGRND SOD, gmO2/m2/day at 20 deg C	Data Source	Aerobic BOD1 Dec Rate (1/day)	BOD1 SETT RATE (1/day)	Data Source
1	DRAINAGE DITCH 1	15	Louisiana Equation	0	0.144	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
2	VINCENT FROM RKM 20.3 TO BV01	15	Louisiana Equation	0	0.086	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
3	VINCENT FROM BV01 RKM 18.5	15	Louisiana Equation	0	1.725	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
4	VINCENT FROM RKM 18.5 TO BV02	15	Louisiana Equation	0	2.013	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
5	DRAINAGE DITCH 2	15	Louisiana Equation	0	0.144	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
6	VINCENT FROM BV02 TO DD 8	15	Louisiana Equation	0	2.013	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
7	DRAINAGE DITCH 8	15	Louisiana Equation	0	0.144	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
8	VINCENT FROM DD 8 TO DD 9	15	Louisiana Equation	0	2.013	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
9	DRAINAGE DITCH 9	15	Louisiana Equation	0	0.144	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
10	VINCENT FROM DD 9 TO RKM 15.2	15	Louisiana Equation	0	2.013	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
11	VINCENT FROM RKM 15.2 TO BV03	15	Louisiana Equation	0	1.208	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
12	VINCENT FROM BV03 TO BONFOUCA	15	Louisiana Equation	0	1.208	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
13	UPPER BONFOUCA FROM RKM 5.0 TO DD 23	15	Louisiana Equation	0	0.144	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
14	DRAINAGE DITCH 23	15	Louisiana Equation	0	0.144	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
15	UPPER BONFOUCA FROM DD 23 TO BB01	15	Louisiana Equation	0	0.144	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Winter Justification					Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Winter				
DATA TYPE 12 - REAERATION, SEDIMENT OXYGEN DEMAND AND BOD COEFFICIENTS					DATA TYPE 12 - REAERATION, SEDIMENT OXYGEN DEMAND AND BOD COEFFICIENTS				
REACH	NAME	K2 OPT	Data Source	a	BKGRND SOD, gmO2/m2/day at 20 deg C	Data Source	Aerobic BOD1 Dec Rate (1/day)	BOD1 SETT RATE (1/day)	Data Source
16	UPPER BONFOUCA FROM BB01 TO BAYOU VINCENT	15	Louisiana Equation	0	0.144	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
17	BONFOUCA FROM BV TO HWY 190	15	Louisiana Equation	0	0.805	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
18	HWY 190 (DRAINAGE DITCH 5)	15	Louisiana Equation	0	0.144	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
19	BONFOUCA FROM HWY 190 TO BB02	15	Louisiana Equation	0	1.035	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
20	BONFOUCA FROM BB02 TO WD	15	Louisiana Equation	0	1.035	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
21	WEST DRAINAGE CANAL	15	Louisiana Equation	0	0.144	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
22	BONFOUCA FROM WD TO DD6	11	Texas Equation	0	0.661	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
23	DRAINAGE DITCH 6	15	Louisiana Equation	0	0.144	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
24	BONFOUCA FROM DD 6 TO TRIB 2	1	$K_2 = a$	0.5	0.625	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
25	DRAINAGE DITCH 7	15	Louisiana Equation	0	0.625	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
26	TRIBUTARY 2	11	Texas Equation	0	0.625	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
27	BONFOUCA FROM TRIB 2 TO BB03	1	$K_2 = a$	0.5	0.500	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
28	BONFOUCA FROM BB03 TO CANAL 26	1	$K_2 = a$	0.5	0.500	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
29	CANAL 26	11	Texas Equation	0	0.625	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
30	BONFOUCA FROM CANAL 26 TO TRIB 4	1	$K_2 = a$	0.48	0.500	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Winter Justification					Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Winter				
DATA TYPE 12 - REAERATION, SEDIMENT OXYGEN DEMAND AND BOD COEFFICIENTS					DATA TYPE 12 - REAERATION, SEDIMENT OXYGEN DEMAND AND BOD COEFFICIENTS				
REACH	NAME	K2 OPT	Data Source	a	BKGRND SOD, gmO2/m2/day at 20 deg C	Data Source	Aerobic BOD1 Dec Rate (1/day)	BOD1 SETT RATE (1/day)	Data Source
31	TRIBUTARY 4 - UPLAND	15	Louisiana Equation	0	0.625	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
32	TRIBUTARY 4 - TIDAL	11	Texas Equation	0	0.625	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
33	BONFOUCA FROM TRIB 4 TO BB04	1	$K_2 = a$	0.48	0.250	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
34	BONFOUCA FROM BB04 TO Rkm 5.6	1	$K_2 = a$	0.48	0.000	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
35	BONFOUCA FROM RKM 5.6 TO BB05	1	$K_2 = a$	0.54	0.000	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
36	BONFOUCA FROM BB05 TO RKM 2.7	1	$K_2 = a$	0.66	0.063	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
37	BONFOUCA FROM RKM 2.7 TO LIBERTY	1	$K_2 = a$	0.58	0.000	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
38	LIBERTY FROM RKM 15.0 TO TRIB 1	15	Louisiana Equation	0	0.500	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
39	TRIBUTARY 1	15	Louisiana Equation	0	0.125	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
40	LIBERTY FROM RKM 14.4 TO DD22	15	Louisiana Equation	0	0.625	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
41	DD22	15	Louisiana Equation	0	0.125	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
42	LIBERTY FROM DD22 TO DD20	15	Louisiana Equation	0	0.675	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
43	DD20	15	Louisiana Equation	0	0.125	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
44	LIBERTY FROM DD20 TO BL03	15	Louisiana Equation	0	0.625	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
45	LIBERTY FROM BL03 TO HWY 190	15	Louisiana Equation	0	0.425	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Winter Justification					Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Winter				
DATA TYPE 12 - REAERATION, SEDIMENT OXYGEN DEMAND AND BOD COEFFICIENTS					DATA TYPE 12 - REAERATION, SEDIMENT OXYGEN DEMAND AND BOD COEFFICIENTS				
REACH	NAME	K2 OPT	Data Source	a	BKGRND SOD, gmO2/m2/day at 20 deg C	Data Source	Aerobic BOD1 Dec Rate (1/day)	BOD1 SETT RATE (1/day)	Data Source
46	HWY 190 (DRAINAGE DITCH 14)	15	Louisiana Equation	0	0.125	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
47	LIBERTY FROM HWY 190 TO BL04	11	Texas Equation	0	0.310	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
48	LIBERTY FROM BL04 TO DD18	11	Texas Equation	0	0.256	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
49	DD18	15	Louisiana Equation	0	0.388	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
50	LIBERTY FROM DD18 TO DD19	11	Texas Equation	0	0.078	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
51	DD19	15	Louisiana Equation	0	0.388	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
52	LIBERTY FROM DD19 TO DD04	11	Texas Equation	0	0.000	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
53	DD04	15	Louisiana Equation	0	0.388	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
54	LIBERTY FROM DD04 TO BL05	11	Texas Equation	0	0.031	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
55	LIBERTY FROM BL05 TO RKM 6.3	1	$K_2 = a$	0.36	0.078	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
56	LIBERTY FROM RKM 6.3 TO RKM 6.0	1	$K_2 = a$	0.47	0.031	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
57	LIBERTY FROM RKM 6.0 TO TRIB 9	1	$K_2 = a$	0.39	0.000	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
58	DRAINAGE DITCH 3	15	Louisiana Equation	0	0.388	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
59	TRIBUTARY 9	11	Texas Equation	0	0.388	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
60	LIBERTY FROM TRIB 9 TO TRIB 6	1	$K_2 = a$	0.44	0.000	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Winter Justification					Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Winter				
DATA TYPE 12 - REAERATION, SEDIMENT OXYGEN DEMAND AND BOD COEFFICIENTS					DATA TYPE 12 - REAERATION, SEDIMENT OXYGEN DEMAND AND BOD COEFFICIENTS				
REACH	NAME	K2 OPT	Data Source	a	BKGRND SOD, gmO2/m2/day at 20 deg C	Data Source	Aerobic BOD1 Dec Rate (1/day)	BOD1 SETT RATE (1/day)	Data Source
61	DRAINAGE DITCH 11	15	Louisiana Equation	0	0.388	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
62	TRIBUTARY 6	11	Texas Equation	0	0.388	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
63	LIBERTY FROM TRIB 6 TO TO TRIB 10	1	$K_2 = a$	0.43	0.000	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
64	TRIBUTARY 10 - UPLAND	15	Louisiana Equation	0	0.388	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
65	TRIBUTARY 10 - TIDAL	11	Texas Equation	0	0.388	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
66	LIBERTY FROM TRIB 10 TO BL07	1	$K_2 = a$	0.43	0.163	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
67	LIBERTY FROM BL07 TO TRIB 8	1	$K_2 = a$	0.43	0.171	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
68	TRIBUTARY 8	15	Louisiana Equation	0	0.388	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
69	TRIBUTARY 8	11	Texas Equation	0	0.388	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
70	LIBERTY FROM TRIB 8 TO M1	1	$K_2 = a$	0.43	0.155	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
71	MARINA 1	11	Texas Equation	0	0.388	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
72	LIBERTY FROM M1 TO M2	1	$K_2 = a$	0.43	0.000	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
73	MARINA02	11	Texas Equation	0	0.388	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
74	LIBERTY FROM M2 TO B PAQUET	1	$K_2 = a$	0.43	0.000	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
75	HWY 190 (DD13) PAQUET HEADWATERS	15	Louisiana Equation	0	0.406	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Winter Justification					Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Winter				
DATA TYPE 12 - REAERATION, SEDIMENT OXYGEN DEMAND AND BOD COEFFICIENTS					DATA TYPE 12 - REAERATION, SEDIMENT OXYGEN DEMAND AND BOD COEFFICIENTS				
REACH	NAME	K2 OPT	Data Source	a	BKGRND SOD, gmO2/m2/day at 20 deg C	Data Source	Aerobic BOD1 Dec Rate (1/day)	BOD1 SETT RATE (1/day)	Data Source
76	PAQUET FROM HWY 190 TO DD16	15	Louisiana Equation	0	0.406	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
77	DD16	15	Louisiana Equation	0	0.406	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
78	PAQUET FROM RKM 5.1 TO DD17	15	Louisiana Equation	0	0.406	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
79	DD17	15	Louisiana Equation	0	0.406	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
80	PAQUET FROM DD17 TO TIDAL REACH	15	Louisiana Equation	0	0.406	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
81	PAQUET (TIDAL) TO BP02	15	Louisiana Equation	0	0.260	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
82	PAQUET FROM BP02 TO BP03	1	$K_2 = a$	0.8	0.618	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
83	PAQUET FROM BP03 TO TRIB 24	1	$K_2 = a$	0.61	0.488	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
84	TRIB 24 FROM TOP TO PAQUET	15	Louisiana Equation	0	0.406	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
85	PAQUET FROM TRIB 24 TO TRIB 25	1	$K_2 = a$	0.61	0.244	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
86	TRIB 25 FROM TOP TO RKM 0.3	15	Louisiana Equation	0	0.406	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
87	TRIB 25 FROM RKM 0.3 TO PAQUET	15	Louisiana Equation	0	0.406	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
88	PAQUET FROM TRIB 25 TO BP04	1	$K_2 = a$	0.61	0.000	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
89	PAQUET FROM BP04 TO LIBERTY	1	$K_2 = a$	0.61	0.000	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
90	LIBERTY FROM PAQUET TO BONFOUCA	1	$K_2 = a$	0.43	0.000	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration
91	BONFOUCA FROM LIBERTY TO PONTCHARTRAIN (INCL BB06)	1	$K_2 = a$	0.5	0.000	Reduction to meet 5.0/4.0 Standard	0.0800	0.05	Calibration

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Winter Justification

DATA TYPE 13 - NITROGEN AND PHOSPHORUS COEFFICIENTS

Reach	Name	NBOD decay rate, 1/day	NBOD settling rate, 1/day	Data Source
1	DRAINAGE DITCH 1	0.0300	0.05	Calibration
2	VINCENT FROM RKM 20.3 TO BV01	0.0300	0.05	Calibration
3	VINCENT FROM BV01 RKM 18.5	0.0300	0.05	Calibration
4	VINCENT FROM RKM 18.5 TO BV02	0.0300	0.05	Calibration
5	DRAINAGE DITCH 2	0.0300	0.05	Calibration
6	VINCENT FROM BV02 TO DD 8	0.0300	0.10	Calibration
7	DRAINAGE DITCH 8	0.0300	0.05	Calibration
8	VINCENT FROM DD 8 TO DD 9	0.0300	0.10	Calibration
9	DRAINAGE DITCH 9	0.0300	0.05	Calibration
10	VINCENT FROM DD 9 TO RKM 15.2	0.0300	0.05	Calibration
11	VINCENT FROM RKM 15.2 TO BV03	0.0300	0.15	Calibration
12	VINCENT FROM BV03 TO BONFOUCA	0.0300	0.15	Calibration
13	UPPER BONFOUCA FROM RKM 5.0 TO DD 23	0.0300	0.05	Calibration
14	DRAINAGE DITCH 23	0.0300	0.05	Calibration
15	UPPER BONFOUCA FROM DD 23 TO BB01	0.0300	0.05	Calibration
16	UPPER BONFOUCA FROM BB01 TO BAYOU VINCENT	0.0300	0.05	Calibration
17	BONFOUCA FROM BV TO HWY 190	0.0300	0.15	Calibration
18	HWY 190 (DRAINAGE DITCH 5)	0.0300	0.05	Calibration
19	BONFOUCA FROM HWY 190 TO BB02	0.0300	0.15	Calibration
20	BONFOUCA FROM BB02 TO WD	0.0300	0.05	Calibration
21	WEST DRAINAGE CANAL	0.0300	0.05	Calibration
22	BONFOUCA FROM WD TO DD6	0.0300	0.05	Calibration
23	DRAINAGE DITCH 6	0.0300	0.05	Calibration
24	BONFOUCA FROM DD 6 TO TRIB 2	0.0300	0.05	Calibration
25	DRAINAGE DITCH 7	0.0300	0.05	Calibration
26	TRIBUTARY 2	0.0300	0.05	Calibration
27	BONFOUCA FROM TRIB 2 TO BB03	0.0300	0.05	Calibration
28	BONFOUCA FROM BB03 TO CANAL 26	0.0300	0.05	Calibration
29	CANAL 26	0.0300	0.05	Calibration
30	BONFOUCA FROM CANAL 26 TO TRIB 4	0.0300	0.05	Calibration
31	TRIBUTARY 4 - UPLAND	0.0300	0.05	Calibration
32	TRIBUTARY 4 - TIDAL	0.0300	0.05	Calibration
33	BONFOUCA FROM TRIB 4 TO BB04	0.0300	0.05	Calibration
34	BONFOUCA FROM BB04 TO Rkm 5.6	0.0300	0.05	Calibration
35	BONFOUCA FROM RKM 5.6 TO BB05	0.03	0.05	Calibration
36	BONFOUCA FROM BB05 TO RKM 2.7	0.03	0.05	Calibration
37	BONFOUCA FROM RKM 2.7 TO LIBERTY	0.03	0.05	Calibration
38	LIBERTY FROM RKM 15.0 TO TRIB 1	0.03	0.05	Calibration
39	TRIBUTARY 1	0.03	0.05	Calibration
40	LIBERTY FROM RKM 14.4 TO DD22	0.03	0.05	Calibration
41	DD22	0.03	0.05	Calibration
42	LIBERTY FROM DD22 TO DD20	0.03	0.05	Calibration
43	DD20	0.03	0.05	Calibration
44	LIBERTY FROM DD20 TO BL03	0.03	0.05	Calibration
45	LIBERTY FROM BL03 TO HWY 190	0.03	0.05	Calibration

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Winter Justification

DATA TYPE 13 - NITROGEN AND PHOSPHORUS COEFFICIENTS

Reach	Name	NBOD decay rate, 1/day	NBOD settling rate, 1/day	Data Source
46	HWY 190 (DRAINAGE DITCH 14)	0.03	0.05	Calibration
47	LIBERTY FROM HWY 190 TO BL04	0.03	0.05	Calibration
48	LIBERTY FROM BL04 TO DD18	0.03	0.05	Calibration
49	DD18	0.03	0.05	Calibration
50	LIBERTY FROM DD18 TO DD19	0.03	0.05	Calibration
51	DD19	0.03	0.05	Calibration
52	LIBERTY FROM DD19 TO DD04	0.03	0.05	Calibration
53	DD04	0.03	0.05	Calibration
54	LIBERTY FROM DD04 TO BL05	0.03	0.05	Calibration
55	LIBERTY FROM BL05 TO RKM 6.3	0.03	0.05	Calibration
56	LIBERTY FROM RKM 6.3 TO RKM 6.0	0.03	0.05	Calibration
57	LIBERTY FROM RKM 6.0 TO TRIB 9	0.03	0.05	Calibration
58	DRAINAGE DITCH 3	0.03	0.05	Calibration
59	TRIBUTARY 9	0.03	0.05	Calibration
60	LIBERTY FROM TRIB 9 TO TRIB 6	0.03	0.05	Calibration
61	DRAINAGE DITCH 11	0.03	0.05	Calibration
62	TRIBUTARY 6	0.03	0.05	Calibration
63	LIBERTY FROM TRIB 6 TO TO TRIB 10	0.03	0.05	Calibration
64	TRIBUTARY 10 - UPLAND	0.03	0.05	Calibration
65	TRIBUTARY 10 - TIDAL	0.03	0.05	Calibration
66	LIBERTY FROM TRIB 10 TO BL07	0.03	0.05	Calibration
67	LIBERTY FROM BL07 TO TRIB 8	0.03	0.05	Calibration
68	TRIBUTARY 8	0.03	0.05	Calibration
69	TRIBUTARY 8	0.03	0.05	Calibration
70	LIBERTY FROM TRIB 8 TO M1	0.03	0.05	Calibration
71	MARINA 1	0.03	0.05	Calibration
72	LIBERTY FROM M1 TO M2	0.03	0.05	Calibration
73	MARINA02	0.03	0.05	Calibration
74	LIBERTY FROM M2 TO B PAQUET	0.03	0.05	Calibration
75	HWY 190 (DD13) PAQUET HEADWATERS	0.03	0.05	Calibration
76	PAQUET FROM HWY 190 TO DD16	0.03	0.05	Calibration
77	DD16	0.03	0.05	Calibration
78	PAQUET FROM RKM 5.1 TO DD17	0.03	0.05	Calibration
79	DD17	0.03	0.05	Calibration
80	PAQUET FROM DD17 TO TIDAL REACH	0.03	0.05	Calibration
81	PAQUET (TIDAL) TO BP02	0.03	0.05	Calibration
82	PAQUET FROM BP02 TO BP03	0.03	0.05	Calibration
83	PAQUET FROM BP03 TO TRIB 24	0.03	0.05	Calibration
84	TRIB 24 FROM TOP TO PAQUET	0.03	0.05	Calibration
85	PAQUET FROM TRIB 24 TO TRIB 25	0.03	0.05	Calibration
86	TRIB 25 FROM TOP TO RKM 0.3	0.03	0.05	Calibration
87	TRIB 25 FROM RKM 0.3 TO PAQUET	0.03	0.05	Calibration
88	PAQUET FROM TRIB 25 TO BP04	0.03	0.05	Calibration
89	PAQUET FROM BP04 TO LIBERTY	0.03	0.05	Calibration
90	LIBERTY FROM PAQUET TO BONFOUCA	0.03	0.05	Calibration
91	BONFOUCA FROM LIBERTY TO PONTCHARTRAIN (INCL BB06)	0.03	0.05	Calibration

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Winter Justification

DATA TYPE 19 - NONPOINT SOURCES

Reach	Reach Name	Length of Reach, km	CBOD, kg/day	NBOD, kg/day	Data Source
1	DRAINAGE DITCH 1	3.90	0.72	0.30	Reduction to meet 5.0/4.0 Standard
2	VINCENT FROM RKM 20.3 TO BV01	0.80	0.06	0.02	Reduction to meet 5.0/4.0 Standard
3	VINCENT FROM BV01 RKM 18.5	1.00	0.61	0.02	Reduction to meet 5.0/4.0 Standard
4	VINCENT FROM RKM 18.5 TO BV02	0.90	0.61	0.02	Reduction to meet 5.0/4.0 Standard
5	DRAINAGE DITCH 2	2.10	0.11	0.05	Reduction to meet 5.0/4.0 Standard
6	VINCENT FROM BV02 TO DD 8	0.70	0.59	0.06	Reduction to meet 5.0/4.0 Standard
7	DRAINAGE DITCH 8	0.80	0.06	0.03	Reduction to meet 5.0/4.0 Standard
8	VINCENT FROM DD 8 TO DD 9	0.90	0.73	0.06	Reduction to meet 5.0/4.0 Standard
9	DRAINAGE DITCH 9	2.10	0.17	0.07	Reduction to meet 5.0/4.0 Standard
10	VINCENT FROM DD 9 TO RKM 15.2	0.80	0.04	0.02	Reduction to meet 5.0/4.0 Standard
11	VINCENT FROM RKM 15.2 TO BV03	0.30	0.23	0.04	Reduction to meet 5.0/4.0 Standard
12	VINCENT FROM BV03 TO BONFOUCA	0.50	0.40	0.26	Reduction to meet 5.0/4.0 Standard
13	UPPER BONFOUCA FROM RKM 5.0 TO DD	2.40	0.11	0.05	Reduction to meet 5.0/4.0 Standard
14	DRAINAGE DITCH 23	1.00	0.08	0.04	Reduction to meet 5.0/4.0 Standard
15	UPPER BONFOUCA FROM DD 23 TO BB01	1.50	0.09	0.04	Reduction to meet 5.0/4.0 Standard
16	UPPER BONFOUCA FROM BB01 TO BAYOU	1.10	0.10	0.04	Reduction to meet 5.0/4.0 Standard
17	BONFOUCA FROM BV TO HWY 190	0.20	0.03	0.00	Reduction to meet 5.0/4.0 Standard
18	HWY 190 (DRAINAGE DITCH 5)	1.80	0.09	0.04	Reduction to meet 5.0/4.0 Standard
19	BONFOUCA FROM HWY 190 TO BB02	0.90	3.36	1.09	Reduction to meet 5.0/4.0 Standard
20	BONFOUCA FROM BB02 TO WD	1.20	6.47	0.60	Reduction to meet 5.0/4.0 Standard
21	WEST DRAINAGE CANAL	0.30	0.05	0.02	Reduction to meet 5.0/4.0 Standard
22	BONFOUCA FROM WD TO DD6	2.10	38.81	4.89	Reduction to meet 5.0/4.0 Standard
23	DRAINAGE DITCH 6	0.30	0.03	0.01	Reduction to meet 5.0/4.0 Standard
24	BONFOUCA FROM DD 6 TO TRIB 2	0.80	200.00	22.50	Reduction to meet 5.0/4.0 Standard
25	DRAINAGE DITCH 7	1.00	0.36	0.16	Reduction to meet 5.0/4.0 Standard
26	TRIBUTARY 2	0.50	2.31	0.77	Reduction to meet 5.0/4.0 Standard
27	BONFOUCA FROM TRIB 2 TO BB03	6.00	157.47	20.00	Reduction to meet 5.0/4.0 Standard
28	BONFOUCA FROM BB03 TO CANAL 26	6.00	182.46	18.75	Reduction to meet 5.0/4.0 Standard
29	CANAL 26	0.20	122.50	35.00	Reduction to meet 5.0/4.0 Standard
30	BONFOUCA FROM CANAL 26 TO TRIB 4	0.70	125.02	15.00	Reduction to meet 5.0/4.0 Standard
31	TRIBUTARY 4 - UPLAND	1.60	0.29	0.13	Reduction to meet 5.0/4.0 Standard
32	TRIBUTARY 4 - TIDAL	3.10	7.13	2.15	Reduction to meet 5.0/4.0 Standard
33	BONFOUCA FROM TRIB 4 TO BB04	2.30	175.02	18.75	Reduction to meet 5.0/4.0 Standard
34	BONFOUCA FROM BB04 TO Rkm 5.6	1.10	350.15	37.52	Reduction to meet 5.0/4.0 Standard
35	BONFOUCA FROM RKM 5.6 TO BB05	1.10	406.25	50.00	Reduction to meet 5.0/4.0 Standard
36	BONFOUCA FROM BB05 TO RKM 2.7	1.10	406.25	6.25	Reduction to meet 5.0/4.0 Standard
37	BONFOUCA FROM RKM 2.7 TO LIBERTY	1.10	0.00	0.00	Reduction to meet 5.0/4.0 Standard
38	LIBERTY FROM RKM 15.0 TO TRIB 1	1.10	1.00	0.70	Reduction to meet 5.0/4.0 Standard
39	TRIBUTARY 1	1.10	0.18	0.08	Reduction to meet 5.0/4.0 Standard
40	LIBERTY FROM RKM 14.4 TO DD22	1.10	1.00	0.95	Reduction to meet 5.0/4.0 Standard
41	DD22	1.10	0.01	0.00	Reduction to meet 5.0/4.0 Standard
42	LIBERTY FROM DD22 TO DD20	1.10	3.42	3.80	Reduction to meet 5.0/4.0 Standard
43	DD20	1.10	0.12	0.05	Reduction to meet 5.0/4.0 Standard
44	LIBERTY FROM DD20 TO BL03	1.10	0.85	1.00	Reduction to meet 5.0/4.0 Standard
45	LIBERTY FROM BL03 TO HWY 190	1.10	10.00	0.88	Reduction to meet 5.0/4.0 Standard

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Winter Justification

DATA TYPE 19 - NONPOINT SOURCES

Reach	Reach Name	Length of Reach, km	CBOD, kg/day	NBOD, kg/day	Data Source
46	HWY 190 (DRAINAGE DITCH 14)	1.10	0.13	0.06	Reduction to meet 5.0/4.0 Standard
47	LIBERTY FROM HWY 190 TO BL04	1.10	4.65	1.55	Reduction to meet 5.0/4.0 Standard
48	LIBERTY FROM BL04 TO DD18	1.10	49.60	3.88	Reduction to meet 5.0/4.0 Standard
49	DD18	1.10	0.06	0.03	Reduction to meet 5.0/4.0 Standard
50	LIBERTY FROM DD18 TO DD19	1.10	19.38	2.33	Reduction to meet 5.0/4.0 Standard
51	DD19	1.10	0.25	0.11	Reduction to meet 5.0/4.0 Standard
52	LIBERTY FROM DD19 TO DD04	1.10	29.45	2.33	Reduction to meet 5.0/4.0 Standard
53	DD04	1.10	0.56	0.24	Reduction to meet 5.0/4.0 Standard
54	LIBERTY FROM DD04 TO BL05	1.10	75.95	2.33	Reduction to meet 5.0/4.0 Standard
55	LIBERTY FROM BL05 TO RKM 6.3	1.10	58.13	2.33	Reduction to meet 5.0/4.0 Standard
56	LIBERTY FROM RKM 6.3 TO RKM 6.0	1.10	31.00	1.55	Reduction to meet 5.0/4.0 Standard
57	LIBERTY FROM RKM 6.0 TO TRIB 9	1.10	93.00	1.55	Reduction to meet 5.0/4.0 Standard
58	DRAINAGE DITCH 3	1.10	0.05	0.02	Reduction to meet 5.0/4.0 Standard
59	TRIBUTARY 9	1.10	1.40	0.43	Reduction to meet 5.0/4.0 Standard
60	LIBERTY FROM TRIB 9 TO TRIB 6	1.10	170.50	27.13	Reduction to meet 5.0/4.0 Standard
61	DRAINAGE DITCH 11	1.10	0.22	0.10	Reduction to meet 5.0/4.0 Standard
62	TRIBUTARY 6	1.10	1.78	0.57	Reduction to meet 5.0/4.0 Standard
63	LIBERTY FROM TRIB 6 TO TO TRIB 10	1.10	31.00	9.30	Reduction to meet 5.0/4.0 Standard
64	TRIBUTARY 10 - UPLAND	1.10	0.11	0.05	Reduction to meet 5.0/4.0 Standard
65	TRIBUTARY 10 - TIDAL	1.10	0.67	0.22	Reduction to meet 5.0/4.0 Standard
66	LIBERTY FROM TRIB 10 TO BL07	1.10	170.50	27.90	Reduction to meet 5.0/4.0 Standard
67	LIBERTY FROM BL07 TO TRIB 8	1.10	0.00	13.18	Reduction to meet 5.0/4.0 Standard
68	TRIBUTARY 8	1.10	0.11	0.05	Reduction to meet 5.0/4.0 Standard
69	TRIBUTARY 8	1.10	0.22	0.08	Reduction to meet 5.0/4.0 Standard
70	LIBERTY FROM TRIB 8 TO M1	1.10	19.38	10.08	Reduction to meet 5.0/4.0 Standard
71	MARINA 1	1.10	2.60	0.69	Reduction to meet 5.0/4.0 Standard
72	LIBERTY FROM M1 TO M2	1.10	35.94	8.63	Reduction to meet 5.0/4.0 Standard
73	MARINA02	1.10	22.48	6.20	Reduction to meet 5.0/4.0 Standard
74	LIBERTY FROM M2 TO B PAQUET	1.10	116.25	0.00	Reduction to meet 5.0/4.0 Standard
75	HWY 190 (DD13) PAQUET HEADWATERS	1.10	0.32	0.14	Reduction to meet 5.0/4.0 Standard
76	PAQUET FROM HWY 190 TO DD16	1.10	0.96	0.41	Reduction to meet 5.0/4.0 Standard
77	DD16	1.10	0.22	0.10	Reduction to meet 5.0/4.0 Standard
78	PAQUET FROM RKM 5.1 TO DD17	1.10	0.64	0.22	Reduction to meet 5.0/4.0 Standard
79	DD17	1.10	0.23	0.10	Reduction to meet 5.0/4.0 Standard
80	PAQUET FROM DD17 TO TIDAL REACH	1.10	0.12	0.07	Reduction to meet 5.0/4.0 Standard
81	PAQUET (TIDAL) TO BP02	1.10	67.84	11.78	Reduction to meet 5.0/4.0 Standard
82	PAQUET FROM BP02 TO BP03	1.10	31.07	3.36	Reduction to meet 5.0/4.0 Standard
83	PAQUET FROM BP03 TO TRIB 24	1.10	17.88	3.25	Reduction to meet 5.0/4.0 Standard
84	TRIB 24 FROM TOP TO PAQUET	1.10	2.44	0.73	Reduction to meet 5.0/4.0 Standard
85	PAQUET FROM TRIB 24 TO TRIB 25	1.10	28.44	6.91	Reduction to meet 5.0/4.0 Standard
86	TRIB 25 FROM TOP TO RKM 0.3	1.10	3.74	1.08	Reduction to meet 5.0/4.0 Standard
87	TRIB 25 FROM RKM 0.3 TO PAQUET	1.10	2.93	0.89	Reduction to meet 5.0/4.0 Standard
88	PAQUET FROM TRIB 25 TO BP04	1.10	121.88	28.44	Reduction to meet 5.0/4.0 Standard
89	PAQUET FROM BP04 TO LIBERTY	1.10	130.00	24.38	Reduction to meet 5.0/4.0 Standard
90	LIBERTY FROM PAQUET TO BONFOUCA	1.10	121.88	0.00	Reduction to meet 5.0/4.0 Standard
91	BONFOUCA FROM LIBERTY TO PONTCHARTRAIN (INCL BB06)	1.10	0.00	0.00	Reduction to meet 5.0/4.0 Standard

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Winter Justification

DATA TYPE 20 - HEADWATER DATA FOR FLOW, TEMPERATURE, SALINITY, AND CONSERVATIVES

Headwater Name	Element No.	Headwater Flow, cms	Data Source	Temp, deg C	Salinity	Chlorides	Conductivity	Data Source
B Vincent & Bonfouca	1	0.00283	LTP Default	33.8	0.26	520.9	7.23	Survey Data Average
Browns Vill Rd (DD2)	67	0.00283	LTP Default	33.8	0.26	520.9	7.23	Survey Data Average
Drainage Ditch 8	102	0.00283	LTP Default	33.8	0.26	520.9	7.23	Survey Data Average
Drainage Ditch 9	119	0.00283	LTP Default	33.8	0.26	520.9	7.23	Survey Data Average
UPPER B BONFOUCA	159	0.00283	LTP Default	33.8	0.26	520.9	7.23	Survey Data Average
Drainage Ditch 23	183	0.00283	LTP Default	33.8	0.26	520.9	7.23	Survey Data Average
Highway 190(DD 5)	221	0.00283	LTP Default	33.8	0.26	520.9	7.23	Survey Data Average
West Drainage Canal	260	0.00283	LTP Default	33.8	0.26	520.9	7.23	Survey Data Average
Drainage Ditch 6	284	0.00283	LTP Default	33.8	0.26	520.9	7.23	Survey Data Average
Tributary 2	295	0.00283	LTP Default	33.8	0.26	520.9	7.23	Survey Data Average
Canal 26	324	0.00283	LTP Default	33.8	0.26	520.9	7.23	Survey Data Average
Tributary 4	346	0.00283	LTP Default	33.8	0.26	520.9	7.23	Survey Data Average
BAYOU LIBERTY	433	0.02832	LTP Default	33.8	0.26	520.9	7.23	Survey Data Average
Tributary 1	439	0.00283	LTP Default	33.8	0.26	520.9	7.23	Survey Data Average
Drainage Ditch 22	470	0.00283	LTP Default	33.8	0.26	520.9	7.23	Survey Data Average
Drainage Ditch 20	482	0.00283	LTP Default	33.8	0.26	520.9	7.23	Survey Data Average
Highway 190	536	0.00283	LTP Default	33.8	0.26	520.9	7.23	Survey Data Average
Drainage Ditch 18	576	0.00283	LTP Default	33.8	0.26	520.9	7.23	Survey Data Average
Drainage Ditch 19	585	0.00283	LTP Default	33.8	0.26	520.9	7.23	Survey Data Average
Drainage Ditch 4	601	0.00283	LTP Default	33.8	0.26	520.9	7.23	Survey Data Average
Tributary 9	667	0.00283	LTP Default	33.8	0.26	520.9	7.23	Survey Data Average
Tributary 6	680	0.00283	LTP Default	33.8	0.26	520.9	7.23	Survey Data Average
Tributary 10	698	0.00283	LTP Default	33.8	0.26	520.9	7.23	Survey Data Average
Tributary 8	715	0.00283	LTP Default	33.8	0.26	520.9	7.23	Survey Data Average
Marina 1	727	0.00283	LTP Default	33.8	0.26	520.9	7.23	Survey Data Average
Marina 2	730	0.00283	LTP Default	33.8	0.26	520.9	7.23	Survey Data Average
BAYOU PAQUET	762	0.00283	LTP Default	33.8	0.26	520.9	7.23	Survey Data Average
Drainage Ditch 16	797	0.00283	LTP Default	33.8	0.26	520.9	7.23	Survey Data Average
Drainage Ditch 17	819	0.00283	LTP Default	33.8	0.26	520.9	7.23	Survey Data Average
Tributary 24	861	0.00283	LTP Default	33.8	0.26	520.9	7.23	Survey Data Average
Tributary 25	868	0.00283	LTP Default	33.8	0.26	520.9	7.23	Survey Data Average

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Winter Justification

DATA TYPE 21 - HEADWATER DATA FOR DO, BOD, AND NITROGEN

Headwater Name	Dissolved Oxygen, mg/L	UCBOD1, mg/l	NBOD, mg/l	Data Source
B Vincent & Bonfouca	6.00	0.633	0.29	Reduction to meet 5.0/4.0 Standard
Browns Vill Rd (DD2)	6.00	0.633	0.29	Reduction to meet 5.0/4.0 Standard
Drainage Ditch 8	6.00	0.633	0.29	Reduction to meet 5.0/4.0 Standard
Drainage Ditch 9	6.00	0.633	0.29	Reduction to meet 5.0/4.0 Standard
UPPER B	6.00	0.633	0.29	Reduction to meet 5.0/4.0 Standard
Drainage Ditch 23	6.00	0.633	0.29	Reduction to meet 5.0/4.0 Standard
Highway 190(DD 5)	6.00	0.633	0.29	Reduction to meet 5.0/4.0 Standard
West Drainage Canal	6.00	0.633	0.29	Reduction to meet 5.0/4.0 Standard
Drainage Ditch 6	6.00	2.75	1.25	Reduction to meet 5.0/4.0 Standard
Tributary 2	6.00	2.75	1.25	Reduction to meet 5.0/4.0 Standard
Canal 26	6.00	2.75	1.25	Reduction to meet 5.0/4.0 Standard
Tributary 4	6.00	2.75	1.25	Reduction to meet 5.0/4.0 Standard
BAYOU LIBERTY	6.00	0.55	0.25	Reduction to meet 5.0/4.0 Standard
Tributary 1	6.00	0.55	0.25	Reduction to meet 5.0/4.0 Standard
Drainage Ditch 22	6.00	0.55	0.25	Reduction to meet 5.0/4.0 Standard
Drainage Ditch 20	6.00	0.55	0.25	Reduction to meet 5.0/4.0 Standard
Highway 190	6.00	0.55	0.25	Reduction to meet 5.0/4.0 Standard
Drainage Ditch 18	6.00	1.71	0.78	Reduction to meet 5.0/4.0 Standard
Drainage Ditch 19	6.00	1.71	0.78	Reduction to meet 5.0/4.0 Standard
Drainage Ditch 4	6.00	1.71	0.78	Reduction to meet 5.0/4.0 Standard
Tributary 9	6.00	1.71	0.78	Reduction to meet 5.0/4.0 Standard
Tributary 6	6.00	1.71	0.78	Reduction to meet 5.0/4.0 Standard
Tributary 10	6.00	1.71	0.78	Reduction to meet 5.0/4.0 Standard
Tributary 8	6.00	1.71	0.78	Reduction to meet 5.0/4.0 Standard
Marina 1	6.00	1.71	0.78	Reduction to meet 5.0/4.0 Standard
Marina 2	6.00	1.71	0.78	Reduction to meet 5.0/4.0 Standard
Highway 190	6.00	1.79	0.81	Reduction to meet 5.0/4.0 Standard
BAYOU PAQUET	6.00	1.76	0.77	Reduction to meet 5.0/4.0 Standard
Drainage Ditch 16	6.00	1.79	0.81	Reduction to meet 5.0/4.0 Standard
Drainage Ditch 17	6.00	1.79	0.81	Reduction to meet 5.0/4.0 Standard
Tributary 24	6.00	1.79	0.81	Reduction to meet 5.0/4.0 Standard
Tributary 25	6.00	1.79	0.81	Reduction to meet 5.0/4.0 Standard

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Winter Justification							
DATA TYPE 24 - WASTELOAD DATA FOR FLOW, TEMPERATURE, SALINITY, AND CONSERVATIVES							
Wasteload / Withdrawal Name	EL #	Flow, cms	Temperature, deg C	Salinity	Conductivity	Chlorides	Data Source
V H Seal Apartments	1	4.11E-05	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Groundwater	40	2.83E-02	33.80	0.26	520.9	7.2	Flow - LTP Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Eagle Lake MHP	48	3.45E-03	30.00	0.40	774.0	34.4	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
J&K Management LLC	63	9.86E-06	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Stones Throw Apts	67	1.05E-03	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Good Value Auto Sale	73	3.29E-06	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Adams MHP	74	1.15E-04	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Wadleigh Offshore	79	4.38E-05	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
ExxonMobil #51367	80	1.37E-04	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
LCR-M Plumbing Supp	81	6.57E-06	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Baker-Ellis-Shamrock	83	2.30E-05	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Northshore Chemical	84	3.01E-06	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Manheim Auto Auction	85	0.00E+00	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Winter Justification							
DATA TYPE 24 - WASTELOAD DATA FOR FLOW, TEMPERATURE, SALINITY, AND CONSERVATIVES							
Wasteload / Withdrawal Name	EL #	Flow, cms	Temperature, deg C	Salinity	Conductivity	Chlorides	Data Source
Wadleigh Fitness	87	1.64E-05	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Jubilee #4815	102	9.31E-05	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Johnson-Bldg 2	107	7.67E-05	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Charter-John's Auto	119	9.58E-06	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
I-12 Shell	125	8.76E-06	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
St Tam Par Sch Maint	135	5.48E-06	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
J&D-Vets Health/Omni	136	4.16E-05	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Good Shepherd Church	183	6.02E-05	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Jolly Apartments	221	3.12E-04	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Piney Ridge MHP	222	5.09E-04	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Starling Plaza	223	1.57E-04	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Po Folks Seafood	224	2.68E-05	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
South Seas Rstrmt	227	1.07E-04	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Winter Justification							
DATA TYPE 24 - WASTELOAD DATA FOR FLOW, TEMPERATURE, SALINITY, AND CONSERVATIVES							
Wasteload / Withdrawal Name	EL #	Flow, cms	Temperature, deg C	Salinity	Conductivity	Chlorides	Data Source
Shady Pines MHP	228	5.75E-04	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
1421Hwy190- ArmaCoat	230	3.51E-05	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
FacDir-StTamBrakeTag	231	4.38E-06	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
New Life Ministries	232	2.68E-05	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Peace Luth Church	233	1.30E-04	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Ernest Walder	234	1.97E-05	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Stor N Lock-Tymeless	235	7.67E-06	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Bonfouca Supind Site	260	6.31E-04	30.00	0.22	437.3	23.5	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
DOTD Bnfca Bridge	281	1.10E-06	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Slidell Marine	282	2.03E-04	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
ARC Mech Contractors	284	5.48E-06	30.00	0.39	753.6	200.0	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Pearl River Nav	289	1.92E-04	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
STP Const Building	295	4.38E-05	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Winter Justification							
DATA TYPE 24 - WASTELOAD DATA FOR FLOW, TEMPERATURE, SALINITY, AND CONSERVATIVES							
Wasteload / Withdrawal Name	EL #	Flow, cms	Temperature, deg C	Salinity	Conductivity	Chlorides	Data Source
Acadian Grdns Condos	346	4.11E-04	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Oakwood Estates	351	6.79E-04	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Coin du Lestin Sub	389	4.38E-03	30.00	0.32	628.1	54.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Northshore Squadron	439	1.37E-06	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Andy Knight	442	2.19E-06	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
The Meadows Sub	470	1.51E-02	30.00	0.55	1053.0	150.0	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Royal Golf Club	482	2.38E-04	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
NatFinance-Textron	494	2.19E-04	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Guardian Angels	495	5.09E-05	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Oakmont Subdivisio	498	3.87E-03	30.00	0.32	619.5	47.0	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Assunta's Restaurant	536	1.59E-04	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Indian Hills RV Park	544	4.31E-04	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
J&J Auto Brokers	546	2.19E-06	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Winter Justification							
DATA TYPE 24 - WASTELOAD DATA FOR FLOW, TEMPERATURE, SALINITY, AND CONSERVATIVES							
Wasteload / Withdrawal Name	EL #	Flow, cms	Temperature, deg C	Salinity	Conductivity	Chlorides	Data Source
7thDay & Dollar Gen	548	7.50E-05	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Omni Storage VI	550	1.64E-05	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
ABC Supply Co	551	7.67E-06	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Lion Consulting	552	2.19E-06	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Chill Rite	553	1.20E-05	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Herron-2315/17/19	555	3.12E-05	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
ThomGroc-ST Pol Jury	556	5.48E-06	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
PitStop3-ReflectMir	557	7.67E-05	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
All Am Elks Lodge	576	8.76E-05	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Lake Castle School	585	4.76E-04	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
BlueBell-NuLite	601	4.71E-05	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Albers AC & Heating	602	6.57E-06	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Baker Sales Wrhse	611	2.19E-06	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Winter Justification							
DATA TYPE 24 - WASTELOAD DATA FOR FLOW, TEMPERATURE, SALINITY, AND CONSERVATIVES							
Wasteload / Withdrawal Name	EL #	Flow, cms	Temperature, deg C	Salinity	Conductivity	Chlorides	Data Source
Cleco Service Center	614	1.10E-05	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
G&S-United Medical	615	1.97E-05	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Airgas-Hanna-Sunbelt	616	8.65E-04	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
RJD Contractors	617	1.10E-06	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
M&R-WagnerShopCtr	619	1.09E-04	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
CaWes Center	620	2.27E-04	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Beau's-La Lumber	621	2.96E-05	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Advance Auto	625	5.48E-06	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Huntwyck Village	633	1.52E-02	30.00	0.3	582.3	52.5	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
B Liberty Water Assn	667	9.86E-06	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Thompson Rd Baptist	680	4.38E-05	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Liberty Food Store	698	3.12E-05	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
A-1 Remodeling & Bld	715	1.10E-05	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Winter Justification							
DATA TYPE 24 - WASTELOAD DATA FOR FLOW, TEMPERATURE, SALINITY, AND CONSERVATIVES							
Wasteload / Withdrawal Name	EL #	Flow, cms	Temperature, deg C	Salinity	Conductivity	Chlorides	Data Source
St Genevieve Cath Ch	723	1.64E-04	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Bayou Liberty Marina	728	0.0000	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
A Bonfouca Marina	746	0.0000	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Waste Mgmt of La	762	0.0000	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
AcAlign-AllAm-CT-M&D	763	0.0000	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
K-Bar-B Youth Ranch	767	1.26E-04	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Bayou Paquet headwater	776	2.83E-02	33.80	0.26	520.9	7.2	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Acts 1 Tax Service	797	3.29E-06	30.00	0.39	753.6	63.3	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages
Timber Ridge Sub	819	2.43E-03	30.00	0.45	864.7	41.6	Flow - 1.25*Expected Flow Temp - LTP default Salinity, Conductivity, & Chlorides - Facility measured averages

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Winter Justification

DATA TYPE 25 - WASTELOAD DATA FOR DO, BOD, AND NITROGEN

Wasteload / Withdrawal Name	EL #	DO, mg/l	CBOD, mg/l	UNBOD, mg/l	Data Source
V H Seal Apartments	1	2.00	23.0000	21.5000	Permit Limit to meet 5.0/4.0 DO Criteria
Groundwater	40	6.00	2.7000	1.1900	BV01
Eagle Lake MHP	48	5.00	11.5000	8.6000	Permit Limit to meet 5.0/4.0 DO Criteria
J&K Management LLC	63	2.00	23.0000	21.5000	Permit Limit to meet 5.0/4.0 DO Criteria
Stones Throw Apts	67	2.00	23.0000	8.6000	Permit Limit to meet 5.0/4.0 DO Criteria
Good Value Auto Sale	73	2.00	23.0000	21.5000	Permit Limit to meet 5.0/4.0 DO Criteria
Adams MHP	74	2.00	23.0000	21.5000	Permit Limit to meet 5.0/4.0 DO Criteria
Wadleigh Offshore	79	2.00	23.0000	21.5000	Permit Limit to meet 5.0/4.0 DO Criteria
ExxonMobil #51367	80	2.00	23.0000	21.5000	Permit Limit to meet 5.0/4.0 DO Criteria
LCR-M Plumbing Supp	81	2.00	23.0000	21.5000	Permit Limit to meet 5.0/4.0 DO Criteria
Baker-Ellis-Shamrock	83	2.00	23.0000	21.5000	Permit Limit to meet 5.0/4.0 DO Criteria
Northshore Chemical	84	2.00	23.0000	21.5000	Permit Limit to meet 5.0/4.0 DO Criteria
Manheim Auto Auction	85	2.00	23.0000	21.5000	Permit Limit to meet 5.0/4.0 DO Criteria
Wadleigh Fitness	87	2.00	23.0000	21.5000	Permit Limit to meet 5.0/4.0 DO Criteria
Jubilee #4815	102	2.00	23.0000	21.5000	Permit Limit to meet 5.0/4.0 DO Criteria
Johnson-Bldg 2	107	2.00	23.0000	21.5000	Permit Limit to meet 5.0/4.0 DO Criteria
Charter-John's Auto	119	2.00	23.0000	21.5000	Permit Limit to meet 5.0/4.0 DO Criteria
I-12 Shell	125	2.00	23.0000	21.5000	Permit Limit to meet 5.0/4.0 DO Criteria
St Tam Par Sch Maint	135	2.00	23.0000	21.5000	Permit Limit to meet 5.0/4.0 DO Criteria
J&D- Vets Health/Omni	136	2.00	23.0000	21.5000	Permit Limit to meet 5.0/4.0 DO Criteria
Good Shepherd Church	183	2.00	23.0000	21.5000	Permit Limit to meet 5.0/4.0 DO Criteria
Jolly Apartments	221	2.00	23.0000	8.6000	Permit Limit to meet 5.0/4.0 DO Criteria
Piney Ridge MHP	222	2.00	23.0000	8.6000	Permit Limit to meet 5.0/4.0 DO Criteria
Starling Plaza	223	2.00	23.0000	21.5000	Permit Limit to meet 5.0/4.0 DO Criteria
Po Folks Seafood	224	2.00	23.0000	21.5000	Permit Limit to meet 5.0/4.0 DO Criteria
South Seas Rstrnt	227	2.00	23.0000	21.5000	Permit Limit to meet 5.0/4.0 DO Criteria
Shady Pines MHP	228	2.00	23.0000	8.6000	Permit Limit to meet 5.0/4.0 DO Criteria
1421Hwy190-ArmaCoat	230	2.00	23.0000	21.5000	Permit Limit to meet 5.0/4.0 DO Criteria
FacDir-StTamBrakeTag	231	2.00	23.0000	21.5000	Permit Limit to meet 5.0/4.0 DO Criteria
New Life Ministries	232	2.00	23.0000	21.5000	Permit Limit to meet 5.0/4.0 DO Criteria
Peace Luth Church	233	2.00	23.0000	21.5000	Permit Limit to meet 5.0/4.0 DO Criteria
Ernest Walder	234	2.00	23.0000	21.5000	Permit Limit to meet 5.0/4.0 DO Criteria
Stor N Lock-Tymeless	235	2.00	23.0000	21.5000	Permit Limit to meet 5.0/4.0 DO Criteria
Bonfouca Supfnd Site	260	2.00	1.3300	1.7400	Permit Limit to meet 5.0/4.0 DO Criteria
DOTD Bnfca Bridge	281	2.00	46.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria
Slidell Marine	282	2.00	46.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria
ARC Mech Contractors	284	2.00	69.0000	64.5000	Permit Limit to meet 5.0/4.0 DO Criteria
Pearl River Nav	289	2.00	69.0000	64.5000	Permit Limit to meet 5.0/4.0 DO Criteria
STP Const Building	295	2.00	69.0000	64.5000	Permit Limit to meet 5.0/4.0 DO Criteria
Acadian Grdns Condos	346	2.00	69.0000	64.5000	Permit Limit to meet 5.0/4.0 DO Criteria
Oakwood Estates	351	2.00	23.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria
Coin du Lestin Sub	389	2.00	23.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Winter Justification

DATA TYPE 25 - WASTELOAD DATA FOR DO, BOD, AND NITROGEN

Wasteload / Withdrawal Name	EL #	DO, mg/l	CBOD, mg/l	UNBOD, mg/l	Data Source
Northshore Squadron	439	2.00	23.0000	21.5000	Permit Limit to meet 5.0/4.0 DO Criteria
Andy Knight	442	2.00	23.0000	21.5000	Permit Limit to meet 5.0/4.0 DO Criteria
The Meadows Sub	470	2.00	11.5000	8.6000	Permit Limit to meet 5.0/4.0 DO Criteria
Royal Golf Club	482	2.00	23.0000	21.5000	Permit Limit to meet 5.0/4.0 DO Criteria
NatFinance-Textron	494	2.00	23.0000	21.5000	Permit Limit to meet 5.0/4.0 DO Criteria
Guardian Angels	495	2.00	23.0000	21.5000	Permit Limit to meet 5.0/4.0 DO Criteria
Oakmont Subdivisio	498	2.00	11.5000	8.6000	Permit Limit to meet 5.0/4.0 DO Criteria
Assunta's Restaurant	536	2.00	23.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria
Indian Hills RV Park	544	2.00	23.0000	21.5000	Permit Limit to meet 5.0/4.0 DO Criteria
J&J Auto Brokers	546	2.00	23.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria
7thDay & Dollar Gen	548	2.00	23.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria
Omni Storage VI	550	2.00	23.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria
ABC Supply Co	551	2.00	23.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria
Lion Consulting	552	2.00	23.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria
Chill Rite	553	2.00	23.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria
Herron-2315/17/19	555	2.00	23.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria
ThomGroc-ST Pol Jury	556	2.00	23.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria
PitStop3-ReflectMir	557	2.00	23.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria
All Am Elks Lodge	576	2.00	23.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria
Lake Castle School	585	2.00	23.0000	21.5000	Permit Limit to meet 5.0/4.0 DO Criteria
BlueBell-NuLite	601	2.00	23.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria
Albers AC & Heating	602	2.00	23.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria
Baker Sales Wrhse	611	2.00	23.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria
Cleco Service Center	614	2.00	23.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria
G&S-United Medical	615	2.00	23.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria
Airgas-Hanna-Sunbelt	616	2.00	23.0000	25.3000	Permit Limit to meet 5.0/4.0 DO Criteria
RJD Contractors	617	2.00	23.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria
M&R-WagnerShopCtr	619	2.00	23.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria
CalWes Center	620	2.00	23.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria
Beau's-La Lumber	621	2.00	23.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria
Advance Auto	625	2.00	23.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria
Huntwyck Village	633	2.00	23.0000	8.6000	Permit Limit to meet 5.0/4.0 DO Criteria
B Liberty Water Assn	667	2.00	23.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria
Thompson Rd Baptist	680	2.00	23.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria
Liberty Food Store	698	2.00	23.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria
A-1 Remodeling & Bld	715	2.00	23.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria
St Genevieve Cath Ch	723	2.00	23.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria
Bayou Liberty Marina	728	2.00	23.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria
A Bonfouca Marina	746	2.00	23.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria
Waste Mgmt of La	762	2.00	23.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria
AcAlign-AllAm-CT-M&D	763	2.00	23.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria
K-Bar-B Youth Ranch	767	2.00	23.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria
Bayou Paquet headwater	776	6.00	1.7600	0.7700	Permit Limit to meet 5.0/4.0 DO Criteria
Acts 1 Tax Service	797	2.00	23.0000	43.0000	Permit Limit to meet 5.0/4.0 DO Criteria
Timber Ridge Sub	819	2.00	23.0000	8.6000	Permit Limit to meet 5.0/4.0 DO Criteria

Bayou Liberty and Bayou Bonfouca 040905, 040906, 040907, 040908 Winter Justification

DATA TYPE 27 - LOWER BOUNDARY CONDITIONS

PMIDameter	Value	Units	Data Source
TEMPERATURE	20.8000	°C	BB07
SALINITY	3.9400	ppt	BB07
CHLORIDES	7096.0000	ppm	BB07
CONDUCTIVITY	2200.0000	umhos/cm	BB07
DISSOLVED OXYGEN	6.8000	mg/L	BB07
CBOD1	7.8200	mg/L	BB07
CBOD2	0.0000	mg/L	BB07
CHLOROPHYLL A	5.5500	ug/L	BB07
NBOD	1.8000	mg/L	BB07

Appendix E - Projection Model Development

Appendix E1 – Summer Loading

Summer Projection, Non-Point Benthic Load Input and TMDL Calculations:

Modeled stream or water body:

BAYOU BONFOUCA AND BAYOU LIBERTY

Shaded cells are input values for calculations. GIN OF SAFETY (MOS) (%) = [MOG + MOU] = **20%**
 Values to be used in the projection models.

Reach Number and Description	Reach	Calibration Model Values											Reduced Man-Made Loads						Projected Model Loads							
		Total Non-Point UCBOB	Total Non-Point UNBOD	SOD @ 20°C	Total Calb. Benthic Load (TCBL)	Reach Length	Proj. Model Avg. Reach Width	Proj. Temp.	Background Benthic Load	Effective Background Benthic Load	Man-Made Benthic Load	Background percentage reduction	Percentage Reduction of man-made sources	Reduced Background Benthic Load	Reduced Man-Made Benthic Load	Reduced TCBL adjusted for MOS	Reduced Total UCBOB Load	Reduced UNBOD Load	Reduced SOD Load at Projection Temp.	SOD @ 20°C	Total Non-Point UCBOB INPUTS	Non-Point UNBOD INPUTS	Total MOS at Projection Temp.	Non-Point UCBOB LA	Non-Point UNBOD LA	SOD LA at Projection Temp.
		g O ₂ / [(m ²)(day)]	Kilo-meters	Meters	(deg Celcius)	g O ₂ / [(m ²)(day)]	g O ₂ / [(m ²)(day)]	g O ₂ / [(m ²)(day)]	%	%	g O ₂ / [(m ²)(day)]	g O ₂ / [(m ²)(day)]	g O ₂ / [(m ²)(day)]	kg O ₂ /day	kg O ₂ /day	kg O ₂ /day	g O ₂ / [(m ²)(day)]	kg O ₂ /day	kg O ₂ /day	kg O ₂ /day	kg O ₂ /day	kg O ₂ /day	kg O ₂ /day			
DRAINAGE DITCH 1	1	0.162	0.067	0.50	0.729	3.90	1.03	30.40	0.00	0.00	0.73	0%	77%	0.00	0.17	0.21	0.15	0.06	0.89	0.144	0.187	0.078	0.28	0.15	0.06	0.89
VINCENT FROM RKM 20.0 TO BV01	2	0.159	0.061	0.30	0.521	0.80	1.02	30.40	0.00	0.00	0.52	0%	77%	0.00	0.12	0.15	0.03	0.01	0.11	0.086	0.037	0.014	0.04	0.03	0.01	0.11
VINCENT FROM BV01 RKM 18.5	3	1.228	0.044	6.00	7.272	1.00	1.14	30.40	0.00	0.00	7.27	0%	77%	0.00	1.67	2.09	0.32	0.01	3.03	1.725	0.403	0.014	0.84	0.32	0.01	3.03
VINCENT FROM RKM 18.5 TO BV02	4	1.365	0.049	7.00	8.413	0.90	1.14	30.40	0.00	0.00	8.41	0%	77%	0.00	1.94	2.42	0.32	0.01	3.18	2.013	0.403	0.014	0.88	0.32	0.01	3.18
DRAINAGE DITCH 2	5	0.092	0.040	0.50	0.632	2.10	1.56	30.40	0.00	0.00	0.63	0%	77%	0.00	0.15	0.18	0.07	0.03	0.73	0.144	0.086	0.038	0.21	0.07	0.03	0.73
VINCENT FROM BV02 TO DD 8	6	1.667	0.167	7.00	8.833	0.70	1.20	30.40	0.00	0.00	8.83	0%	77%	0.00	2.03	2.54	0.32	0.03	2.60	2.013	0.403	0.040	0.74	0.32	0.03	2.60
DRAINAGE DITCH 8	7	0.126	0.057	0.50	0.683	0.80	1.09	30.40	0.00	0.00	0.68	0%	77%	0.00	0.16	0.20	0.03	0.01	0.19	0.144	0.032	0.014	0.06	0.03	0.01	0.19
VINCENT FROM DD 8 TO DD 9	8	1.561	0.129	7.00	8.690	0.90	1.21	30.40	0.00	0.00	8.69	0%	77%	0.00	2.00	2.50	0.39	0.03	3.38	2.013	0.489	0.040	0.95	0.39	0.03	3.38
DRAINAGE DITCH 9	9	0.140	0.062	0.50	0.702	2.10	1.02	30.40	0.00	0.00	0.70	0%	77%	0.00	0.16	0.20	0.07	0.03	0.47	0.144	0.086	0.038	0.14	0.07	0.03	0.47
VINCENT FROM DD 9 TO RKM 15.2	10	0.102	0.051	7.00	7.154	0.80	1.22	30.40	0.00	0.00	7.15	0%	77%	0.00	1.65	2.06	0.02	0.01	3.02	2.013	0.029	0.014	0.76	0.02	0.01	3.02
VINCENT FROM RKM 15.2 TO BV03	11	0.565	0.106	4.20	4.871	0.30	4.72	30.40	0.00	0.00	4.87	0%	77%	0.00	1.12	1.40	0.18	0.03	2.63	1.208	0.230	0.043	0.71	0.18	0.03	2.63
VINCENT FROM BV03 TO BONFOUCA	12	0.593	0.381	4.20	5.175	0.50	4.72	30.40	0.00	0.00	5.17	0%	77%	0.00	1.19	1.49	0.32	0.21	4.39	1.208	0.403	0.259	1.23	0.32	0.21	4.39
UB FROM RKM 5.0 TO DD 23	13	0.154	0.067	0.50	0.721	2.40	1.00	30.40	0.00	0.00	0.72	0%	77%	0.00	0.17	0.21	0.09	0.04	0.53	0.144	0.106	0.046	0.16	0.09	0.04	0.53
DRAINAGE DITCH 23	14	0.142	0.062	0.50	0.704	1.00	1.05	30.40	0.00	0.00	0.70	0%	77%	0.00	0.16	0.20	0.03	0.01	0.23	0.144	0.043	0.019	0.07	0.03	0.01	0.23
UB FROM DD 23 TO BB01	15	0.162	0.066	0.50	0.728	1.50	1.03	30.40	0.00	0.00	0.73	0%	77%	0.00	0.17	0.21	0.06	0.02	0.34	0.144	0.072	0.029	0.11	0.06	0.02	0.34
UB FROM BB01 TO BAYOU VINCENT	16	0.164	0.066	0.50	0.730	1.10	1.55	30.40	0.00	0.00	0.73	0%	77%	0.00	0.17	0.21	0.06	0.03	0.38	0.144	0.081	0.032	0.12	0.06	0.03	0.38
BONFOUCA FROM BV TO HWY 190	17	0.046	0.000	2.80	2.846	0.20	10.84	30.40	0.00	0.00	2.85	0%	77%	0.00	0.65	0.82	0.02	0.00	2.69	0.805	0.029	0.000	0.68	0.02	0.00	2.69
HWY 190 (DRAINAGE DITCH 5)	18	0.090	0.040	0.50	0.630	1.80	1.62	30.40	0.00	0.00	0.63	0%	77%	0.00	0.14	0.18	0.06	0.03	0.65	0.144	0.075	0.034	0.18	0.06	0.03	0.65
BONFOUCA FROM HWY 190 TO BB02	19	1.199	0.390	3.60	5.189	0.90	10.84	30.40	0.00	0.00	5.19	0%	77%	0.00	1.19	1.49	2.69	0.87	15.55	1.035	3.364	1.093	4.78	2.69	0.87	15.55
BONFOUCA FROM BB02 TO WD	20	1.730	0.161	3.60	5.491	1.20	10.84	30.40	0.00	0.00	5.49	0%	77%	0.00	1.26	1.58	5.18	0.48	20.73	1.035	6.469	0.604	6.60	5.18	0.48	20.73
WEST DRAINAGE CANAL	21	0.189	0.071	0.50	0.760	0.30	3.00	30.40	0.00	0.00	0.76	0%	77%	0.00	0.17	0.22	0.04	0.01	0.20	0.144	0.049	0.018	0.06	0.04	0.01	0.20
BONFOUCA FROM WD TO DD6	22	1.185	0.149	2.30	3.634	2.10	54.25	30.40	0.00	0.00	3.63	0%	77%	0.00	0.84	1.04	31.05	3.91	116.01	0.661	38.813	4.888	37.74	31.05	3.91	116.01
DRAINAGE DITCH 6	23	0.150	0.067	0.50	0.717	0.30	1.00	30.40	0.00	0.00	0.72	0%	77%	0.00	0.16	0.21	0.01	0.00	0.07	0.144	0.013	0.006	0.02	0.01	0.00	0.07

Summer Projection, Non-Point Benthic Load Input and TMDL Calculations:

Modeled stream or water body:

BAYOU BONFOUCA AND BAYOU LIBERTY

Shaded cells are input values for calculations. GIN OF SAFETY (MOS) (%) = [MOG + MOU] = **20%**

Values to be used in the projection models.

Reach Number and Description	Reach	Calibration Model Values											Reduced Man-Made Loads						Projected Model Loads							
		Total Non-Point UCBOB	Total Non-Point UNBOD	SOD @ 20°C	Total Calb. Benthic Load (TCBL)	Reach Length	Proj. Model Avg. Reach Width	Proj. Temp.	Background Benthic Load	Effective Background Benthic Load	Man-Made Benthic Load	Background percentage reduction	Percentage Reduction of man-made sources	Reduced Background Benthic Load	Reduced Man-Made Benthic Load	Reduced TCBL adjusted for MOS	Reduced Total UCBOB Load	Reduced UNBOD Load	Reduced SOD Load at Projection Temp.	SOD @ 20°C	Total Non-Point UCBOB INPUTS	Non-Point UNBOD INPUTS	Total MOS at Projection Temp.	Non-Point UCBOB LA	Non-Point UNBOD LA	SOD LA at Projection Temp.
		g O ₂ / [(m ²)(day)]	Kilo-meters	Meters	(deg Celcius)	g O ₂ / [(m ²)(day)]	g O ₂ / [(m ²)(day)]	g O ₂ / [(m ²)(day)]	%	%	g O ₂ / [(m ²)(day)]	g O ₂ / [(m ²)(day)]	g O ₂ / [(m ²)(day)]	kg O ₂ /day	kg O ₂ /day	kg O ₂ /day	g O ₂ / [(m ²)(day)]	kg O ₂ /day	kg O ₂ /day	kg O ₂ /day	kg O ₂ /day	kg O ₂ /day	kg O ₂ /day			
BONFOUCA FROM DD 6 TO TRIB 2	24	2.148	0.242	0.50	2.890	0.80	93.10	30.40	0.00	0.00	2.89	0%	0%	0.00	2.89	3.61	160.00	18.00	71.69	0.625	200.000	22.500	62.42	160.00	18.00	71.69
DRAINAGE DITCH 7 - UPLAND	25	0.142	0.063	0.50	0.705	1.00	1.04	30.40	0.00	0.00	0.70	0%	0%	0.00	0.70	0.88	0.15	0.07	1.00	0.625	0.185	0.081	0.30	0.15	0.07	1.00
TRIBUTARY 2 - TIDAL	26	0.308	0.102	0.50	0.911	0.50	12.00	30.40	0.00	0.00	0.91	0%	0%	0.00	0.91	1.14	1.85	0.61	5.78	0.625	2.313	0.768	2.06	1.85	0.61	5.78
BONFOUCA FROM TRIB 2 TO BB03	27	2.256	0.286	0.40	2.942	0.60	93.10	30.40	0.00	0.00	2.94	0%	0%	0.00	2.94	3.68	126.00	16.00	43.01	0.500	157.500	20.000	46.25	126.00	16.00	43.01
BONFOUCA FROM BB03 TO CANAL 26	28	1.960	0.201	0.40	2.562	0.80	93.10	30.40	0.00	0.00	2.56	0%	0%	0.00	2.56	3.20	146.00	15.00	57.35	0.500	182.500	18.750	54.59	146.00	15.00	57.35
CANAL 26	29	0.430	0.123	0.50	1.053	2.00	114.00	30.40	0.00	0.00	1.05	0%	0%	0.00	1.05	1.32	98.00	28.00	219.45	0.625	122.500	35.000	86.36	98.00	28.00	219.45
BONFOUCA FROM CANAL 26 TO TRIB 4	30	6.536	0.784	0.40	7.720	0.20	76.50	30.40	0.00	0.00	7.72	0%	0%	0.00	7.72	9.65	100.00	12.00	11.78	0.500	125.000	15.000	30.95	100.00	12.00	11.78
TRIBUTARY 10 - UPLAND	31	0.107	0.046	0.50	0.653	1.10	1.40	30.40	0.00	0.00	0.65	0%	0%	0.00	0.65	0.82	0.17	0.07	1.48	0.625	0.206	0.089	0.43	0.17	0.07	1.48
TRIBUTARY 4 - TIDAL	32	0.396	0.119	0.50	1.015	0.80	18.00	30.40	0.00	0.00	1.02	0%	0%	0.00	1.02	1.27	5.70	1.72	13.86	0.625	7.125	2.150	5.32	5.70	1.72	13.86
BONFOUCA FROM TRIB 4 TO BB04	33	2.288	0.245	0.20	2.733	0.80	76.50	30.40	0.00	0.00	2.73	0%	0%	0.00	2.73	3.42	140.00	15.00	23.56	0.250	175.000	18.750	44.64	140.00	15.00	23.56
BONFOUCA FROM BB04 TO Rkm 5.6	34	2.553	0.274	0.00	2.826	1.20	91.40	30.40	0.00	0.00	2.83	0%	0%	0.00	2.83	3.53	280.00	30.00	0.00	0.000	350.000	37.500	77.50	280.00	30.00	0.00
BONFOUCA FROM Rkm 5.6 TO BB05	35	2.585	0.318	0.00	2.903	1.10	114.30	30.40	0.00	0.00	2.90	0%	0%	0.00	2.90	3.63	325.00	40.00	0.00	0.000	406.250	50.000	91.25	325.00	40.00	0.00
BONFOUCA FROM BB05 TO RKM 2.7	36	2.324	0.036	0.05	2.410	1.80	77.70	30.40	0.00	0.00	2.41	0%	0%	0.00	2.41	3.01	325.00	5.00	13.46	0.063	406.250	6.250	85.87	325.00	5.00	13.46
BONFOUCA FROM RKM 2.7 TO LIBERTY	37	0.000	0.000	0.00	0.000	1.90	88.00	30.40	0.00	0.00	0.00	0%	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00
LIBERTY FROM RKM 15.0 TO TRIB 1	38	2.222	1.556	2.00	5.778	0.60	1.50	30.40	0.00	0.00	5.78	0%	80%	0.00	1.16	1.44	0.40	0.28	0.69	0.500	0.500	0.350	0.34	0.40	0.28	0.69
TRIBUTARY 1	39	0.147	0.064	0.50	0.711	2.40	1.00	30.40	0.00	0.00	0.71	0%	80%	0.00	0.14	0.18	0.07	0.03	0.46	0.125	0.088	0.039	0.14	0.07	0.03	0.46
LIBERTY FROM RKM 14.4 TO DD22	40	1.855	1.763	2.50	6.118	0.70	1.54	30.40	0.00	0.00	6.12	0%	80%	0.00	1.22	1.53	0.40	0.38	1.04	0.625	0.500	0.475	0.45	0.40	0.38	1.04
DD22	41	0.048	0.020	0.50	0.569	0.30	3.11	30.40	0.00	0.00	0.57	0%	80%	0.00	0.11	0.14	0.01	0.00	0.18	0.125	0.011	0.005	0.05	0.01	0.00	0.18
LIBERTY FROM DD22 TO DD20	42	2.405	2.672	2.70	7.777	0.90	4.99	30.40	0.00	0.00	7.78	0%	80%	0.00	1.56	1.94	2.16	2.40	4.67	0.675	2.700	3.000	2.31	2.16	2.40	4.67
DD20	43	0.092	0.040	0.50	0.632	2.70	1.60	30.40	0.00	0.00	0.63	0%	80%	0.00	0.13	0.16	0.08	0.03	0.83	0.125	0.099	0.043	0.24	0.08	0.03	0.83
LIBERTY FROM DD20 TO BL03	44	1.923	2.262	2.50	6.686	0.20	8.84	30.40	0.00	0.00	6.69	0%	80%	0.00	1.34	1.67	0.68	0.80	1.70	0.625	0.850	1.000	0.80	0.68	0.80	1.70
LIBERTY FROM BL03 TO HWY 190	45	1.810	0.158	1.70	3.668	2.50	8.84	30.40	0.00	0.00	3.67	0%	80%	0.00	0.73	0.92	8.00	0.70	14.46	0.425	10.000	0.875	5.79	8.00	0.70	14.46
HWY 190 (DRAINAGE DITCH 14)	46	0.114	0.050	0.50	0.664	2.30	1.29	30.40	0.00	0.00	0.66	0%	80%	0.00	0.13	0.17	0.07	0.03	0.57	0.125	0.085	0.037	0.17	0.07	0.03	0.57

Summer Projection, Non-Point Benthic Load Input and TMDL Calculations:

Modeled stream or water body:

BAYOU BONFOUCA AND BAYOU LIBERTY

Shaded cells are input values for calculations. GIN OF SAFETY (MOS) (%) = [MOG + MOU] = **20%**

Values to be used in the projection models.

Reach Number and Description	Reach	Calibration Model Values						Reduced Man-Made Loads										Projected Model Loads			Total MOS at Projection Temp.					
		Total Non-Point UCBOB	Total Non-Point UNBOD	SOD @ 20°C	Total Calb. Benthic Load (TCBL)	Reach Length	Proj. Model Avg. Reach Width	Proj. Temp.	Background Benthic Load	Effective Background Benthic Load	Man-Made Benthic Load	Background percentage reduction	Percentage Reduction of man-made sources	Reduced Background Benthic Load	Reduced Man-Made Benthic Load	Reduced TCBL adjusted for MOS	Reduced Total UCBOB Load	Reduced UNBOD Load	Reduced SOD Load at Projection Temp.	SOD @ 20°C	Total Non-Point UCBOB INPUTS	Non-Point UNBOD INPUTS	Total MOS at Projection Temp.	Non-Point UCBOB LA	Non-Point UNBOD LA	SOD LA at Projection Temp.
		g O ₂ / [(m ²)(day)]	Kilo-meters	Meters	(deg Celcius)	g O ₂ / [(m ²)(day)]	g O ₂ / [(m ²)(day)]	g O ₂ / [(m ²)(day)]	%	%	g O ₂ / [(m ²)(day)]	g O ₂ / [(m ²)(day)]	g O ₂ / [(m ²)(day)]	kg O ₂ /day	kg O ₂ /day	kg O ₂ /day	g O ₂ / [(m ²)(day)]	kg O ₂ /day	kg O ₂ /day	kg O ₂ /day	kg O ₂ /day	kg O ₂ /day	kg O ₂ /day			
LIBERTY FROM HWY 190 TO BL04	47	3.226	1.075	0.40	4.701	0.10	18.60	30.40	0.00	0.00	4.70	0%	38%	0.00	2.91	3.64	3.72	1.24	0.89	0.310	4.650	1.550	1.46	3.72	1.24	0.89
LIBERTY FROM BL04 TO DD18	48	2.151	0.168	0.33	2.649	1.60	18.60	30.40	0.00	0.00	2.65	0%	38%	0.00	1.64	2.05	39.68	3.10	11.72	0.256	49.600	3.875	13.63	39.68	3.10	11.72
DD18	49	0.138	0.059	0.50	0.698	0.30	1.07	30.40	0.00	0.00	0.70	0%	38%	0.00	0.43	0.54	0.03	0.01	0.19	0.388	0.034	0.015	0.06	0.03	0.01	0.19
LIBERTY FROM DD18 TO DD19	50	2.240	0.269	0.10	2.609	0.60	18.60	30.40	0.00	0.00	2.61	0%	38%	0.00	1.62	2.02	15.50	1.86	1.33	0.078	19.375	2.325	4.67	15.50	1.86	1.33
DD19	51	0.116	0.051	0.50	0.668	1.40	1.29	30.40	0.00	0.00	0.67	0%	38%	0.00	0.41	0.52	0.13	0.06	1.08	0.388	0.163	0.072	0.32	0.13	0.06	1.08
LIBERTY FROM DD19 TO DD04	52	4.453	0.352	0.00	4.804	0.20	42.67	30.40	0.00	0.00	4.80	0%	38%	0.00	2.98	3.72	23.56	1.86	0.00	0.000	29.450	2.325	6.36	23.56	1.86	0.00
DD04	53	0.085	0.037	0.50	0.623	4.20	1.77	30.40	0.00	0.00	0.62	0%	38%	0.00	0.39	0.48	0.39	0.17	4.44	0.388	0.492	0.215	1.25	0.39	0.17	4.44
LIBERTY FROM DD04 TO BL05	54	3.281	0.100	0.04	3.421	0.70	42.67	30.40	0.00	0.00	3.42	0%	38%	0.00	2.12	2.65	60.76	1.86	1.43	0.031	75.950	2.325	16.01	60.76	1.86	1.43
LIBERTY FROM BL05 TO RKM 6.3	55	2.929	0.117	0.10	3.147	0.60	42.67	30.40	0.00	0.00	3.15	0%	38%	0.00	1.95	2.44	46.50	1.86	3.06	0.078	58.125	2.325	12.85	46.50	1.86	3.06
LIBERTY FROM RKM 6.3 TO RKM 6.0	56	3.359	0.168	0.04	3.567	0.30	39.69	30.40	0.00	0.00	3.57	0%	38%	0.00	2.21	2.76	24.80	1.24	0.57	0.031	31.000	1.550	6.65	24.80	1.24	0.57
LIBERTY FROM RKM 6.0 TO Trib 9	57	3.155	0.053	0.00	3.207	0.80	47.55	30.40	0.00	0.00	3.21	0%	38%	0.00	1.99	2.49	74.40	1.24	0.00	0.000	93.000	1.550	18.91	74.40	1.24	0.00
DRAINAGE DITCH 3 - UPLAND	58	0.149	0.064	0.50	0.713	0.20	1.01	30.40	0.00	0.00	0.71	0%	38%	0.00	0.44	0.55	0.02	0.01	0.12	0.388	0.023	0.010	0.04	0.02	0.01	0.12
TRIBUTARY 9 - TIDAL	59	0.375	0.115	0.50	0.990	0.30	16.00	30.40	0.00	0.00	0.99	0%	38%	0.00	0.61	0.77	1.12	0.34	2.86	0.388	1.395	0.426	1.08	1.12	0.34	2.86
LIBERTY FROM TRIB 9 TO TRIB 6	60	5.783	0.920	0.00	6.703	0.80	47.55	30.40	0.00	0.00	6.70	0%	38%	0.00	4.16	5.20	136.40	21.70	0.00	0.000	170.500	27.125	39.53	136.40	21.70	0.00
DRAINAGE DITCH 11 - UPLAND	61	0.142	0.063	0.50	0.705	1.00	1.04	30.40	0.00	0.00	0.70	0%	38%	0.00	0.44	0.55	0.09	0.04	0.62	0.388	0.115	0.050	0.19	0.09	0.04	0.62
TRIBUTARY 6 - TIDAL	62	0.319	0.103	0.50	0.922	0.60	12.00	30.40	0.00	0.00	0.92	0%	38%	0.00	0.57	0.71	1.43	0.46	4.30	0.388	1.783	0.574	1.55	1.43	0.46	4.30
LIBERTY FROM TRIB 6 TO TRIB 10	63	3.793	1.138	0.00	4.931	0.20	52.73	30.40	0.00	0.00	4.93	0%	38%	0.00	3.06	3.82	24.80	7.44	0.00	0.000	31.000	9.300	8.06	24.80	7.44	0.00
TRIBUTARY 10 - UPLAND	64	0.144	0.064	0.50	0.708	0.50	1.03	30.40	0.00	0.00	0.71	0%	38%	0.00	0.44	0.55	0.05	0.02	0.31	0.388	0.057	0.026	0.09	0.05	0.02	0.31
TRIBUTARY 10 - TIDAL	65	0.331	0.108	0.50	0.938	0.20	13.00	30.40	0.00	0.00	0.94	0%	38%	0.00	0.58	0.73	0.53	0.17	1.55	0.388	0.667	0.217	0.56	0.53	0.17	1.55
LIBERTY FROM TRIB 10 TO BL07	66	4.690	0.767	0.21	5.667	0.90	52.12	30.40	0.00	0.00	5.67	0%	38%	0.00	3.51	4.39	136.40	22.32	11.76	0.163	170.500	27.900	42.62	136.40	22.32	11.76
LIBERTY FROM BL07 TO TRIB 8	67	0.000	3.262	0.22	3.482	0.10	52.12	30.40	0.00	0.00	3.48	0%	38%	0.00	2.16	2.70	0.00	10.54	1.37	0.171	0.000	13.175	2.98	0.00	10.54	1.37
TRIBUTARY 8 - UPLAND	68	0.147	0.065	0.50	0.712	0.50	1.01	30.40	0.00	0.00	0.71	0%	38%	0.00	0.44	0.55	0.05	0.02	0.30	0.388	0.057	0.026	0.09	0.05	0.02	0.30
TRIBUTARY 8 - TIDAL	69	0.290	0.099	0.50	0.889	0.10	10.00	30.40	0.00	0.00	0.89	0%	38%	0.00	0.55	0.69	0.18	0.06	0.60	0.388	0.225	0.077	0.21	0.18	0.06	0.60
LIBERTY FROM TRIB 8 TO M1	70	0.799	0.416	0.20	1.415	0.60	52.12	30.40	0.00	0.00	1.42	0%	38%	0.00	0.88	1.10	15.50	8.06	7.46	0.155	19.375	10.075	7.76	15.50	8.06	7.46
MARINA 1 - TIDAL	71	0.523	0.139	0.50	1.163	0.20	32.00	30.40	0.00	0.00	1.16	0%	38%	0.00	0.72	0.90	2.08	0.55	3.82	0.388	2.596	0.690	1.61	2.08	0.55	3.82
LIBERTY FROM M1 TO M2	72	8.202	1.969	0.00	10.171	0.10	60.96	30.40	0.00	0.00	10.17	0%	38%	0.00	6.31	7.88	31.00	7.44	0.00	0.000	38.750	9.300	9.61	31.00	7.44	0.00
MARINA02 - TIDAL	73	0.503	0.139	0.50	1.142	1.80	32.00	30.40	0.00	0.00	1.14	0%	38%	0.00	0.71	0.89	17.98	4.96	34.37	0.388	22.475	6.200	14.33	17.98	4.96	34.37
LIBERTY FROM M2 TO B PAQUET	74	1.758	0.000	0.00	1.758	1.40	60.96	30.40	0.00	0.00	1.76	0%	38%	0.00	1.09	1.36	93.00	0.00	0.00	0.000	116.250	0.000	23.25	93.00	0.00	0.00

Summer Projection, Non-Point Benthic Load Input and TMDL Calculations:

Modeled stream or water body:

BAYOU BONFOUCA AND BAYOU LIBERTY

Shaded cells are input values for calculations. GIN OF SAFETY (MOS) (%) = [MOG + MOU] = **20%**

Values to be used in the projection models.

Reach Number and Description	Reach	Calibration Model Values						Reduced Man-Made Loads											Projected Model Loads							
		Total Non-Point UCBOB	Total Non-Point UNBOD	SOD @ 20°C	Total Calb. Benthic Load (TCBL)	Reach Length	Proj. Model Avg. Reach Width	Proj. Temp.	Background Benthic Load	Effective Background Benthic Load	Man-Made Benthic Load	Background percentage reduction	Percentage Reduction of man-made sources	Reduced Background Benthic Load	Reduced Man-Made Benthic Load	Reduced TCBL adjusted for MOS	Reduced Total UCBOB Load	Reduced UNBOD Load	Reduced SOD Load at Projection Temp.	SOD @ 20°C	Total Non-Point UCBOB INPUTS	Non-Point UNBOD INPUTS	Total MOS at Projection Temp.	Non-Point UCBOB LA	Non-Point UNBOD LA	SOD LA at Projection Temp.
		g O ₂ / [(m ²)(day)]	Kilo-meters	Meters	(deg Celcius)	g O ₂ / [(m ²)(day)]	g O ₂ / [(m ²)(day)]	g O ₂ / [(m ²)(day)]	%	%	g O ₂ / [(m ²)(day)]	g O ₂ / [(m ²)(day)]	g O ₂ / [(m ²)(day)]	kg O ₂ /day	kg O ₂ /day	kg O ₂ /day	g O ₂ / [(m ²)(day)]	kg O ₂ /day	kg O ₂ /day	kg O ₂ /day	kg O ₂ /day	kg O ₂ /day	kg O ₂ /day			
HWY 190 (DD13-PAQUET HEADWATERS)	75	0.139	0.064	0.50	0.702	1.40	1.09	30.40	0.00	0.00	0.70	0%	35%	0.00	0.46	0.57	0.14	0.06	0.95	0.406	0.172	0.079	0.29	0.14	0.06	0.95
PAQUET FROM HWY 190 TO DD16	76	0.183	0.078	0.50	0.761	2.10	1.56	30.40	0.00	0.00	0.76	0%	35%	0.00	0.49	0.62	0.39	0.17	2.05	0.406	0.488	0.207	0.65	0.39	0.17	2.05
DD16	77	0.153	0.067	0.50	0.720	0.90	1.00	30.40	0.00	0.00	0.72	0%	35%	0.00	0.47	0.59	0.09	0.04	0.56	0.406	0.112	0.049	0.17	0.09	0.04	0.56
PAQUET FROM RKM 5.1 TO DD17	78	0.192	0.067	0.50	0.760	1.30	1.60	30.40	0.00	0.00	0.76	0%	35%	0.00	0.49	0.62	0.26	0.09	1.30	0.406	0.325	0.114	0.41	0.26	0.09	1.30
DD17	79	0.082	0.036	0.50	0.618	1.70	1.86	30.40	0.00	0.00	0.62	0%	35%	0.00	0.40	0.50	0.17	0.07	1.98	0.406	0.211	0.093	0.56	0.17	0.07	1.98
PAQUET FROM DD17 TO TIDAL REACH	80	0.114	0.067	0.50	0.681	0.40	1.86	30.40	0.00	0.00	0.68	0%	35%	0.00	0.44	0.55	0.06	0.03	0.47	0.406	0.069	0.041	0.14	0.06	0.03	0.47
PAQUET TIDAL REACH TO BP02	81	4.418	0.767	0.32	5.505	1.00	18.90	30.40	0.00	0.00	5.51	0%	35%	0.00	3.58	4.47	54.28	9.43	7.57	0.260	67.844	11.781	17.82	54.28	9.43	7.57
PAQUET FROM BP02 TO BP03	82	2.529	0.273	0.76	3.562	0.80	18.29	30.40	0.00	0.00	3.56	0%	35%	0.00	2.32	2.89	24.05	2.60	13.91	0.618	30.063	3.250	10.14	24.05	2.60	13.91
PAQUET FROM BP03 TO TRIB 24	83	3.436	0.625	0.60	4.661	0.30	21.34	30.40	0.00	0.00	4.66	0%	35%	0.00	3.03	3.79	14.30	2.60	4.81	0.488	17.875	3.250	5.43	14.30	2.60	4.81
TRIB 24 FROM TOP TO PAQUET	84	0.373	0.112	0.50	0.985	0.40	20.10	30.40	0.00	0.00	0.99	0%	35%	0.00	0.64	0.80	1.95	0.59	5.03	0.406	2.438	0.731	1.89	1.95	0.59	5.03
PAQUET FROM TRIB 24 TO TRIB 25	85	5.467	1.328	0.30	7.095	0.30	21.34	30.40	0.00	0.00	7.09	0%	35%	0.00	4.61	5.76	22.75	5.53	2.40	0.244	28.438	6.906	7.67	22.75	5.53	2.40
TRIB 25 FROM TOP TO RKM 0.3	86	0.399	0.115	0.50	1.015	0.70	16.46	30.40	0.00	0.00	1.01	0%	35%	0.00	0.66	0.82	2.99	0.86	7.21	0.406	3.738	1.081	2.77	2.99	0.86	7.21
TRIB 25 FROM RKM 0.3 TO PAQUET	87	0.375	0.115	0.50	0.990	0.30	32.00	30.40	0.00	0.00	0.99	0%	35%	0.00	0.64	0.80	2.34	0.72	6.01	0.406	2.925	0.894	2.27	2.34	0.72	6.01
PAQUET FROM TRIB 25 TO BP04	88	6.152	1.435	0.00	7.587	0.80	30.48	30.40	0.00	0.00	7.59	0%	35%	0.00	4.93	6.16	97.50	22.75	0.00	0.000	121.875	28.438	30.06	97.50	22.75	0.00
PAQUET FROM BP04 TO LIBERTY	89	26.247	4.921	0.00	31.168	0.20	30.48	30.40	0.00	0.00	31.17	0%	35%	0.00	20.26	25.32	104.00	19.50	0.00	0.000	130.000	24.375	30.88	104.00	19.50	0.00
LIBERTY FROM PAQUET TO BONFOUCA	90	2.237	0.000	0.00	2.237	1.10	60.96	30.40	0.00	0.00	2.24	0%	35%	0.00	1.45	1.82	97.50	0.00	0.00	0.000	121.875	0.000	24.38	97.50	0.00	0.00
BONFOUCA FROM LIBERTY TO BB06	91	0.000	0.000	0.00	0.000	0.80	105.60	30.40	0.00	0.00	0.00	0%	35%	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00

Summer TMDL Calculations for Point Source loads:

BAYOU LIBERTY 040905

Input data into the shaded cells.

Point Source Loading Calculations																									
Facility Name	Waterbody	AI No./ Permit No.	Reach No.	Element Number	Included in the Projection Model (Yes/No)	Anticipated flow (gpd)	Anticipated/ design flow (cms)	Flow with MOS (cms)	Proposed Permit Limits			UCBOD				UNBOD				Sub-Total of Point Source Phosphorus Loads			Sub-Total of Point Source BOD Loads		
									CBOD ₅ (mg/l)	NH ₃ N (mg/l)	MOS (%)	Ultimate Conc. (mg/l) (2)	Loads (kg/day) (1)	WLA (kg/day)	Reserve/ MOS Load (kg/day)	Ultimate Conc. (mg/l) (2)	Loads (kg/day) (1)	WLA (kg/day)	Reserve/ MOS Load (kg/day)	Loads (kg/day)	WLA (kg/day)	Reserve/ MOS Load (kg/day)	Loads (kg/day)	WLA (kg/day)	Reserve/ MOS Load (kg/day)
						A	A1 = A/(1-E)	B	C	E	F = 2.3 x B	G = (86.4)(A1)(F)	H = (1-E) x G	I = (E)(G)	J = 4.3 x C	K = (86.4)(A1)(J)	L = (1-E) x K	M = (D)(K)	N = 86.4(A1)(D)	O = (1-E) x N	P = E x N	G + K + N	H + L + O	I + M + P	
Fernandez-Zimmerle LLC	Bayou Liberty	1609/LAG533438	N/A	N/A	NO	600	0.00002629	0.00003286	10.0	5.0	20%	23.0	0.065298	0.052239	0.013060	21.500000	0.061040	0.048832	0.012208	0.000000	0.000000	0.000000	0.126338	0.101071	0.025268
Bayou Liberty Water Association	Bayou Liberty	12830/LAG530716	58	667	YES	180	0.00000789	0.00000986	10.0	10.0	20%	23.0	0.019590	0.015672	0.003918	43.000000	0.036624	0.029299	0.007325	0.000000	0.000000	0.000000	0.056214	0.044971	0.011243
Heron Wire Products Inc	Bayou Liberty	14221/LAG532809	46	555	YES	150	0.00000657	0.00000821	10.0	10.0	20%	23.0	0.016325	0.013060	0.003265	43.000000	0.030520	0.024416	0.006104	0.000000	0.000000	0.000000	0.046845	0.037476	0.009369
Coast Waterworks Inc - The Meadows Subdivision	Bayou Liberty	19119/LA0073148	41	470	YES	276000	0.01209200	0.01511500	5.0	2.0	20%	11.5	15.018264	12.014611	3.003653	8.600000	11.231050	8.984840	2.246210	0.000000	0.000000	0.000000	26.249314	20.999451	5.249863
LA Water Service Inc - Oakmont Subdivision	Bayou Liberty	19471/LAG570031	43	498	YES	70600	0.00309320	0.00386650	5.0	2.0	20%	11.5	3.841754	3.073404	0.768351	8.600000	2.872964	2.298371	0.574593	0.000000	0.000000	0.000000	6.714719	5.371775	1.342944
Louisiana Water Service Inc - Huntwyck Village	Bayou Liberty	19476/LA0065714	53	633	YES	278000	0.01218000	0.01522500	10.0	2.0	20%	23.0	30.255120	24.204096	6.051024	8.600000	11.312784	9.050227	2.262557	0.000000	0.000000	0.000000	41.567904	33.254323	8.313581
Royale Gardens Subdivision	Bayou Liberty	19797/LAG570046	N/A	N/A	NO	35000	0.00153344	0.00191680	10.0	5.0	20%	23.0	3.809071	3.047257	0.761814	21.500000	3.560653	2.848523	0.712131	0.000000	0.000000	0.000000	7.369724	5.895779	1.473945
2315 Hwy 190 Building	Bayou Liberty	27080/LAG532824	46	555	YES	320	0.00001402	0.00001753	10.0	10.0	20%	23.0	0.034826	0.027861	0.006965	43.000000	0.065109	0.052087	0.013022	0.000000	0.000000	0.000000	0.099935	0.079948	0.019987
Curtis Environmental Utilities Inc - Timber Ridge Subdivision	Bayou Paquet	33837/LAG570109	79	819	YES	44400	0.00194530	0.00243160	10.0	2.0	20%	23.0	4.832076	3.865660	0.966415	8.600000	1.806776	1.445421	0.361355	0.000000	0.000000	0.000000	6.638852	5.311081	1.327770
The Southern District of Lutheran Church-Missouri Synod	Bayou Liberty	42602/LAG531992	43	494	YES	2400	0.00010515	0.00013144	10.0	5.0	20%	23.0	0.261193	0.208954	0.052239	21.500000	0.244158	0.195327	0.048832	0.000000	0.000000	0.000000	0.505351	0.404281	0.101070
Royal Golf Club Inc	Bayou Liberty	43097/LAG530890	43	482	YES	4340	0.00019015	0.00023769	10.0	5.0	20%	23.0	0.472333	0.377866	0.094467	21.500000	0.441528	0.353223	0.088306	0.000000	0.000000	0.000000	0.913861	0.731089	0.182772
St Tammany Parish Police Jury - Thompson Road WWTP	Bayou Liberty	43394/LAG530650	46	556	YES	20	0.00000088	0.00000110	10.0	10.0	20%	23.0	0.002177	0.001741	0.000435	43.000000	0.004070	0.003256	0.000814	0.000000	0.000000	0.000000	0.006246	0.004997	0.001249
Pit Stop #3	Bayou Liberty	70933/LAG531535	46	557	YES	1060	0.00004644	0.00005805	10.0	10.0	20%	23.0	0.115359	0.092288	0.023072	43.000000	0.215672	0.172538	0.043134	0.000000	0.000000	0.000000	0.331031	0.264825	0.066206
Liberty Food Store	Bayou Liberty	71168/LAG531327	64	698	YES	570	0.00002497	0.00003122	10.0	10.0	20%	23.0	0.062033	0.049626	0.012407	43.000000	0.115975	0.092780	0.023195	0.000000	0.000000	0.000000	0.178008	0.142406	0.035602
Thompson Road Grocery Store #615	Bayou Liberty	74116/LAG532825	46	556	YES	80	0.00000351	0.00000438	10.0	10.0	20%	23.0	0.008706	0.006965	0.001741	43.000000	0.016277	0.013022	0.003255	0.000000	0.000000	0.000000	0.024984	0.019987	0.004997
Cleco Power LLC - Slidell Service Center	Bayou Liberty	83359/LAG532103	53	614	YES	200	0.00000876	0.00001095	10.0	10.0	20%	23.0	0.021766	0.017413	0.004353	43.000000	0.040693	0.032554	0.008139	0.000000	0.000000	0.000000	0.062459	0.049967	0.012492
Butera Investments Inc - Lake Castle Private School	Bayou Liberty	99225/LAG541304	51	585	YES	8700	0.00038117	0.00047646	10.0	5.0	20%	23.0	0.946826	0.757461	0.189365	21.500000	0.885077	0.708061	0.177015	0.000000	0.000000	0.000000	1.831903	1.465522	0.366381
Louisiana Lumber Inc - Construction Project	Bayou Liberty	107578/LAG531777	53	621	YES	400	0.00001753	0.00002191	10.0	10.0	20%	23.0	0.043532	0.034826	0.008706	43.000000	0.081386	0.065109	0.016277	0.000000	0.000000	0.000000	0.124918	0.099935	0.024984
ABC Supply Co Inc	Bayou Liberty	113210/LAG531454	46	551	YES	140	0.00000613	0.00000767	10.0	10.0	20%	23.0	0.015236	0.012189	0.003047	43.000000	0.028485	0.022788	0.005697	0.000000	0.000000	0.000000	0.043722	0.034977	0.008744
G&S Bear Enterprises LLC	Bayou Liberty	117778/LAG531527	53	615	YES	160	0.00000701	0.00000876	10.0	10.0	20%	23.0	0.017413	0.013930	0.003483	43.000000	0.032554	0.026044	0.006511	0.000000	0.000000	0.000000	0.049967	0.039974	0.009993

Summer TMDL Calculations for Point Source loads:

BAYOU LIBERTY 040905

Input data into the shaded cells.

Point Source Loading Calculations																									
Facility Name	Waterbody	AI No./ Permit No.	Reach No.	Element Number	Included in the Projection Model (Yes/No)	Anticipated flow (gpd)	Anticipated/ design flow (cms)	Flow with MOS (cms)	Proposed Permit Limits			UCBOD			UNBOD			Sub-Total of Point Source Phosphorus Loads			Sub-Total of Point Source BOD Loads				
									CBOD ₅ (mg/l)	NH ₃ N (mg/l)	MOS (%)	Ultimate Conc. (mg/l) (2)	Loads (kg/day) (1)	WLA (kg/day)	Reserve/ MOS Load (kg/day)	Ultimate Conc. (mg/l) (2)	Loads (kg/day) (1)	WLA (kg/day)	Reserve/ MOS Load (kg/day)	Loads (kg/day)	WLA (kg/day)	Reserve/ MOS Load (kg/day)	Loads (kg/day)	WLA (kg/day)	Reserve/ MOS (kg/day)
						A	A1 = A/(1-E)	B	C	E	F = 2.3 x B	G = (86.4)(A1)(F)	H = (1-E) x G	I = (E)(G)	J = 4.3 x C	K = (86.4)(A1)(J)	L = (1-E) x K	M = (D)(K)	N = 86.4(A1)(D)	O = (1-E) x N	P = E x N	G + K + N	H + L + O	I + M + P	
Indian Hills RV Park	Bayou Liberty	119158/LAG541174	46	544	YES	7875	0.00034502	0.00043128	10.0	5.0	20%	23.0	0.857030	0.685624	0.171406	21.500000	0.801136	0.640909	0.160227	0.000000	0.000000	0.000000	1.658166	1.326533	0.331633
Dollar General Store #6578	Bayou Liberty	125413/LAG531717	46	548	YES	120	0.0000526	0.0000657	10.0	10.0	20%	23.0	0.013060	0.010448	0.002612	43.000000	0.024416	0.019533	0.004883	0.000000	0.000000	0.000000	0.037475	0.029980	0.007495
Hanna Brothers Extreme Motion Picture Catering	Bayou Liberty	129058/LAG531861	53	616	YES	160	0.0000701	0.0000876	10.0	10.0	20%	23.0	0.017413	0.013930	0.003483	43.000000	0.032554	0.026044	0.006511	0.000000	0.000000	0.000000	0.049967	0.039974	0.009993
Gause West Properties - Shopping Center for Faye Wagner	Bayou Liberty	129831/LAG531980	53	619	YES	1932	0.0008465	0.0010581	10.0	10.0	20%	23.0	0.210261	0.168209	0.042052	43.000000	0.393096	0.314477	0.078619	0.000000	0.000000	0.000000	0.603357	0.482685	0.120671
Omni Storage VI LLC	Bayou Liberty	140231/LAG532056	46	550	YES	300	0.0001314	0.00001643	10.0	10.0	20%	23.0	0.032650	0.026120	0.006530	43.000000	0.061041	0.048833	0.012208	0.000000	0.000000	0.000000	0.093690	0.074952	0.018738
Airgas Gulf States - WWTP	Bayou Liberty	155400/LAG532559	53	616	YES	140	0.0000613	0.0000767	10.0	10.0	20%	23.0	0.015236	0.012189	0.003047	43.000000	0.028485	0.022788	0.005697	0.000000	0.000000	0.000000	0.043722	0.034977	0.008744
CRS Properties LLC - Albers AC & Heating	Bayou Liberty	157679/LAG532786	53	602	YES	120	0.0000526	0.0000657	10.0	10.0	20%	23.0	0.013060	0.010448	0.002612	43.000000	0.024416	0.019533	0.004883	0.000000	0.000000	0.000000	0.037475	0.029980	0.007495
Seventh-Day Adventist Church - WWTP	Bayou Liberty	157724/LAG532799	46	548	YES	1250	0.00005477	0.00006846	10.0	10.0	20%	23.0	0.136039	0.108831	0.027208	43.000000	0.254333	0.203467	0.050867	0.000000	0.000000	0.000000	0.390372	0.312298	0.078074
Guardian Angels Learning Center II	Bayou Liberty	157922/LAG532862	43	495	YES	930	0.00004075	0.00005093	10.0	5.0	20%	23.0	0.101213	0.080970	0.020243	21.500000	0.094612	0.075690	0.018922	0.000000	0.000000	0.000000	0.195825	0.156660	0.039165
Equity Creek Real Estate LLC	Bayou Liberty	157924/LAG533803	N/A	N/A	NO	30	0.0000131	0.00000164	10.0	10.0	20%	23.0	0.003265	0.002612	0.000653	43.000000	0.006104	0.004883	0.001221	0.000000	0.000000	0.000000	0.009369	0.007495	0.001874
All American Lodge Greatest in Elkdome	Bayou Liberty	157925/LAG532887	49	576	YES	1600	0.00007010	0.00008763	10.0	10.0	20%	23.0	0.174128	0.139303	0.034826	43.000000	0.325544	0.260436	0.065109	0.000000	0.000000	0.000000	0.499673	0.399738	0.099935
RJD Contractors ---> AVC Electric	Bayou Liberty	157926/LAG533686	53	617	YES	20	0.0000088	0.00000110	10.0	10.0	20%	23.0	0.002177	0.001741	0.000435	43.000000	0.004070	0.003256	0.000814	0.000000	0.000000	0.000000	0.006246	0.004997	0.001249
2319 Hwy 190 Building	Bayou Liberty	157927/LAG532861	46	555	YES	40	0.0000175	0.00000219	10.0	10.0	20%	23.0	0.004353	0.003483	0.000871	43.000000	0.008139	0.006511	0.001628	0.000000	0.000000	0.000000	0.012492	0.009993	0.002498
2317 Hwy 190 Building	Bayou Liberty	157928/LAG532860	46	555	YES	60	0.0000263	0.00000329	10.0	10.0	20%	23.0	0.006530	0.005224	0.001306	43.000000	0.012208	0.009767	0.002442	0.000000	0.000000	0.000000	0.018738	0.014990	0.003748
Assunta's Italian Restaurant of Slidell	Bayou Liberty	157931/LAG532904	46	536	YES	2900	0.0012706	0.0015883	10.0	10.0	20%	23.0	0.315617	0.252494	0.063123	43.000000	0.590067	0.472053	0.118013	0.000000	0.000000	0.000000	0.905684	0.724547	0.181137
Lion Consulting Inc - Lion Multimedia & Consulting	Bayou Liberty	157933/LAG532890	46	552	YES	40	0.0000175	0.00000219	10.0	10.0	20%	23.0	0.004353	0.003483	0.000871	43.000000	0.008139	0.006511	0.001628	0.000000	0.000000	0.000000	0.012492	0.009993	0.002498
Chill Rite	Bayou Liberty	157934/LAG532842	46	553	YES	220	0.0000964	0.00001205	10.0	10.0	20%	23.0	0.023943	0.019154	0.004789	43.000000	0.044763	0.035810	0.008953	0.000000	0.000000	0.000000	0.068705	0.054964	0.013741
M & R File Service LLC - Russell & Michelle Bolotte	Bayou Liberty	163444/LAG533101	53	619	YES	60	0.0000263	0.00000329	10.0	10.0	20%	23.0	0.006530	0.005224	0.001306	43.000000	0.012208	0.009767	0.002442	0.000000	0.000000	0.000000	0.018738	0.014990	0.003748
Southern Pipe	Bayou Liberty	168384/LAG533350	N/A	N/A	NO	80	0.0000351	0.00000438	10.0	5.0	20%	23.0	0.008706	0.006965	0.001741	21.500000	0.008139	0.006511	0.001628	0.000000	0.000000	0.000000	0.016845	0.013476	0.003369
Carl Hodge Rental	Bayou Bonfouca	169771/LAG533393	N/A	N/A	NO	160	0.0000701	0.0000876	10.0	5.0	20%	23.0	0.017413	0.013930	0.003483	21.500000	0.016277	0.013022	0.003255	0.000000	0.000000	0.000000	0.033690	0.026952	0.006738
Diversified Oil Field Services Inc	Bayou Vincent	169801/LA0125334	N/A	N/A	NO	400	0.0001753	0.00002191	10.0	5.0	20%	23.0	0.043532	0.034826	0.008706	21.500000	0.040693	0.032555	0.008139	0.000000	0.000000	0.000000	0.084225	0.067380	0.016845
SUB-TOTAL Loads													61.87	49.49	12.37		35.87	28.70	7.17	0.00	0.00	0.00	97.74	78.19	19.55

Summer TMDL Calculations for Point Source loads:

BAYOU LIBERTY 040906

Input data into the shaded cells.

Point Source Loading Calculations																									
Facility Name	Waterbody	Reach No.	Element Number	Included in the Projection Model (Yes/No)	Anticipated flow (gpd)	Anticipated/ design flow (cms)	Flow with MOS (cms)	Proposed Permit Limits			UCBOD			UNBOD			Sub-Total of Point Source Phosphorus Loads			Sub-Total of Point Source BOD Loads					
								CBOD ₅ (mg/l)	NH ₃ N (mg/l)	MOS (%)	Ultimate Conc. (mg/l) (2)	Loads (kg/day) (1)	WLA (kg/day)	Reserve/ MOS Load (kg/day)	Ultimate Conc. (mg/l) (2)	Loads (kg/day) (1)	WLA (kg/day)	Reserve/ MOS Load (kg/day)	Loads (kg/day)	WLA (kg/day)	Reserve/ MOS Load (kg/day)	Loads (kg/day)	WLA (kg/day)	Reserve/ MOS (kg/day)	
						A	A1 = A/(1-E)	B	C	E	F = 2.3 x B	G = (86.4)(A1)(F)	H = (1-E) x G	I = (E)(G)	J = 4.3 x C	K = (86.4)(A1)(J)	L = (1-E) x K	M = (D)(K)	N = 86.4(A1)(D)	O = (1-E) x N	P = E x N	G + K + N	H + L + O	I + M + P	
R&D Automotive	Bayou Liberty	24329/LAG470270	N/A	N/A	NO	500	2.1906E-05	2.7383E-05	10.0	5.0	20%	23.0	0.054415	0.043532	0.010883	21.500000	0.050866	0.040693	0.010173	0.000000	0.000000	0.000000	0.105282	0.084225	0.021056
Acts 1 Tax Service Inc	Bayou Paquet	40483/LAG530841	77	797	YES	60	2.6288E-06	3.2860E-06	10.0	10.0	20%	23.0	0.006530	0.005224	0.001306	43.000000	0.012208	0.009767	0.002442	0.000000	0.000000	0.000000	0.018738	0.014990	0.003748
NC Investments LLC - Mom & Dad's Consignment Store	Bayou Paquet	43141/LAG532804	75	763	YES	40	1.7525E-06	2.1906E-06	10.0	10.0	20%	23.0	0.004353	0.003483	0.000871	43.000000	0.008139	0.006511	0.001628	0.000000	0.000000	0.000000	0.012492	0.009993	0.002498
Waste Management of LA LLC - St. Tam Hauling Ctr	Bayou Paquet	76287/LA0078778	75	762	YES	500	2.1906E-05	2.7383E-05	10.0	10.0	20%	23.0	0.054415	0.043532	0.010883	43.000000	0.101731	0.081385	0.020346	0.000000	0.000000	0.000000	0.156146	0.124917	0.031229
A-1 Remodeling & Building Inc	Bayou Liberty	93349/LAG531273	68	715	YES	200	8.7625E-06	1.0953E-05	10.0	10.0	20%	23.0	0.021766	0.017413	0.004353	43.000000	0.040693	0.032554	0.008139	0.000000	0.000000	0.000000	0.062459	0.049967	0.012492
Bayou Liberty Marina	Bayou Liberty	94269/LAG531330	71	728	YES	20	8.7630E-07	1.0954E-06	10.0	10.0	20%	23.0	0.002177	0.001741	0.000435	43.000000	0.004070	0.003256	0.000814	0.000000	0.000000	0.000000	0.006246	0.004997	0.001249
Timberland Trailer Park LLC	W15 Canal	98284/LAG531573	N/A	N/A	NO	4500	1.9716E-04	2.4645E-04	10.0	5.0	20%	23.0	0.489738	0.391790	0.097948	21.500000	0.457798	0.366239	0.091560	0.000000	0.000000	0.000000	0.947536	0.758029	0.189507
A Bonfouca Marina	Bayou Liberty	114175/LAG531465	73	746	YES	860	0.00003768	0.00004710	10.0	10.0	20%	23.0	0.093595	0.074876	0.018719	43.000000	0.174981	0.139985	0.034996	0.000000	0.000000	0.000000	0.268576	0.214861	0.053715
Thompson Road Baptist Church - WWTP	Bayou Liberty	138188/LAG532165	61	680	YES	800	3.5050E-05	4.3813E-05	10.0	10.0	20%	23.0	0.087064	0.069651	0.017413	43.000000	0.162772	0.130218	0.032554	0.000000	0.000000	0.000000	0.249836	0.199869	0.049967
Accurate Alignment	Bayou Paquet	151364/LAG470244	75	763	YES	20	8.7630E-07	1.0954E-06	10.0	10.0	20%	23.0	0.002177	0.001741	0.000435	43.000000	0.004070	0.003256	0.000814	0.000000	0.000000	0.000000	0.006246	0.004997	0.001249
All American Cargo Elevators LLC WWTP	Bayou Paquet	157614/LAG532770	75	763	YES	60	2.6288E-06	3.2860E-06	10.0	10.0	20%	23.0	0.006530	0.005224	0.001306	43.000000	0.012208	0.009767	0.002442	0.000000	0.000000	0.000000	0.018738	0.014990	0.003748
St Genevieve Catholic Church - WWTP	Bayou Liberty	157725/LAG532800	70	723	YES	3000	1.3144E-04	1.6430E-04	10.0	10.0	20%	23.0	0.326497	0.261198	0.065299	43.000000	0.610407	0.488326	0.122081	0.000000	0.000000	0.000000	0.936904	0.749523	0.187381
Mayfield Elementary	Bayou Bonfouca	161289/LAG541758	N/A	N/A	NO	14250	6.2433E-04	7.8041E-04	10.0	5.0	20%	23.0	1.550836	1.240669	0.310167	21.500000	1.449695	1.159756	0.289939	0.000000	0.000000	0.000000	3.000531	2.400424	0.600106
Broadway Inc: K-Bar-B Youth Ranch - Cabins & Admin Complex	Bayou Paquet	164343/LAG533161	75	767	YES	2300	1.0077E-04	1.2596E-04	10.0	10.0	20%	23.0	0.250313	0.200250	0.050063	43.000000	0.467976	0.374381	0.093595	0.000000	0.000000	0.000000	0.718289	0.574631	0.143658
SUB-TOTAL Loads													2.90	2.32	0.58		3.51	2.81	0.70	0.00	0.00	0.00	6.40	5.12	1.28

Summer TMDL Calculations for Point Source loads:

BAYOU BONFOUCA 040907

Input data into the shaded cells.

Point Source Loading Calculations

Facility Name	Waterbody	Reach No.	Element Number	Included in the Projection Model (Yes/No)	Anticipated flow (gpd)	Anticipated/ design flow (cms)	Flow with MOS (cms)	Proposed Permit Limits			UCBOD				UNBOD				Sub-Total of Point Source Phosphorus Loads			Sub-Total of Point Source BOD Loads			
								CBOD ₅ (mg/l)	NH ₃ -N (mg/l)	MOS (%)	Ultimate Conc. (mg/l) (2)	Loads (kg/day) (1)	WLA (kg/day)	Reserve/ MOS Load (kg/day)	Ultimate Conc. (mg/l) (2)	Loads (kg/day) (1)	WLA (kg/day)	Reserve/ MOS Load (kg/day)	Loads (kg/day)	WLA (kg/day)	Reserve/ MOS Load (kg/day)	Loads (kg/day)	WLA (kg/day)	Reserve/ MOS (kg/day)	
						A	A1 = A/(1-E)	B	C	E	F = 2.3 x B	G = (86.4)(A1)(F)	H = (1-E) x G	I = (E)(G)	J = 4.3 x C	K = (86.4)(A1)(J)	L = (1-E) x K	M = (D)(K)	N = (1-E) x N	O = (1-E) x N	P = E x N	G + K + N	H + L + O	I + M + P	
Cut-Rite, Inc. Cut Rite/Northshore Driveline	Bayou Liberty			NO	500	2.1906E-05	2.7383E-05	10.0	5.0	20%	23.0	0.054415	0.043532	0.010883	21.500000	0.050866	0.040693	0.010173	0.000000	0.000000	0.000000	0.105282	0.084225	0.021056	
ExxonMobil Oil Corp #51367	Bayou Vincent		5	80	YES	2,500	1.0953E-04	1.3691E-04	10.0	5.0	20%	23.0	0.272073	0.217658	0.054415	21.500000	0.254329	0.203463	0.050866	0.000000	0.000000	0.000000	0.526401	0.421121	0.105280
Advantage Tire & Wheel	Bayou Liberty			NO	1500	6.5719E-05	8.2149E-05	10.0	5.0	20%	23.0	0.163246	0.130597	0.032649	21.500000	0.152599	0.122080	0.030520	0.000000	0.000000	0.000000	0.315845	0.252676	0.063169	
Sumbelt Innovative Plastics Inc contact cooling water	Bayou Liberty		53	616	YES	13000	0.00056956	0.00071195	10.0	5.0	20%	23.0	1.414787	1.131830	0.282957	21.500000	1.322518	1.058015	0.264504	0.000000	0.000000	0.000000	2.737305	2.189844	0.547461
Stones Throw Apartments	Bayou Vincent		5	67	YES	19,200	8.4120E-04	1.0515E-03	10.0	2.0	20%	23.0	2.089541	1.671633	0.417908	8.600000	0.781307	0.625045	0.156261	0.000000	0.000000	0.000000	2.870847	2.296678	0.574169
Eagle Lake Mobile Home Park	Bayou Vincent		3	48	YES	63,000	2.7602E-03	3.4503E-03	5.0	2.0	20%	11.5	3.428168	2.742535	0.685634	8.600000	2.563674	2.050939	0.512735	0.000000	0.000000	0.000000	5.991842	4.793474	1.198368
Western International Gas & Cylinder Inc - Slidell Facility	Bayou Liberty			NO	4480	1.9628E-04	2.4535E-04	10.0	5.0	20%	23.0	0.487561	0.390049	0.097512	21.500000	0.455764	0.364611	0.091153	0.000000	0.000000	0.000000	0.943325	0.754660	0.188665	
John's Automotive Machine Shop Inc	Bayou Bonfouca		9	119	YES	40	1.7525E-06	2.1906E-06	10.0	5.0	20%	23.0	0.004353	0.003483	0.000871	21.500000	0.004069	0.003255	0.000814	0.000000	0.000000	0.000000	0.008423	0.006738	0.001685
Jung's Automotive, Inc	Bayou Liberty			NO	300	1.3144E-05	1.6430E-05	10.0	5.0	20%	23.0	0.032649	0.026119	0.006530	21.500000	0.030520	0.024416	0.006104	0.000000	0.000000	0.000000	0.063169	0.050535	0.012634	
CM Auto Repair Inc	Bayou Paquet			NO	500	2.1906E-05	2.7383E-05	10.0	10.0	20%	23.0	0.054415	0.043532	0.010883	43.000000	0.101733	0.081386	0.020347	0.000000	0.000000	0.000000	0.156148	0.124919	0.031230	
Randall A Evans DDS LLC	Bayou Bonfouca			NO	500	2.1906E-05	2.7383E-05	10.0	5.0	20%	23.0	0.054415	0.043532	0.010883	21.500000	0.050866	0.040693	0.010173	0.000000	0.000000	0.000000	0.105282	0.084225	0.021056	
Rowland Duffour Clinic	Bayou Paquet			NO	500	2.1906E-05	2.7383E-05	10.0	10.0	20%	23.0	0.054415	0.043532	0.010883	43.000000	0.101733	0.081386	0.020347	0.000000	0.000000	0.000000	0.156148	0.124919	0.031230	
Brown's Village Road Sand Pit	Bayou Bonfouca			NO	100	4.3813E-06	5.4766E-06	10.0	5.0	20%	23.0	0.010883	0.008706	0.002177	21.500000	0.010173	0.008139	0.002035	0.000000	0.000000	0.000000	0.021056	0.016845	0.004211	
Northshore Chemical LLC	Bayou Vincent		5	84	YES	55	2.4097E-06	3.0121E-06	10.0	5.0	20%	23.0	0.005986	0.004789	0.001197	21.500000	0.005595	0.004476	0.001119	0.000000	0.000000	0.000000	0.011581	0.009265	0.002316
Factory Direct Furniture	Bayou Bonfouca		18	231	YES	40	1.7525E-06	2.1906E-06	10.0	5.0	20%	23.0	0.004353	0.003483	0.000871	21.500000	0.004069	0.003255	0.000814	0.000000	0.000000	0.000000	0.008423	0.006738	0.001685
Ernest Walder Sr	Bayou Bonfouca		18	234	YES	360	1.5773E-05	1.9716E-05	10.0	5.0	20%	23.0	0.039180	0.031344	0.007836	21.500000	0.036625	0.029300	0.007325	0.000000	0.000000	0.000000	0.075805	0.060644	0.015161
LCR-M - Plumbing Supply	Bayou Vincent		5	81	YES	120	5.2575E-06	6.5719E-06	10.0	5.0	20%	23.0	0.013060	0.010448	0.002612	21.500000	0.012208	0.009766	0.002442	0.000000	0.000000	0.000000	0.025268	0.020214	0.005054
J&K Management LLC	Bayou Vincent		4	63	YES	180	7.8863E-06	9.8579E-06	10.0	5.0	20%	23.0	0.019590	0.015672	0.003918	21.500000	0.018312	0.014650	0.003662	0.000000	0.000000	0.000000	0.037902	0.030321	0.007580
Capitol Steel Inc - Slidell	Bayou Bonfouca			NO	1400	6.1338E-05	7.6672E-05	10.0	5.0	20%	23.0	0.152363	0.121890	0.030473	21.500000	0.142426	0.113941	0.028485	0.000000	0.000000	0.000000	0.294789	0.235831	0.058958	
New Life Ministries	Bayou Bonfouca		18	232	YES	490	2.1468E-05	2.6835E-05	10.0	5.0	20%	23.0	0.053327	0.042661	0.010665	21.500000	0.049849	0.039879	0.009970	0.000000	0.000000	0.000000	0.103175	0.082540	0.020635
NU-Lite Electrical Wholesalers	Bayou Liberty		53	601	YES	80	0.00000351	0.00000438	10.0	10.0	20%	23.0	0.008706	0.006965	0.001741	43.000000	0.016277	0.013022	0.003255	0.000000	0.000000	0.000000	0.024984	0.019987	0.004997

Summer TMDL Calculations for Point Source loads:

BAYOU BONFOUCA 040907

Input data into the shaded cells.

Point Source Loading Calculations																									
Facility Name	Waterbody	Flow with MOS	Reach No.	Element Number	Included in the Projection Model (Yes/No)	Anticipated flow (gpd)	Anticipated design flow (cms)	Flow with MOS (cms)	Proposed Permit Limits			UCBOD			UNBOD			Sub-Total of Point Source Phosphorus Loads			Sub-Total of Point Source BOD Loads				
									CBOD ₅ (mg/l)	NH ₃ N (mg/l)	MOS (%)	Ultimate Conc. (mg/l) (2)	Loads (kg/day) (1)	WLA (kg/day)	Reserve/MOS Load (kg/day)	Ultimate Conc. (mg/l) (2)	Loads (kg/day) (1)	WLA (kg/day)	Reserve/MOS Load (kg/day)	Loads (kg/day)	WLA (kg/day)	Reserve/MOS Load (kg/day)	Loads (kg/day)	WLA (kg/day)	Reserve/MOS (kg/day)
						A	AI = A/(1-E)	B	C	E	F = 2.3 x B	G = (86.4)(AI)(F)	H = (1-E) x G	I = (E)(G)	J = 4.3 x C	K = (86.4)(AI)(J)	L = (1-E) x K	M = (D)(K)	N = 86.4(AI)(D)	O = (1-E) x N	P = E x N	G + K + N	H + L + O	I + M + P	
Piney Ridge Mobile Home Park LLC	Bayou Bonfouca	42841/LAG540932	18	222	YES	9,300	4.0746E-04	5.0933E-04	10.0	2.0	20%	23.0	1.012131	0.809705	0.202426	8.600000	0.378449	0.302759	0.075690	0.000000	0.000000	0.000000	1.390579	1.112464	0.278116
S&H Good Eats	Bayou Bonfouca	42865/LAG533440	18	224	YES	490	2.1468E-05	2.6835E-05	10.0	5.0	20%	23.0	0.053327	0.042661	0.010665	21.500000	0.049849	0.039879	0.009970	0.000000	0.000000	0.000000	0.103175	0.082540	0.020635
Coastal Property Holdings LLC - Shady Pines Mobile Home Park	Bayou Bonfouca	43212/LAG540642	18	228	YES	10,500	4.6003E-04	5.7504E-04	10.0	2.0	20%	23.0	1.142715	0.914172	0.228543	8.600000	0.427276	0.341821	0.085455	0.000000	0.000000	0.000000	1.569990	1.255992	0.313998
Skater's Paradise II, inc.	Bayou Bonfouca	43242/LAG530811	18	230	YES	540	2.3659E-05	2.9574E-05	10.0	5.0	20%	23.0	0.058769	0.047015	0.011754	21.500000	0.054936	0.043949	0.010987	0.000000	0.000000	0.000000	0.113705	0.090964	0.022741
Sidell Welding Service Inc	Bayou Bonfouca	43249/LAG530660	N/A	N/A	NO	400	1.7525E-05	2.1906E-05	10.0	5.0	20%	23.0	0.043532	0.034826	0.008706	21.500000	0.040693	0.032555	0.008139	0.000000	0.000000	0.000000	0.084225	0.067380	0.016845
South Seas Chinese Restaurant	Bayou Bonfouca	43274/LAG530987	18	227	YES	1,950	8.5435E-05	1.0679E-04	10.0	5.0	20%	23.0	0.212221	0.169776	0.042444	21.500000	0.198380	0.158704	0.039676	0.000000	0.000000	0.000000	0.410601	0.328480	0.082120
Ellis Recycling	Bayou Vincent	43316/LAG480553	5	83	YES	120	5.2575E-06	6.5719E-06	10.0	5.0	20%	23.0	0.013060	0.010448	0.002612	21.500000	0.012208	0.009766	0.002442	0.000000	0.000000	0.000000	0.025268	0.020214	0.005054
St Tammany Parish School Board - Sidell Support Facility	Bayou Vincent	43403/LAG530531	9	135	YES	100	4.3813E-06	5.4766E-06	10.0	5.0	20%	23.0	0.010883	0.008707	0.002177	21.500000	0.010173	0.008139	0.002035	0.000000	0.000000	0.000000	0.021057	0.016845	0.004211
Wadleigh & Associates Inc Medi-Fitness Facility	Bayou Vincent	52386/LA0109495	5	87	YES	300	1.3144E-05	1.6430E-05	10.0	5.0	20%	23.0	0.032650	0.026120	0.006530	21.500000	0.030520	0.024416	0.006104	0.000000	0.000000	0.000000	0.063170	0.050536	0.012634
Blue Bell Creameries Inc	Bayou Liberty	68576/LAG532783	53	601	YES	780	0.00003417	0.00004272	10.0	10.0	20%	23.0	0.084888	0.067911	0.016978	43.000000	0.158704	0.126963	0.031741	0.000000	0.000000	0.000000	0.243592	0.194874	0.048718
I-12 Shell	Bayou Vincent	71531/LAG531734	9	125	YES	160	7.0100E-06	8.7625E-06	10.0	5.0	20%	23.0	0.017413	0.013930	0.003483	21.500000	0.016277	0.013022	0.003255	0.000000	0.000000	0.000000	0.033690	0.026952	0.006738
Jubilee #4815	Bayou Vincent	74005/LAG480587	7	102	YES	1,700	7.4482E-05	9.3103E-05	10.0	5.0	20%	23.0	0.185013	0.148011	0.037003	21.500000	0.172947	0.138358	0.034589	0.000000	0.000000	0.000000	0.357960	0.286368	0.071592
Circle K #1689	Bayou Bonfouca	75145/LAG533633	N/A	N/A	NO	1000	4.3813E-05	5.4766E-05	10.0	5.0	20%	23.0	0.108831	0.087064	0.021766	21.500000	0.101733	0.081386	0.020347	0.000000	0.000000	0.000000	0.210564	0.168451	0.042113
Eagle Carwash	Bayou Vincent	82445/LAG750317	N/A	N/A	NO	500	2.1906E-05	2.7383E-05	10.0	5.0	20%	23.0	0.054415	0.043532	0.010883	21.500000	0.050866	0.040693	0.010173	0.000000	0.000000	0.000000	0.105282	0.084225	0.021056
Terminix - Home Estates Drive Office Project	Gum Bayou	90273/LAG750602	N/A	N/A	NO	320	1.4020E-05	1.7525E-05	10.0	5.0	20%	23.0	0.034826	0.027861	0.006965	21.500000	0.032555	0.026044	0.006511	0.000000	0.000000	0.000000	0.067380	0.053904	0.013476
Charter Communications	Bayou Vincent	96374/LAG531494	9	119	YES	120	5.2575E-06	6.5719E-06	10.0	5.0	20%	23.0	0.013060	0.010448	0.002612	21.500000	0.012208	0.009766	0.002442	0.000000	0.000000	0.000000	0.025268	0.020214	0.005054
Adams Mobile Home Park	Bayou Vincent	98300/LAG541621	5	74	YES	2,100	9.2007E-05	1.1501E-04	10.0	5.0	20%	23.0	0.228545	0.182836	0.045709	21.500000	0.213640	0.170912	0.042728	0.000000	0.000000	0.000000	0.442186	0.353749	0.088437
Tymeless Flooring Inc	Bayou Bonfouca	99281/LAG531318	18	235	YES	100	4.3813E-06	5.4766E-06	10.0	5.0	20%	23.0	0.010883	0.008707	0.002177	21.500000	0.010173	0.008139	0.002035	0.000000	0.000000	0.000000	0.021057	0.016845	0.004211
Baker Sales Inc - Baker Sales Warehouse	Bayou Liberty	103353/LAG531763	53	611	YES	40	0.00000175	0.00000219	10.0	10.0	20%	23.0	0.004353	0.003483	0.000871	43.000000	0.008139	0.006511	0.001628	0.000000	0.000000	0.000000	0.012492	0.009993	0.002498
Johnson Apartments	Bayou Vincent	117172/LAG531511	7	107	YES	800	3.5050E-05	4.3813E-05	10.0	5.0	20%	23.0	0.087064	0.069651	0.017413	21.500000	0.081386	0.065109	0.016277	0.000000	0.000000	0.000000	0.168450	0.134760	0.033690

Summer TMDL Calculations for Point Source loads:

BAYOU BONFOUCA 040907

Input data into the shaded cells.

Point Source Loading Calculations																									
Facility Name	Waterbody	Reach No.	Element Number	Included in the Projection Model (Yes/No)	Anticipated flow (gpd)	Anticipated/ design flow (cms)	Flow with MOS (cms)	Proposed Permit Limits			UCBOD				UNBOD				Sub-Total of Point Source Phosphorus Loads			Sub-Total of Point Source BOD Loads			
								CBOD ₅ (mg/l)	NH ₃ N (mg/l)	MOS (%)	Ultimate Conc. (mg/l) (2)	Loads (kg/day) (1)	WLA (kg/day)	Reserve/ MOS Load (kg/day)	Ultimate Conc. (mg/l) (2)	Loads (kg/day) (1)	WLA (kg/day)	Reserve/ MOS Load (kg/day)	Loads (kg/day)	WLA (kg/day)	Reserve/ MOS Load (kg/day)	Loads (kg/day)	WLA (kg/day)	Reserve/ MOS (kg/day)	
						A	A1 = A/(1-E)	B	C	E	F = 2.3 x B	G = (86.4)(A1)(F)	H = (1-E) x G	I = (E)(G)	J = 4.3 x C	K = (86.4)(A1)(J)	L = (1-E) x K	M = (D)(K)	N = 86.4(A1)(D)	O = (1-E) x N	P = E x N	G + K + N	H + L + O	I + M + P	
Beau's Air Conditioning & Heating LLC	Bayou Liberty	117735/LAGS31519	53	621	YES	140	0.00000613	0.00000767	10.0	10.0	20%	23.0	0.015236	0.012189	0.003047	43.000000	0.028485	0.022788	0.005697	0.000000	0.000000	0.000000	0.043722	0.034977	0.008744
Venson Harold Seal Apartments	Bayou Vincent	117751/LAGS31526	1	1	YES	750	3.2860E-05	4.1075E-05	10.0	5.0	20%	23.0	0.081624	0.065299	0.016325	21.500000	0.076301	0.061041	0.015260	0.000000	0.000000	0.000000	0.157925	0.126340	0.031585
Acadiana Stor-N-Lock	Bayou Bonfouca	120264/LAGS31938	18	235	YES	40	1.7525E-06	2.1906E-06	10.0	5.0	20%	23.0	0.004353	0.003483	0.000871	21.500000	0.004069	0.003255	0.000814	0.000000	0.000000	0.000000	0.008423	0.006738	0.001685
CalWes Properties LLC - CalWes Center	Bayou Liberty	126385/LAGS32174	53	620	YES	4145	0.00018160	0.00022700	10.0	10.0	20%	23.0	0.451094	0.360876	0.090219	43.000000	0.843350	0.674680	0.168670	0.000000	0.000000	0.000000	1.294445	1.035556	0.258889
Peace Lutheran Church - RV Units	Bayou Bonfouca	133232/LAGS32329	18	233	YES	2,370	1.0384E-04	1.2980E-04	10.0	5.0	20%	23.0	0.257939	0.206351	0.051588	21.500000	0.241116	0.192893	0.048223	0.000000	0.000000	0.000000	0.499055	0.399244	0.099811
Jolly Investments LLC - Jolly Investments Apartments	Bayou Bonfouca	133963/LAGS41455	18	221	YES	5,700	2.4973E-04	3.1216E-04	10.0	2.0	20%	23.0	0.620329	0.496263	0.124066	8.600000	0.231949	0.185559	0.046390	0.000000	0.000000	0.000000	0.852279	0.681823	0.170456
United Medical Care Walk In Clinic	Bayou Liberty	134229/LAGS32037	53	615	YES	200	0.00000876	0.00001095	10.0	10.0	20%	23.0	0.021766	0.017413	0.004353	43.000000	0.040693	0.032554	0.008139	0.000000	0.000000	0.000000	0.062459	0.049967	0.012492
Good Shepherd Lutheran Church	Bayou Bonfouca	148472/LAGS32580	14	183	YES	1,100	4.8194E-05	6.0243E-05	10.0	5.0	20%	23.0	0.119714	0.095771	0.023943	21.500000	0.111906	0.089525	0.022381	0.000000	0.000000	0.000000	0.231620	0.185296	0.046324
RDG Properties - Platform Crane - Bldg 2	Bayou Vincent	149820/LAGS32253	7	107	YES	600	2.6288E-05	3.2860E-05	10.0	5.0	20%	23.0	0.065299	0.052240	0.013060	21.500000	0.061041	0.048833	0.012208	0.000000	0.000000	0.000000	0.126340	0.101072	0.025268
GBR Properties Inc - Advance Auto	Bayou Liberty	151898/LAGS32293	53	625	YES	100	0.00000438	0.00000548	10.0	10.0	20%	23.0	0.010883	0.008707	0.002177	43.000000	0.020347	0.016277	0.004069	0.000000	0.000000	0.000000	0.031230	0.024984	0.006246
RDG Properties - SE LA Veterans Healthcare & Omni Eng	Bayou Vincent	161936/LAGS30000	9	136	YES	600	2.6288E-05	3.2860E-05	10.0	5.0	20%	23.0	0.065299	0.052240	0.013060	21.500000	0.061041	0.048833	0.012208	0.000000	0.000000	0.000000	0.126340	0.101072	0.025268
St Tammany Brake Tag Center - St Tammany Wholesale	Bayou Bonfouca	165431/LAG470290	18	231	YES	40	1.7525E-06	2.1906E-06	10.0	5.0	20%	23.0	0.004353	0.003483	0.000871	21.500000	0.004069	0.003255	0.000814	0.000000	0.000000	0.000000	0.008423	0.006738	0.001685
Coastal Marine Contractors - Main Yard - Ship & Barge Repair	Bayou Bonfouca	167032/LA0124877	N/A	N/A	NO	300	1.3144E-05	1.6430E-05	10.0	5.0	20%	23.0	0.032649	0.026119	0.006530	21.500000	0.030520	0.024416	0.006104	0.000000	0.000000	0.000000	0.063169	0.050535	0.012634
Manual Darby Property	Bayou Bonfouca	167139/LAGS33313	N/A	N/A	NO	490	2.1468E-05	2.6835E-05	10.0	5.0	20%	23.0	0.053327	0.042662	0.010665	21.500000	0.049849	0.039879	0.009970	0.000000	0.000000	0.000000	0.103176	0.082541	0.020635
Guardian Angel Learning Center	Bayou Bonfouca	167920/LAGS33301	N/A	N/A	NO	510	2.2344E-05	2.7931E-05	10.0	5.0	20%	23.0	0.055504	0.044403	0.011101	21.500000	0.051884	0.041507	0.010377	0.000000	0.000000	0.000000	0.107387	0.085910	0.021477
Sidell Masjid of Al-Islam	Bayou Vincent	167945/LAGS33308	N/A	N/A	NO	15	6.5719E-07	8.2149E-07	10.0	5.0	20%	23.0	0.001632	0.001306	0.000326	21.500000	0.001526	0.001221	0.000305	0.000000	0.000000	0.000000	0.003158	0.002527	0.000632
Ozone Aggregates	Bayou Bonfouca	168041/LAGS33333	N/A	N/A	NO	80	3.5050E-06	4.3813E-06	10.0	5.0	20%	23.0	0.008706	0.006965	0.001741	21.500000	0.008139	0.006511	0.001628	0.000000	0.000000	0.000000	0.016845	0.013476	0.003369
Arian Nurser & Preschool	Bayou Bonfouca	168045/LAGS33353	N/A	N/A	NO	950	4.1622E-05	5.2028E-05	10.0	5.0	20%	23.0	0.103389	0.082711	0.020678	21.500000	0.096646	0.077317	0.019329	0.000000	0.000000	0.000000	0.200035	0.160028	0.040007
Romar Services Inc - Warehouse	Bayou Bonfouca	168139/LAGS33302	N/A	N/A	NO	80	3.5050E-06	4.3813E-06	10.0	5.0	20%	23.0	0.008706	0.006965	0.001741	21.500000	0.008139	0.006511	0.001628	0.000000	0.000000	0.000000	0.016845	0.013476	0.003369
Carolyn Draperies	Bayou Bonfouca	168371/LAGS33343	N/A	N/A	NO	20	8.7625E-07	1.0953E-06	10.0	5.0	20%	23.0	0.002177	0.001741	0.000435	21.500000	0.002035	0.001628	0.000407	0.000000	0.000000	0.000000	0.004211	0.003369	0.000842

Summer TMDL Calculations for Point Source loads:

BAYOU BONFOUCA 040907

Input data into the shaded cells.

Point Source Loading Calculations																									
Facility Name	Waterbody	Reach No.	Element Number	Included in the Projection Model (Yes/No)	Anticipated flow (gpd)	Anticipated/design flow (cms)	Flow with MOS (cms)	Proposed Permit Limits			UCBOD				UNBOD				Sub-Total of Point Source Phosphorus Loads			Sub-Total of Point Source BOD Loads			
								CBOD ₅ (mg/l)	NH ₃ N (mg/l)	MOS (%)	Ultimate Conc. (mg/l) (2)	Loads (kg/day) (1)	WLA (kg/day)	Reserve/MOS Load (kg/day)	Ultimate Conc. (mg/l) (2)	Loads (kg/day) (1)	WLA (kg/day)	Reserve/MOS Load (kg/day)	Loads (kg/day)	WLA (kg/day)	Reserve/MOS Load (kg/day)	Loads (kg/day)	WLA (kg/day)	Reserve/MOS (kg/day)	
						A	A1 = A/(1-E)	B	C	E	F = 2.3 x B	G = (86.4)/(A1)(F)	H = (1-E) x G	I = (E)(G)	J = 4.3 x C	K = (86.4)/(A1)(J)	L = (1-E) x K	M = (D)(K)	N = 86.4(A1)(D)	O = (1-E) x N	P = E x N	G + K + N	H + L + O	I + M + P	
Pentecost Missionary Baptist Church of Shidell	Bayou Bonfouca	169553/LAG533559	N/A	N/A	NO	1290	5.6518E-05	7.0648E-05	10.0	5.0	20%	23.0	0.140391	0.112313	0.028078	21.500000	0.131236	0.104988	0.026247	0.000000	0.000000	0.000000	0.271627	0.217302	0.054325
Honaker Funeral Home & Cemeteries	Bayou Bonfouca	169689/LAG533399	N/A	N/A	NO	1800	7.8863E-05	9.8578E-05	10.0	5.0	20%	23.0	0.195895	0.156716	0.039179	21.500000	0.183119	0.146495	0.036624	0.000000	0.000000	0.000000	0.379014	0.303212	0.075803
Coco' Auto/Truck Repair	Bayou Liberty	169692/LAG470301	N/A	N/A	NO	300	1.3144E-05	1.6430E-05	10.0	10.0	20%	23.0	0.032649	0.026119	0.006530	43.000000	0.061040	0.048832	0.012208	0.000000	0.000000	0.000000	0.093689	0.074951	0.018738
Sparrows Offshore LLC	Bayou Bonfouca	169789/LA0125351	N/A	N/A	NO	500	2.1906E-05	2.7383E-05	10.0	5.0	20%	23.0	0.054415	0.043532	0.010883	21.500000	0.050866	0.040693	0.010173	0.000000	0.000000	0.000000	0.105282	0.084225	0.021056
James & Leonard Brown Commercial Property	Bayou Vincent	169799/LAG533457	N/A	N/A	NO	500	2.1906E-05	2.7383E-05	10.0	5.0	20%	23.0	0.054415	0.043532	0.010883	21.500000	0.050866	0.040693	0.010173	0.000000	0.000000	0.000000	0.105282	0.084225	0.021056
RPM Pizza LLC	Bayou Bonfouca	170122/LAG533147	N/A	N/A	NO	1500	6.5719E-05	8.2149E-05	10.0	5.0	20%	23.0	0.163246	0.130597	0.032649	21.500000	0.152599	0.122080	0.030520	0.000000	0.000000	0.000000	0.315845	0.252676	0.063169
Lee's Hamburgers	Bayou Bonfouca	170398/LAG533422	N/A	N/A	NO	1500	6.5719E-05	8.2149E-05	10.0	5.0	20%	23.0	0.163246	0.130597	0.032649	21.500000	0.152599	0.122080	0.030520	0.000000	0.000000	0.000000	0.315845	0.252676	0.063169
Flowers Baking Co of New Orleans	Bayou Bonfouca	170858/LAG533465	N/A	N/A	NO	500	2.1906E-05	2.7383E-05	10.0	5.0	20%	23.0	0.054415	0.043532	0.010883	21.500000	0.050866	0.040693	0.010173	0.000000	0.000000	0.000000	0.105282	0.084225	0.021056
John L's Plumbing	Bayou Bonfouca	171511/LAG533505	N/A	N/A	NO	900	3.9431E-05	4.9289E-05	10.0	5.0	20%	23.0	0.097948	0.078358	0.019590	21.500000	0.091560	0.073248	0.018312	0.000000	0.000000	0.000000	0.189507	0.151606	0.037901

(1) - Load(kg/day) = 86.4 x Ultimate Conc.(mg/l) x Modeled Flow(cms)

Summer TMDL Calculations for Point Source loads:

BAYOU BONFOUCA 040908

Input data into the shaded cells.

Point Source Loading Calculations																									
Facility Name	Waterbody	AI No./ Permit No.	Reach No.	Element Number	Included in the Projection Model (Yes/No)	Anticipated flow (gpd)	Anticipated/ design flow (cms)	Flow with MOS (cms)	Proposed Permit Limits			UCBOD				UNBOD			Sub-Total of Point Source Phosphorus Loads			Sub-Total of Point Source BOD Loads			
									CBOD ₅ (mg/l)	NH ₃ N (mg/l)	MOS (%)	Ultimate Conc. (mg/l) (2)	Loads (kg/day) (1)	WLA (kg/day)	Reserve/ MOS Load (kg/day)	Ultimate Conc. (mg/l) (2)	Loads (kg/day) (1)	WLA (kg/day)	Reserve/ MOS Load (kg/day)	Loads (kg/day)	WLA (kg/day)	Reserve/ MOS Load (kg/day)	Loads (kg/day)	WLA (kg/day)	Reserve/ MOS (kg/day)
						A	A1 = A/(1-E)	B	C	E	F = 2.3 x B	G = (86.4)(A1)(F)	H = (1-E) x G	I = (E)(G)	J = 4.3 x C	K = (86.4)(A1)(J)	L = (1-E) x K	M = (D)(K)	N = 86.4(A1)(D)	O = (1-E) x N	P = E x N	G + K + N	H + L + O	I + M + P	
Sidell Easy Pay Tire Store	Bayou Liberty	5931/LAG470233	N/A	N/A	NO	100	4.3813E-06	5.4766E-06	30.0	15.0	20%	69.0	0.032649	0.026119	0.006530	64.500000	0.030520	0.024416	0.006104	0.000000	0.000000	0.000000	0.063169	0.050535	0.012634
Coin du Lestin Subdivision	Bayou Bonfouca	19211/LAG570065	35	389	YES	80,000	3.5050E-03	4.3813E-03	10.0	10.0	20%	23.0	8.706420	6.965136	1.741284	43.000000	16.277220	13.021776	3.255444	0.000000	0.000000	0.000000	24.983640	19.986912	4.996728
Pearl River Navigation Inc	Bayou Bonfouca	24247/LA0109461	24	289	YES	3,500	1.5334E-04	1.9168E-04	30.0	15.0	20%	69.0	1.142690	0.914152	0.228538	64.500000	1.068166	0.854533	0.213653	0.000000	0.000000	0.000000	2.210856	1.768685	0.442171
Acadian Gardens Condominium Association	Bayou Bonfouca	40443/LAG540085	31	346	YES	7,500	3.2859E-04	4.1074E-04	30.0	15.0	20%	69.0	2.448653	1.958922	0.489731	64.500000	2.288958	1.831166	0.457792	0.000000	0.000000	0.000000	4.737611	3.790088	0.947522
St Tammany Parish - Oakwood Estates STP	Bayou Bonfouca	43203/LAG570166	31	351	YES	12,400	5.4328E-04	6.7910E-04	10.0	10.0	20%	23.0	1.349508	1.079606	0.269902	43.000000	2.522992	2.018394	0.504598	0.000000	0.000000	0.000000	3.872500	3.098000	0.774500
J&J Auto Brokers	Bayou Liberty	104963/LAG470178	46	546	YES	40	0.0000175	0.00000219	10.0	10.0	20%	23.0	0.004353	0.003483	0.000871	43.000000	0.008139	0.006511	0.001628	0.000000	0.000000	0.000000	0.012492	0.009993	0.002498
Brian Harris Autoplex	Bayou Bonfouca	118103/LAG470186	N/A	N/A	NO	120	5.2575E-06	6.5719E-06	30.0	15.0	20%	69.0	0.039179	0.031343	0.007836	64.500000	0.036624	0.029299	0.007325	0.000000	0.000000	0.000000	0.075803	0.060642	0.015161
Sidell Marine Inc	Bayou Bonfouca	124476/LAG532176	22	282	YES	3,700	1.6211E-04	2.0264E-04	30.0	15.0	20%	69.0	1.208044	0.966435	0.241609	64.500000	1.129258	0.903407	0.225852	0.000000	0.000000	0.000000	2.337302	1.869842	0.467460
Carroll Road Building - STP Construction	Bayou Bonfouca	124764/LAG531773	25	295	YES	800	3.5050E-05	4.3813E-05	30.0	15.0	20%	69.0	0.261193	0.208954	0.052239	64.500000	0.244158	0.195327	0.048832	0.000000	0.000000	0.000000	0.505351	0.404281	0.101070
JGILS - J&D Investments	Bayou Bonfouca	125337/LAG531786			YES	160	7.0100E-06	8.7625E-06	30.0	15.0	20%	69.0	0.052239	0.041791	0.010448	64.500000	0.048832	0.039065	0.009766	0.000000	0.000000	0.000000	0.101071	0.080856	0.020214
ARC Mechanical Contractors	Bayou Bonfouca	138813/LAG532075			YES	100	4.3813E-06	5.4766E-06	30.0	15.0	20%	69.0	0.032649	0.026119	0.006530	64.500000	0.030520	0.024416	0.006104	0.000000	0.000000	0.000000	0.063169	0.050535	0.012634
Casadaban Marine Services	Bayou Vincent	143036/LAG533292	N/A	N/A	NO	500	2.1906E-05	2.7383E-05	30.0	15.0	20%	69.0	0.163246	0.130597	0.032649	64.500000	0.152599	0.122080	0.030520	0.000000	0.000000	0.000000	0.315845	0.252676	0.063169
SUB-TOTAL Loads													15.41	12.33	3.08		23.81	19.05	4.76	0.00	0.00	0.00	39.22	31.37	7.84

Appendix E2 – Winter Loading

Winter Projection, Non-Point Benthic Load Input and TMDL Calculations:

Modeled stream or water body:

BAYOU BONFOUCA AND BAYOU LIBERTY

Shaded cells are input values for calculations. GIN OF SAFETY (MOS) (%) = [MOG + MOU] = **20%**

Values to be used in the projection models.

Reach Number and Description	Reach	Calibration Model Values											Reduced Man-Made Loads						Projected Model Loads					
		Total Non-Point UCBOB	Total Non-Point UNBOD	SOD @ 20°C	Total Calb. Benthic Load (TCBL)	Reach Length	Proj. Model Avg. Reach Width	Proj. Temp.	Background Benthic Load	Man-Made Benthic Load	Background percentage reduction	Percentage Reduction of man-made sources	Reduced Man-Made Benthic Load	Reduced TCBL adjusted for MOS	Reduced Total UCBOB Load	Reduced UNBOD Load	Reduced SOD Load at Projection Temp.	SOD @ 20°C	Total Non-Point UCBOB INPUTS	Non-Point UNBOD INPUTS	Total MOS at Projection Temp.	Non-Point UCBOB LA	Non-Point UNBOD LA	SOD LA at Projection Temp.
		g O ₂ / [(m ²)(day)]	Kilo-meters	Meters	(deg Celcius)	g O ₂ / [(m ²)(day)]	g O ₂ / [(m ²)(day)]	%	%	g O ₂ / [(m ²)(day)]	g O ₂ / [(m ²)(day)]	kg O ₂ /day	kg O ₂ /day	kg O ₂ /day	g O ₂ / [(m ²)(day)]	kg O ₂ /day	kg O ₂ /day	kg O ₂ /day	kg O ₂ /day	kg O ₂ /day	kg O ₂ /day			
DRAINAGE DITCH 1	1	0.162	0.067	0.50	0.729	3.90	3.98	20.80	0.00	0.73	0%	77%	0.17	0.21	0.58	0.24	1.88	0.144	0.722	0.300	0.67	0.58	0.24	1.88
VINCENT FROM RKM 20.0 TO BV01	2	0.159	0.061	0.30	0.521	0.80	1.73	20.80	0.00	0.52	0%	77%	0.12	0.15	0.05	0.02	0.10	0.086	0.063	0.024	0.04	0.05	0.02	0.10
VINCENT FROM BV01 RKM 18.5	3	1.228	0.044	6.00	7.272	1.00	1.73	20.80	0.00	7.27	0%	77%	1.67	2.09	0.49	0.02	2.51	1.725	0.611	0.022	0.75	0.49	0.02	2.51
VINCENT FROM RKM 18.5 TO BV02	4	1.365	0.049	7.00	8.413	0.90	1.73	20.80	0.00	8.41	0%	77%	1.94	2.42	0.49	0.02	2.64	2.013	0.611	0.022	0.79	0.49	0.02	2.64
DRAINAGE DITCH 2	5	0.092	0.040	0.50	0.632	2.10	2.00	20.80	0.00	0.63	0%	77%	0.15	0.18	0.09	0.04	0.51	0.144	0.111	0.048	0.16	0.09	0.04	0.51
VINCENT FROM BV02 TO DD 8	6	1.667	0.167	7.00	8.833	0.70	1.77	20.80	0.00	8.83	0%	77%	2.03	2.54	0.47	0.05	2.10	2.013	0.594	0.059	0.66	0.47	0.05	2.10
DRAINAGE DITCH 8	7	0.126	0.057	0.50	0.683	0.80	2.00	20.80	0.00	0.68	0%	77%	0.16	0.20	0.05	0.02	0.19	0.144	0.058	0.026	0.07	0.05	0.02	0.19
VINCENT FROM DD 8 TO DD 9	8	1.561	0.129	7.00	8.690	0.90	1.81	20.80	0.00	8.69	0%	77%	2.00	2.50	0.58	0.05	2.76	2.013	0.731	0.060	0.85	0.58	0.05	2.76
DRAINAGE DITCH 9	9	0.140	0.062	0.50	0.702	2.10	2.00	20.80	0.00	0.70	0%	77%	0.16	0.20	0.14	0.06	0.51	0.144	0.169	0.075	0.18	0.14	0.06	0.51
VINCENT FROM DD 9 TO RKM 15.2	10	0.102	0.051	7.00	7.154	0.80	1.85	20.80	0.00	7.15	0%	77%	1.65	2.06	0.03	0.02	2.51	2.013	0.044	0.022	0.64	0.03	0.02	2.51
VINCENT FROM RKM 15.2 TO BV03	11	0.565	0.106	4.20	4.871	0.30	4.72	20.80	0.00	4.87	0%	77%	1.12	1.40	0.18	0.03	1.44	1.208	0.230	0.043	0.41	0.18	0.03	1.44
VINCENT FROM BV03 TO BONFOUCA	12	0.593	0.381	4.20	5.175	0.50	4.72	20.80	0.00	5.17	0%	77%	1.19	1.49	0.32	0.21	2.40	1.208	0.403	0.259	0.73	0.32	0.21	2.40
UB FROM RKM 5.0 TO DD 23	13	0.154	0.067	0.50	0.721	2.40	1.00	20.80	0.00	0.72	0%	77%	0.17	0.21	0.09	0.04	0.29	0.144	0.106	0.046	0.10	0.09	0.04	0.29
DRAINAGE DITCH 23	14	0.142	0.062	0.50	0.704	1.00	2.00	20.80	0.00	0.70	0%	77%	0.16	0.20	0.07	0.03	0.24	0.144	0.082	0.036	0.08	0.07	0.03	0.24
UB FROM DD 23 TO BB01	15	0.162	0.066	0.50	0.728	1.50	1.23	20.80	0.00	0.73	0%	77%	0.17	0.21	0.07	0.03	0.22	0.144	0.086	0.035	0.08	0.07	0.03	0.22
UB FROM BB01 TO BAYOU VINCENT	16	0.164	0.066	0.50	0.730	1.10	1.85	20.80	0.00	0.73	0%	77%	0.17	0.21	0.08	0.03	0.25	0.144	0.096	0.038	0.09	0.08	0.03	0.25
BONFOUCA FROM BV TO HWY 190	17	0.046	0.000	2.80	2.846	0.20	10.84	20.80	0.00	2.85	0%	77%	0.65	0.82	0.02	0.00	1.47	0.805	0.029	0.000	0.37	0.02	0.00	1.47
HWY 190 (DRAINAGE DITCH 5)	18	0.090	0.040	0.50	0.630	1.80	2.00	20.80	0.00	0.63	0%	77%	0.14	0.18	0.07	0.03	0.44	0.144	0.093	0.042	0.14	0.07	0.03	0.44
BONFOUCA FROM HWY 190 TO BB02	19	1.199	0.390	3.60	5.189	0.90	10.84	20.80	0.00	5.19	0%	77%	1.19	1.49	2.69	0.87	8.50	1.035	3.364	1.093	3.02	2.69	0.87	8.50
BONFOUCA FROM BB02 TO WD	20	1.730	0.161	3.60	5.491	1.20	10.84	20.80	0.00	5.49	0%	77%	1.26	1.58	5.18	0.48	11.33	1.035	6.469	0.604	4.25	5.18	0.48	11.33
WEST DRAINAGE CANAL	21	0.189	0.071	0.50	0.760	0.30	3.00	20.80	0.00	0.76	0%	77%	0.17	0.22	0.04	0.01	0.11	0.144	0.049	0.018	0.04	0.04	0.01	0.11
BONFOUCA FROM WD TO DD6	22	1.185	0.149	2.30	3.634	2.10	54.25	20.80	0.00	3.63	0%	77%	0.84	1.04	31.05	3.91	63.38	0.661	38.813	4.888	24.59	31.05	3.91	63.38
DRAINAGE DITCH 6	23	0.150	0.067	0.50	0.717	0.30	2.00	20.80	0.00	0.72	0%	77%	0.16	0.21	0.02	0.01	0.07	0.144	0.026	0.012	0.03	0.02	0.01	0.07
BONFOUCA FROM DD 6 TO TRIB 2	24	2.148	0.242	0.50	2.890	0.80	93.10	20.80	0.00	2.89	0%	0%	2.89	3.61	160.00	18.00	39.16	0.625	200.000	22.500	54.29	160.00	18.00	39.16
DRAINAGE DITCH 7 - UPLAND	25	0.142	0.063	0.50	0.705	1.00	2.00	20.80	0.00	0.70	0%	0%	0.70	0.88	0.28	0.13	1.05	0.625	0.356	0.156	0.37	0.28	0.13	1.05
TRIBUTARY 2 - TIDAL	26	0.308	0.102	0.50	0.911	0.50	12.00	20.80	0.00	0.91	0%	0%	0.91	1.14	1.85	0.61	3.16	0.625	2.313	0.768	1.40	1.85	0.61	3.16
BONFOUCA FROM TRIB 2 TO BB03	27	2.256	0.286	0.40	2.942	0.60	93.08	20.80	0.00	2.94	0%	0%	2.94	3.68	125.97	16.00	23.49	0.500	157.466	19.996	41.37	125.97	16.00	23.49
BONFOUCA FROM BB03 TO CANAL 26	28	1.960	0.201	0.40	2.562	0.80	93.08	20.80	0.00	2.56	0%	0%	2.56	3.20	145.97	15.00	31.32	0.500	182.461	18.746	48.07	145.97	15.00	31.32
CANAL 26	29	0.430	0.123	0.50	1.053	2.00	114.00	20.80	0.00	1.05	0%	0%	1.05	1.32	98.00	28.00	119.89	0.625	122.500	35.000	61.47	98.00	28.00	119.89
BONFOUCA FROM CANAL 26 TO TRIB 4	30	6.536	0.784	0.40	7.720	0.20	76.51	20.80	0.00	7.72	0%	0%	7.72	9.65	100.01	12.00	6.44	0.500	125.016	15.002	29.61	100.01	12.00	6.44

Winter Projection, Non-Point Benthic Load Input and TMDL Calculations:

Modeled stream or water body:

BAYOU BONFOUCA AND BAYOU LIBERTY

Shaded cells are input values for calculations. GIN OF SAFETY (MOS) (%) = [MOG + MOU] = **20%**

Values to be used in the projection models.

Reach Number and Description	Reach	Calibration Model Values						Reduced Man-Made Loads						Projected Model Loads										
		Total Non-Point UCBO	Total Non-Point UNBOD	SOD @ 20°C	Total Calb. Benthic Load (TCBL)	Reach Length	Proj. Model Avg. Reach Width	Proj. Temp.	Background Benthic Load	Man-Made Benthic Load	Background percentage reduction	Percentage Reduction of man-made sources	Reduced Man-Made Benthic Load	Reduced TCBL adjusted for MOS	Reduced Total UCBO Load	Reduced UNBOD Load	Reduced SOD Load at Projection Temp.	SOD @ 20°C	Total Non-Point UCBO INPUTS	Non-Point UNBOD INPUTS	Total MOS at Projection Temp.	Non-Point UCBO LA	Non-Point UNBOD LA	SOD LA at Projection Temp.
		g O ₂ / [(m ²)(day)]	Kilo-meters	Meters	(deg Celcius)	g O ₂ / [(m ²)(day)]	g O ₂ / [(m ²)(day)]	%	%	g O ₂ / [(m ²)(day)]	g O ₂ / [(m ²)(day)]	kg O ₂ /day	kg O ₂ /day	kg O ₂ /day	g O ₂ / [(m ²)(day)]	kg O ₂ /day	kg O ₂ /day	kg O ₂ /day	kg O ₂ /day	kg O ₂ /day	kg O ₂ /day			
TRIBUTARY 10 - UPLAND	31	0.107	0.046	0.50	0.653	1.10	2.00	20.80	0.00	0.65	0%	0%	0.65	0.82	0.24	0.10	1.16	0.625	0.295	0.127	0.37	0.24	0.10	1.16
TRIBUTARY 4 - TIDAL	32	0.396	0.119	0.50	1.015	0.80	18.00	20.80	0.00	1.02	0%	0%	1.02	1.27	5.70	1.72	7.57	0.625	7.125	2.150	3.75	5.70	1.72	7.57
BONFOUCA FROM TRIB 4 TO BB04	33	2.288	0.245	0.20	2.733	0.80	76.51	20.80	0.00	2.73	0%	0%	2.73	3.42	140.02	15.00	12.87	0.250	175.023	18.752	41.97	140.02	15.00	12.87
BONFOUCA FROM BB04 TO Rkm 5.6	34	2.553	0.274	0.00	2.826	1.20	91.44	20.80	0.00	2.83	0%	0%	2.83	3.53	280.12	30.01	0.00	0.000	350.153	37.516	77.53	280.12	30.01	0.00
BONFOUCA FROM Rkm 5.6 TO Rkm 2.7	35	2.585	0.318	0.00	2.903	1.10	114.30	20.80	0.00	2.90	0%	0%	2.90	3.63	325.00	40.00	0.00	0.000	406.250	50.000	91.25	325.00	40.00	0.00
BONFOUCA FROM BB05 TO Rkm 2.7	36	2.324	0.036	0.05	2.410	1.80	77.70	20.80	0.00	2.41	0%	0%	2.41	3.01	325.00	5.00	7.35	0.063	406.250	6.250	84.34	325.00	5.00	7.35
BONFOUCA FROM Rkm 2.7 TO LIBERTY	37	0.000	0.000	0.00	0.000	1.90	88.00	20.80	0.00	0.00	0%	0%	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00
LIBERTY FROM Rkm 15.0 TO TRIB 1	38	2.222	1.556	2.00	5.778	0.60	2.99	20.80	0.00	5.78	0%	80%	1.16	1.44	0.80	0.56	0.75	0.500	0.997	0.698	0.53	0.80	0.56	0.75
TRIBUTARY 1	39	0.147	0.064	0.50	0.711	2.40	2.00	20.80	0.00	0.71	0%	80%	0.14	0.18	0.14	0.06	0.50	0.125	0.176	0.077	0.18	0.14	0.06	0.50
LIBERTY FROM Rkm 14.4 TO DD22	40	1.855	1.763	2.50	6.118	0.70	3.08	20.80	0.00	6.12	0%	80%	1.22	1.53	0.80	0.76	1.13	0.625	1.000	0.950	0.67	0.80	0.76	1.13
DD22	41	0.048	0.020	0.50	0.569	0.30	2.00	20.80	0.00	0.57	0%	80%	0.11	0.14	0.01	0.00	0.06	0.125	0.007	0.003	0.02	0.01	0.00	0.06
LIBERTY FROM DD22 TO DD20	42	2.405	2.672	2.70	7.777	0.90	6.32	20.80	0.00	7.78	0%	80%	1.56	1.94	2.74	3.04	3.23	0.675	3.420	3.800	2.25	2.74	3.04	3.23
DD20	43	0.092	0.040	0.50	0.632	2.70	2.00	20.80	0.00	0.63	0%	80%	0.13	0.16	0.10	0.04	0.57	0.125	0.124	0.054	0.18	0.10	0.04	0.57
LIBERTY FROM DD20 TO BL03	44	1.923	2.262	2.50	6.686	0.20	8.84	20.80	0.00	6.69	0%	80%	1.34	1.67	0.68	0.80	0.93	0.625	0.850	1.000	0.60	0.68	0.80	0.93
LIBERTY FROM BL03 TO HWY 190	45	1.810	0.158	1.70	3.668	2.50	8.84	20.80	0.00	3.67	0%	80%	0.73	0.92	8.00	0.70	7.90	0.425	10.000	0.875	4.15	8.00	0.70	7.90
HWY 190 (DRAINAGE DITCH 14)	46	0.114	0.050	0.50	0.664	2.30	2.00	20.80	0.00	0.66	0%	80%	0.13	0.17	0.11	0.05	0.48	0.125	0.131	0.057	0.16	0.11	0.05	0.48
LIBERTY FROM HWY 190 TO BL04	47	3.226	1.075	0.40	4.701	0.10	18.60	20.80	0.00	4.70	0%	38%	2.91	3.64	3.72	1.24	0.49	0.310	4.650	1.550	1.36	3.72	1.24	0.49
LIBERTY FROM BL04 TO DD18	48	2.151	0.168	0.33	2.649	1.60	18.60	20.80	0.00	2.65	0%	38%	1.64	2.05	39.68	3.10	6.40	0.256	49.600	3.875	12.30	39.68	3.10	6.40
DD18	49	0.138	0.059	0.50	0.698	0.30	2.00	20.80	0.00	0.70	0%	38%	0.43	0.54	0.05	0.02	0.20	0.388	0.064	0.028	0.07	0.05	0.02	0.20
LIBERTY FROM DD18 TO DD19	50	2.240	0.269	0.10	2.609	0.60	18.60	20.80	0.00	2.61	0%	38%	1.62	2.02	15.50	1.86	0.73	0.078	19.375	2.325	4.52	15.50	1.86	0.73
DD19	51	0.116	0.051	0.50	0.668	1.40	2.00	20.80	0.00	0.67	0%	38%	0.41	0.52	0.20	0.09	0.91	0.388	0.252	0.112	0.30	0.20	0.09	0.91
LIBERTY FROM DD19 TO DD04	52	4.453	0.352	0.00	4.804	0.20	42.67	20.80	0.00	4.80	0%	38%	2.98	3.72	23.56	1.86	0.00	0.000	29.450	2.325	6.36	23.56	1.86	0.00
DD04	53	0.085	0.037	0.50	0.623	4.20	2.00	20.80	0.00	0.62	0%	38%	0.39	0.48	0.44	0.19	2.74	0.388	0.556	0.243	0.84	0.44	0.19	2.74
LIBERTY FROM DD04 TO BL05	54	3.281	0.100	0.04	3.421	0.70	42.67	20.80	0.00	3.42	0%	38%	2.12	2.65	60.76	1.86	0.78	0.031	75.950	2.325	15.85	60.76	1.86	0.78
LIBERTY FROM BL05 TO Rkm 6.3	55	2.929	0.117	0.10	3.147	0.60	42.67	20.80	0.00	3.15	0%	38%	1.95	2.44	46.50	1.86	1.67	0.078	58.125	2.325	12.51	46.50	1.86	1.67
LIBERTY FROM Rkm 6.3 to Rkm 6.0	56	3.359	0.168	0.04	3.567	0.30	39.69	20.80	0.00	3.57	0%	38%	2.21	2.76	24.80	1.24	0.31	0.031	31.000	1.550	6.59	24.80	1.24	0.31
LIBERTY FROM Rkm 6.0 to Trib 9	57	3.155	0.053	0.00	3.207	0.80	47.55	20.80	0.00	3.21	0%	38%	1.99	2.49	74.40	1.24	0.00	0.000	93.000	1.550	18.91	74.40	1.24	0.00
DRAINAGE DITCH 3 - UPLAND	58	0.149	0.064	0.50	0.713	0.20	2.00	20.80	0.00	0.71	0%	38%	0.44	0.55	0.04	0.02	0.13	0.388	0.046	0.020	0.05	0.04	0.02	0.13
TRIBUTARY 9 - TIDAL	59	0.375	0.115	0.50	0.990	0.30	16.00	20.80	0.00	0.99	0%	38%	0.61	0.77	1.12	0.34	1.56	0.388	1.395	0.426	0.76	1.12	0.34	1.56
LIBERTY FROM TRIB 9 TO TRIB 6	60	5.783	0.920	0.00	6.703	0.80	47.55	20.80	0.00	6.70	0%	38%	4.16	5.20	136.40	21.70	0.00	0.000	170.500	27.125	39.53	136.40	21.70	0.00

Winter Projection, Non-Point Benthic Load Input and TMDL Calculations:

Modeled stream or water body:

BAYOU BONFOUCA AND BAYOU LIBERTY

Shaded cells are input values for calculations. GIN OF SAFETY (MOS) (%) = [MOG + MOU] = **20%**

Values to be used in the projection models.

Reach Number and Description	Reach	Calibration Model Values					Reduced Man-Made Loads										Projected Model Loads			Total MOS at Projection Temp.				
		Total Non-Point UCBOB	Total Non-Point UNBOD	SOD @ 20°C	Total Calb. Benthic Load (TCBL)	Reach Length	Proj. Model Avg. Reach Width	Proj. Temp.	Background Benthic Load	Man-Made Benthic Load	Background percentage reduction	Percentage Reduction of man-made sources	Reduced Man-Made Benthic Load	Reduced TCBL adjusted for MOS	Reduced Total UCBOB Load	Reduced UNBOD Load	Reduced SOD Load at Projection Temp.	SOD @ 20°C	Total Non-Point UCBOB INPUTS	Non-Point UNBOD INPUTS	Total MOS at Projection Temp.	Non-Point UCBOB LA	Non-Point UNBOD LA	SOD LA at Projection Temp.
		g O ₂ / [(m ²)(day)]	Kilo-meters	Meters	(deg Celcius)	g O ₂ / [(m ²)(day)]	g O ₂ / [(m ²)(day)]	%	%	g O ₂ / [(m ²)(day)]	g O ₂ / [(m ²)(day)]	kg O ₂ /day	kg O ₂ /day	kg O ₂ /day	g O ₂ / [(m ²)(day)]	kg O ₂ /day	kg O ₂ /day	kg O ₂ /day	kg O ₂ /day	kg O ₂ /day	kg O ₂ /day			
DRAINAGE DITCH 11 - UPLAND	61	0.142	0.063	0.50	0.705	1.00	2.00	20.80	0.00	0.70	0%	38%	0.44	0.55	0.18	0.08	0.65	0.388	0.221	0.097	0.23	0.18	0.08	0.65
TRIBUTARY 6 - TIDAL	62	0.319	0.103	0.50	0.922	0.60	12.00	20.80	0.00	0.92	0%	38%	0.57	0.71	1.43	0.46	2.35	0.388	1.783	0.574	1.06	1.43	0.46	2.35
LIBERTY FROM TRIB 6 TO TRIB 10	63	3.793	1.138	0.00	4.931	0.20	52.73	20.80	0.00	4.93	0%	38%	3.06	3.82	24.80	7.44	0.00	0.000	31.000	9.300	8.06	24.80	7.44	0.00
TRIBUTARY 10 - UPLAND	64	0.144	0.064	0.50	0.708	0.50	2.00	20.80	0.00	0.71	0%	38%	0.44	0.55	0.09	0.04	0.33	0.388	0.111	0.050	0.11	0.09	0.04	0.33
TRIBUTARY 10 - TIDAL	65	0.331	0.108	0.50	0.938	0.20	13.00	20.80	0.00	0.94	0%	38%	0.58	0.73	0.53	0.17	0.85	0.388	0.667	0.217	0.39	0.53	0.17	0.85
LIBERTY FROM TRIB 10 TO BL07	66	4.690	0.767	0.21	5.667	0.90	52.12	20.80	0.00	5.67	0%	38%	3.51	4.39	136.40	22.32	6.42	0.163	170.500	27.900	41.29	136.40	22.32	6.42
LIBERTY FROM BL07 TO TRIB 8	67	0.000	3.262	0.22	3.482	0.10	52.12	20.80	0.00	3.48	0%	38%	2.16	2.70	0.00	10.54	0.75	0.171	0.000	13.175	2.82	0.00	10.54	0.75
TRIBUTARY 8 - UPLAND	68	0.147	0.065	0.50	0.712	0.50	2.00	20.80	0.00	0.71	0%	38%	0.44	0.55	0.09	0.04	0.33	0.388	0.114	0.051	0.11	0.09	0.04	0.33
TRIBUTARY 8 - TIDAL	69	0.290	0.099	0.50	0.889	0.10	10.00	20.80	0.00	0.89	0%	38%	0.55	0.69	0.18	0.06	0.33	0.388	0.225	0.077	0.14	0.18	0.06	0.33
LIBERTY FROM TRIB 8 TO M1	70	0.799	0.416	0.20	1.415	0.60	52.12	20.80	0.00	1.42	0%	38%	0.88	1.10	15.50	8.06	4.08	0.155	19.375	10.075	6.91	15.50	8.06	4.08
MARINA 1 - TIDAL	71	0.523	0.139	0.50	1.163	0.20	32.00	20.80	0.00	1.16	0%	38%	0.72	0.90	2.08	0.55	2.09	0.388	2.596	0.690	1.18	2.08	0.55	2.09
LIBERTY FROM M1 TO M2	72	8.202	1.969	0.00	10.171	0.10	56.54	20.80	0.00	10.17	0%	38%	6.31	7.88	28.75	6.90	0.00	0.000	35.940	8.626	8.91	28.75	6.90	0.00
MARINA02 - TIDAL	73	0.503	0.139	0.50	1.142	1.80	32.00	20.80	0.00	1.14	0%	38%	0.71	0.89	17.98	4.96	18.78	0.388	22.475	6.200	10.43	17.98	4.96	18.78
LIBERTY FROM M2 TO B PAQUET	74	1.758	0.000	0.00	1.758	1.40	60.96	20.80	0.00	1.76	0%	38%	1.09	1.36	93.00	0.00	0.00	0.000	116.250	0.000	23.25	93.00	0.00	0.00
HWY 190 (DD13-PAQUET HEADWATERS)	75	0.139	0.064	0.50	0.702	1.40	2.00	20.80	0.00	0.70	0%	35%	0.46	0.57	0.25	0.12	0.96	0.406	0.316	0.145	0.33	0.25	0.12	0.96
PAQUET FROM HWY 190 TO DD16	76	0.183	0.078	0.50	0.761	2.10	3.08	20.80	0.00	0.76	0%	35%	0.49	0.62	0.77	0.33	2.21	0.406	0.963	0.409	0.83	0.77	0.33	2.21
DD16	77	0.153	0.067	0.50	0.720	0.90	2.00	20.80	0.00	0.72	0%	35%	0.47	0.59	0.18	0.08	0.62	0.406	0.224	0.098	0.22	0.18	0.08	0.62
PAQUET FROM RKM 5.1 TO DD17	78	0.192	0.067	0.50	0.760	1.30	3.16	20.80	0.00	0.76	0%	35%	0.49	0.62	0.51	0.18	1.40	0.406	0.642	0.225	0.52	0.51	0.18	1.40
DD17	79	0.082	0.036	0.50	0.618	1.70	2.00	20.80	0.00	0.62	0%	35%	0.40	0.50	0.18	0.08	1.16	0.406	0.227	0.100	0.36	0.18	0.08	1.16
PAQUET FROM DD17 TO TIDAL REACH	80	0.114	0.067	0.50	0.681	0.40	3.24	20.80	0.00	0.68	0%	35%	0.44	0.55	0.10	0.06	0.44	0.406	0.120	0.071	0.15	0.10	0.06	0.44
PAQUET TIDAL REACH TO BP02	81	4.418	0.767	0.32	5.505	1.00	18.90	20.80	0.00	5.51	0%	35%	3.58	4.47	54.28	9.43	4.13	0.260	67.844	11.781	16.96	54.28	9.43	4.13
PAQUET FROM BP02 TO BP03	82	2.529	0.273	0.76	3.562	0.80	18.90	20.80	0.00	3.56	0%	35%	2.32	2.89	24.85	2.69	7.86	0.618	31.065	3.358	8.85	24.85	2.69	7.86
PAQUET FROM BP03 TO TRIB 24	83	3.436	0.625	0.60	4.661	0.30	21.34	20.80	0.00	4.66	0%	35%	3.03	3.79	14.30	2.60	2.63	0.488	17.875	3.250	4.88	14.30	2.60	2.63
TRIB 24 FROM TOP TO PAQUET	84	0.373	0.112	0.50	0.985	0.40	20.10	20.80	0.00	0.99	0%	35%	0.64	0.80	1.95	0.59	2.75	0.406	2.438	0.731	1.32	1.95	0.59	2.75
PAQUET FROM TRIB 24 TO TRIB 25	85	5.467	1.328	0.30	7.095	0.30	21.34	20.80	0.00	7.09	0%	35%	4.61	5.76	22.75	5.53	1.31	0.244	28.438	6.906	7.40	22.75	5.53	1.31
TRIB 25 FROM TOP TO RKM 0.3	86	0.399	0.115	0.50	1.015	0.70	16.46	20.80	0.00	1.01	0%	35%	0.66	0.82	2.99	0.86	3.94	0.406	3.738	1.081	1.95	2.99	0.86	3.94
TRIB 25 FROM RKM 0.3 TO PAQUET	87	0.375	0.115	0.50	0.990	0.30	32.00	20.80	0.00	0.99	0%	35%	0.64	0.80	2.34	0.72	3.28	0.406	2.925	0.894	1.58	2.34	0.72	3.28
PAQUET FROM TRIB 25 TO BP04	88	6.152	1.435	0.00	7.587	0.80	30.48	20.80	0.00	7.59	0%	35%	4.93	6.16	97.50	22.75	0.00	0.000	121.875	28.438	30.06	97.50	22.75	0.00
PAQUET FROM BP04 TO LIBERTY	89	26.247	4.921	0.00	31.168	0.20	30.48	20.80	0.00	31.17	0%	35%	20.26	25.32	104.00	19.50	0.00	0.000	130.000	24.375	30.88	104.00	19.50	0.00
LIBERTY FROM PAQUET TO BONFOUCA	90	2.237	0.000	0.00	2.237	1.10	60.96	20.80	0.00	2.24	0%	35%	1.45	1.82	97.50	0.00	0.00	0.000	121.875	0.000	24.38	97.50	0.00	0.00
BONFOUCA FROM LIBERTY TO BB06	91	0.000	0.000	0.00	0.000	0.80	105.59	20.80	0.00	0.00	0%	35%	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00
Sub-Total										281.90			145.49	181.86	2937.00	357.53	460.41		3671.25	446.92	938.74	2937.00	357.53	460.41

Winter TMDL Calculations for Point Source loads:

BAYOU LIBERTY 040905

Input data into the shaded cells.

Point Source Loading Calculations																									
Facility Name	Waterbody	Reach No.	Element Number	Included in the Projection Model (Yes/No)	Anticipated flow (gpd)	Anticipated/design flow (cms)	Flow with MOS (cms)	Proposed Permit Limits			UCBOD			UNBOD				Sub-Total of Point Source Phosphorus Loads			Sub-Total of Point Source BOD Loads				
								CBOD ₅ (mg/l)	NH ₃ N (mg/l)	MOS (%)	Ultimate Conc. (mg/l) (2)	Loads (kg/day) (1)	WLA (kg/day)	Reserve/MOS Load (kg/day)	Ultimate Conc. (mg/l) (2)	Loads (kg/day) (1)	WLA (kg/day)	Reserve/MOS Load (kg/day)	Loads (kg/day)	WLA (kg/day)	Reserve/MOS Load (kg/day)	Loads (kg/day)	WLA (kg/day)	Reserve/MOS (kg/day)	
Fernandez-Zimmerle LLC	Bayou Liberty	1609/LAG533438	N/A	N/A	NO	600	0.00002629	0.00003286	10.0	5.0	20%	23.0	0.065298	0.052239	0.013060	21.500000	0.061040	0.048832	0.012208	0.000000	0.000000	0.000000	0.126338	0.101071	0.025268
Bayou Liberty Water Association	Bayou Liberty	12830/LAG530716	58	667	YES	180	0.00000789	0.00000986	10.0	10.0	20%	23.0	0.019590	0.015672	0.003918	43.000000	0.036624	0.029299	0.007325	0.000000	0.000000	0.000000	0.056214	0.044971	0.011243
Herron Wire Products Inc	Bayou Liberty	14221/LAG532809	46	555	YES	150	0.00000657	0.00000821	10.0	10.0	20%	23.0	0.016325	0.013060	0.003265	43.000000	0.030520	0.024416	0.006104	0.000000	0.000000	0.000000	0.046845	0.037476	0.009369
Coast Waterworks Inc - The Meadows Subdivision	Bayou Liberty	19119/LA0073148	41	470	YES	276000	0.01209200	0.01511500	5.0	2.0	20%	11.5	15.018264	12.014611	3.003653	8.600000	11.231050	8.984840	2.246210	0.000000	0.000000	0.000000	26.249314	20.999451	5.249863
LA Water Service Inc - Oakmont Subdivision	Bayou Liberty	19471/LAG570031	43	498	YES	70600	0.00309320	0.00386650	5.0	2.0	20%	11.5	3.841754	3.073404	0.768351	8.600000	2.872964	2.298371	0.574593	0.000000	0.000000	0.000000	6.714719	5.371775	1.342944
Louisiana Water Service Inc - Huntwyck Village	Bayou Liberty	19476/LA0065714	53	633	YES	278000	0.01218000	0.01522500	10.0	2.0	20%	23.0	30.255120	24.204096	6.051024	8.600000	11.312784	9.050227	2.262557	0.000000	0.000000	0.000000	41.567904	33.254323	8.313581
Royale Gardens Subdivision	Bayou Liberty	19797/LAG570046	N/A	N/A	NO	35000	0.00153344	0.00191680	10.0	5.0	20%	23.0	3.809071	3.047257	0.761814	21.500000	3.560653	2.848523	0.712131	0.000000	0.000000	0.000000	7.369724	5.895779	1.473945
2315 Hwy 190 Building	Bayou Liberty	27080/LAG532824	46	555	YES	320	0.00001402	0.00001753	10.0	10.0	20%	23.0	0.034826	0.027861	0.006965	43.000000	0.065109	0.052087	0.013022	0.000000	0.000000	0.000000	0.099935	0.079948	0.019987
Curtis Environmental Utilities Inc - Timber Ridge Subdivision	Bayou Paquet	33837/LAG570109	79	819	YES	44400	0.00194530	0.00243160	10.0	2.0	20%	23.0	4.832076	3.865660	0.966415	8.600000	1.806776	1.445421	0.361355	0.000000	0.000000	0.000000	6.638852	5.311081	1.327770
The Southern District of Lutheran Church-Missouri Synod	Bayou Liberty	42602/LAG531992	43	494	YES	2400	0.00010515	0.00013144	10.0	5.0	20%	23.0	0.261193	0.208954	0.052239	21.500000	0.244158	0.195327	0.048832	0.000000	0.000000	0.000000	0.505351	0.404281	0.101070
Royal Golf Club Inc	Bayou Liberty	43097/LAG530890	43	482	YES	4340	0.00019015	0.00023769	10.0	5.0	20%	23.0	0.472333	0.377866	0.094467	21.500000	0.441528	0.353223	0.088306	0.000000	0.000000	0.000000	0.913861	0.731089	0.182772
St Tammany Parish Police Jury - Thompson Road WWTP	Bayou Liberty	43394/LAG530650	46	556	YES	20	0.00000088	0.00000110	10.0	10.0	20%	23.0	0.002177	0.001741	0.000435	43.000000	0.004070	0.003256	0.000814	0.000000	0.000000	0.000000	0.006246	0.004997	0.001249
Pit Stop #3	Bayou Liberty	70933/LAG531535	46	557	YES	1060	0.00004644	0.00005805	10.0	10.0	20%	23.0	0.115359	0.092288	0.023072	43.000000	0.215672	0.172538	0.043134	0.000000	0.000000	0.000000	0.331031	0.264825	0.066206
Liberty Food Store	Bayou Liberty	71168/LAG531327	64	698	YES	570	0.00002497	0.00003122	10.0	10.0	20%	23.0	0.062033	0.049626	0.012407	43.000000	0.115975	0.092780	0.023195	0.000000	0.000000	0.000000	0.178008	0.142406	0.035602
Thompson Road Grocery Store #615	Bayou Liberty	74116/LAG532825	46	556	YES	80	0.00000351	0.00000438	10.0	10.0	20%	23.0	0.008706	0.006965	0.001741	43.000000	0.016277	0.013022	0.003255	0.000000	0.000000	0.000000	0.024984	0.019987	0.004997
Cleco Power LLC - Slidell Service Center	Bayou Liberty	83359/LAG532103	53	614	YES	200	0.00000876	0.00001095	10.0	10.0	20%	23.0	0.021766	0.017413	0.004353	43.000000	0.040693	0.032554	0.008139	0.000000	0.000000	0.000000	0.062459	0.049967	0.012492
Butera Investments Inc - Lake Castle Private School	Bayou Liberty	99225/LAG541304	51	585	YES	8700	0.00038117	0.00047646	10.0	5.0	20%	23.0	0.946826	0.757461	0.189365	21.500000	0.885077	0.708061	0.177015	0.000000	0.000000	0.000000	1.831903	1.465522	0.366381
Louisiana Lumber Inc - Construction Project	Bayou Liberty	107578/LAG531777	53	621	YES	400	0.00001753	0.00002191	10.0	10.0	20%	23.0	0.043532	0.034826	0.008706	43.000000	0.081386	0.065109	0.016277	0.000000	0.000000	0.000000	0.124918	0.099935	0.024984
ABC Supply Co Inc	Bayou Liberty	113210/LAG531454	46	551	YES	140	0.00000613	0.00000767	10.0	10.0	20%	23.0	0.015236	0.012189	0.003047	43.000000	0.028485	0.022788	0.005697	0.000000	0.000000	0.000000	0.043722	0.034977	0.008744
G&S Bear Enterprises LLC	Bayou Liberty	117778/LAG531527	53	615	YES	160	0.00000701	0.00000876	10.0	10.0	20%	23.0	0.017413	0.013930	0.003483	43.000000	0.032554	0.026044	0.006511	0.000000	0.000000	0.000000	0.049967	0.039974	0.009993
Indian Hills RV Park	Bayou Liberty	119158/LAG541174	46	544	YES	7875	0.00034502	0.00043128	10.0	5.0	20%	23.0	0.857030	0.685624	0.171406	21.500000	0.801136	0.640909	0.160227	0.000000	0.000000	0.000000	1.658166	1.326533	0.331633

Winter TMDL Calculations for Point Source loads:

BAYOU LIBERTY 040905

Input data into the shaded cells.

Point Source Loading Calculations																									
Facility Name	Waterbody	Reach No.	Element Number	Included in the Projection Model (Yes/No)	Anticipated flow (gpd)	Anticipated/design flow (cms)	Flow with MOS (cms)	Proposed Permit Limits			UCBOD			UNBOD			Sub-Total of Point Source Phosphorus Loads			Sub-Total of Point Source BOD Loads					
								CBOD ₅ (mg/l)	NH ₃ N (mg/l)	MOS (%)	Ultimate Conc. (mg/l) (2)	Loads (kg/day) (1)	WLA (kg/day)	Reserve/MOS Load (kg/day)	Ultimate Conc. (mg/l) (2)	Loads (kg/day) (1)	WLA (kg/day)	Reserve/MOS Load (kg/day)	Loads (kg/day)	WLA (kg/day)	Reserve/MOS Load (kg/day)	Loads (kg/day)	WLA (kg/day)	Reserve/MOS Load (kg/day)	
Dollar General Store #6578	Bayou Liberty	125413/LAG531717	46	548	YES	120	0.00000526	0.00000657	10.0	10.0	20%	23.0	0.013060	0.010448	0.002612	43.000000	0.024416	0.019533	0.004883	0.000000	0.000000	0.000000	0.037475	0.029980	0.007495
Hanna Brothers Extreme Motion Picture Catering	Bayou Liberty	129058/LAG531861	53	616	YES	160	0.00000701	0.00000876	10.0	10.0	20%	23.0	0.017413	0.013930	0.003483	43.000000	0.032554	0.026044	0.006511	0.000000	0.000000	0.000000	0.049967	0.039974	0.009993
Gause West Properties - Shopping Center for Faye Wagner	Bayou Liberty	129831/LAG531980	53	619	YES	1932	0.00008465	0.00010581	10.0	10.0	20%	23.0	0.210261	0.168209	0.042052	43.000000	0.393096	0.314477	0.078619	0.000000	0.000000	0.000000	0.603357	0.482685	0.120671
Omni Storage VI LLC	Bayou Liberty	140231/LAG532056	46	550	YES	300	0.00001314	0.00001643	10.0	10.0	20%	23.0	0.032650	0.026120	0.006530	43.000000	0.061041	0.048833	0.012208	0.000000	0.000000	0.000000	0.093690	0.074952	0.018738
Airgas Gulf States - WWTP	Bayou Liberty	155400/LAG532559	53	616	YES	140	0.00000613	0.00000767	10.0	10.0	20%	23.0	0.015236	0.012189	0.003047	43.000000	0.028485	0.022788	0.005697	0.000000	0.000000	0.000000	0.043722	0.034977	0.008744
CRSProperties LLC - Albers AC & Heating	Bayou Liberty	157679/LAG532786	53	602	YES	120	0.00000526	0.00000657	10.0	10.0	20%	23.0	0.013060	0.010448	0.002612	43.000000	0.024416	0.019533	0.004883	0.000000	0.000000	0.000000	0.037475	0.029980	0.007495
Seventh-Day Adventist Church - WWTP	Bayou Liberty	157724/LAG532799	46	548	YES	1250	0.00005477	0.00006846	10.0	10.0	20%	23.0	0.136039	0.108831	0.027208	43.000000	0.254333	0.203467	0.050867	0.000000	0.000000	0.000000	0.390372	0.312298	0.078074
Guardian Angels Learning Center II	Bayou Liberty	157922/LAG532862	43	495	YES	930	0.00004075	0.00005093	10.0	5.0	20%	23.0	0.101213	0.080970	0.020243	21.500000	0.094612	0.075690	0.018922	0.000000	0.000000	0.000000	0.195825	0.156660	0.039165
Equity Creek Real Estate LLC	Bayou Liberty	157924/LAG533803	N/A	N/A	NO	30	0.00000131	0.00000164	10.0	10.0	20%	23.0	0.003265	0.002612	0.000653	43.000000	0.006104	0.004883	0.001221	0.000000	0.000000	0.000000	0.009369	0.007495	0.001874
All American Lodge Greatest in Elkdome	Bayou Liberty	157925/LAG532887	49	576	YES	1600	0.00007010	0.00008763	10.0	10.0	20%	23.0	0.174128	0.139303	0.034826	43.000000	0.325544	0.260436	0.065109	0.000000	0.000000	0.000000	0.499673	0.399738	0.099935
RID Contractors ---> AVC Electric	Bayou Liberty	157926/LAG533686	53	617	YES	20	0.00000088	0.00000110	10.0	10.0	20%	23.0	0.002177	0.001741	0.000435	43.000000	0.004070	0.003256	0.000814	0.000000	0.000000	0.000000	0.006246	0.004997	0.001249
2319 Hwy 190 Building	Bayou Liberty	157927/LAG532861	46	555	YES	40	0.00000175	0.00000219	10.0	10.0	20%	23.0	0.004353	0.003483	0.000871	43.000000	0.008139	0.006511	0.001628	0.000000	0.000000	0.000000	0.012492	0.009993	0.002498
2317 Hwy 190 Building	Bayou Liberty	157928/LAG532860	46	555	YES	60	0.00000263	0.00000329	10.0	10.0	20%	23.0	0.006530	0.005224	0.001306	43.000000	0.012208	0.009767	0.002442	0.000000	0.000000	0.000000	0.018738	0.014990	0.003748
Assunta's Italian Restaurant of Slidell	Bayou Liberty	157931/LAG532904	46	536	YES	2900	0.00012706	0.00015883	10.0	10.0	20%	23.0	0.315617	0.252494	0.063123	43.000000	0.590067	0.472053	0.118013	0.000000	0.000000	0.000000	0.905684	0.724547	0.181137
Lion Consulting Inc - Lion Multimedia & Consulting	Bayou Liberty	157933/LAG532890	46	552	YES	40	0.00000175	0.00000219	10.0	10.0	20%	23.0	0.004353	0.003483	0.000871	43.000000	0.008139	0.006511	0.001628	0.000000	0.000000	0.000000	0.012492	0.009993	0.002498
Chill Rite	Bayou Liberty	157934/LAG532842	46	553	YES	220	0.00000964	0.00001205	10.0	10.0	20%	23.0	0.023943	0.019154	0.004789	43.000000	0.044763	0.035810	0.008953	0.000000	0.000000	0.000000	0.068705	0.054964	0.013741
M & R File Service LLC - Russell & Michelle Bolotte	Bayou Liberty	163444/LAG533101	53	619	YES	60	0.00000263	0.00000329	10.0	10.0	20%	23.0	0.006530	0.005224	0.001306	43.000000	0.012208	0.009767	0.002442	0.000000	0.000000	0.000000	0.018738	0.014990	0.003748
Southern Pipe	Bayou Liberty	168384/LAG533350	N/A	N/A	NO	80	0.00000351	0.00000438	10.0	5.0	20%	23.0	0.008706	0.006965	0.001741	21.500000	0.008139	0.006511	0.001628	0.000000	0.000000	0.000000	0.016845	0.013476	0.003369
Carl Hodge Rental	Bayou Bonfouca	169771/LAG533393	N/A	N/A	NO	160	0.00000701	0.00000876	10.0	5.0	20%	23.0	0.017413	0.013930	0.003483	21.500000	0.016277	0.013022	0.003255	0.000000	0.000000	0.000000	0.033690	0.026952	0.006738
Diversified Oil Field Services Inc	Bayou Vincent	169801/LA0125334	N/A	N/A	NO	400	0.00001753	0.00002191	10.0	5.0	20%	23.0	0.043532	0.034826	0.008706	21.500000	0.040693	0.032555	0.008139	0.000000	0.000000	0.000000	0.084225	0.067380	0.016845
SUB-TOTAL Loads													61.87	49.49	12.37		35.87	28.70	7.17	0.00	0.00	0.00	97.74	78.19	19.55

Winter TMDL Calculations for Point Source loads:

BAYOU BONFOUCA 040907

Input data into the shaded cells.

Point Source Loading Calculations																									
Facility Name	Waterbody	Reach No.	Element Number	Included in the Projection Model (Yes/No)	Anticipated flow (gpd)	Anticipated/design flow (cms)	Flow with MOS (cms)	Proposed Permit Limits			UCBOD			UNBOD			Sub-Total of Point Source Phosphorus Loads			Sub-Total of Point Source BOD Loads					
								CBOD ₅ (mg/l)	NH ₃ -N (mg/l)	MOS (%)	Ultimate Conc. (mg/l) (2)	Loads (kg/day) (1)	WLA (kg/day)	Reserve/MOS Load (kg/day)	Ultimate Conc. (mg/l) (2)	Loads (kg/day) (1)	WLA (kg/day)	Reserve/MOS Load (kg/day)	Loads (kg/day)	WLA (kg/day)	Reserve/MOS Load (kg/day)	Loads (kg/day)	WLA (kg/day)	Reserve/MOS (kg/day)	
						A	A1 = A/(1-E)	B	C	E	F = 2.3 x B	G = (86.4)(A1)(F)	H = (1-E) x G	I = (E)(G)	J = 4.3 x C	K = (86.4)(A1)(J)	L = (1-E) x K	M = (D)(K)	N = 86.4(A1)(D)	O = (1-E) x N	P = E x N	G + K + N	H + L + O	I + M + P	
Cut-Rite, Inc. Cut Rige/Northshore Driveline	Bayou Liberty	13288/LAG533518	N/A	N/A	NO	500	2.1906E-05	2.7383E-05	10.0	5.0	20%	23.0	0.054415	0.043532	0.010883	21.500000	0.050866	0.040693	0.010173	0.000000	0.000000	0.000000	0.105282	0.084225	0.021056
ExxonMobil Oil Corp #51367	Bayou Vincent	13400/LAG530198	5	80	YES	2,500	1.0953E-04	1.3691E-04	10.0	5.0	20%	23.0	0.272073	0.217658	0.054415	21.500000	0.254329	0.203463	0.050866	0.000000	0.000000	0.000000	0.526401	0.421121	0.105280
Advantage Tire & Wheel	Bayou Liberty	14744/LAG470293	N/A	N/A	NO	1500	6.5719E-05	8.2149E-05	10.0	5.0	20%	23.0	0.163246	0.130597	0.032649	21.500000	0.152599	0.122080	0.030520	0.000000	0.000000	0.000000	0.315845	0.252676	0.063169
Sumbelt Innovative Plastics Inc contact cooling water	Bayou Liberty	17609/LA0090409	53	616	YES	13000	0.00056956	0.00071195	10.0	5.0	20%	23.0	1.414787	1.131830	0.282957	21.500000	1.322518	1.058015	0.264504	0.000000	0.000000	0.000000	2.737305	2.189844	0.547461
Stones Throw Apartments	Bayou Vincent	17938/LAG570066	5	67	YES	19,200	8.4120E-04	1.0515E-03	10.0	2.0	20%	23.0	2.089541	1.671633	0.417908	8.600000	0.781307	0.625045	0.156261	0.000000	0.000000	0.000000	2.870847	2.296678	0.574169
Eagle Lake Mobile Home Park	Bayou Vincent	19785/LAG570120	3	48	YES	63,000	2.7602E-03	3.4503E-03	5.0	2.0	20%	11.5	3.428168	2.742535	0.685634	8.600000	2.563674	2.050939	0.512735	0.000000	0.000000	0.000000	5.991842	4.793474	1.198368
Western International Gas & Cylinder Inc - Sidell Facility	Bayou Liberty	20072/LA0096334	N/A	N/A	NO	4480	1.9628E-04	2.4535E-04	10.0	5.0	20%	23.0	0.487561	0.390049	0.097512	21.500000	0.455764	0.364611	0.091153	0.000000	0.000000	0.000000	0.943325	0.754660	0.188665
John's Automotive Machine Shop Inc	Bayou Bonfouca	24697/LAG530274	9	119	YES	40	1.7525E-06	2.1906E-06	10.0	5.0	20%	23.0	0.004353	0.003483	0.000871	21.500000	0.004069	0.003255	0.000814	0.000000	0.000000	0.000000	0.008423	0.006738	0.001685
Jung's Automotive, Inc	Bayou Liberty	25610/LAG470303	N/A	N/A	NO	300	1.3144E-05	1.6430E-05	10.0	5.0	20%	23.0	0.032649	0.026119	0.006530	21.500000	0.030520	0.024416	0.006104	0.000000	0.000000	0.000000	0.063169	0.050535	0.012634
CM Auto Repair Inc	Bayou Paquet	27558/LAG470149	N/A	N/A	NO	500	2.1906E-05	2.7383E-05	10.0	10.0	20%	23.0	0.054415	0.043532	0.010883	43.000000	0.101733	0.081386	0.020347	0.000000	0.000000	0.000000	0.156148	0.124919	0.031230
Randall A Evans DDS LLC	Bayou Bonfouca	34988/LAG533431	N/A	N/A	NO	500	2.1906E-05	2.7383E-05	10.0	5.0	20%	23.0	0.054415	0.043532	0.010883	21.500000	0.050866	0.040693	0.010173	0.000000	0.000000	0.000000	0.105282	0.084225	0.021056
Rowland Duffour Clinic	Bayou Paquet	36461/LAG533501	N/A	N/A	NO	500	2.1906E-05	2.7383E-05	10.0	10.0	20%	23.0	0.054415	0.043532	0.010883	43.000000	0.101733	0.081386	0.020347	0.000000	0.000000	0.000000	0.156148	0.124919	0.031230
Brown's Village Road Sand Pit	Bayou Bonfouca	40412/LAG490031	N/A	N/A	NO	100	4.3813E-06	5.4766E-06	10.0	5.0	20%	23.0	0.010883	0.008706	0.002177	21.500000	0.010173	0.008139	0.002035	0.000000	0.000000	0.000000	0.021056	0.016845	0.004211
Northshore Chemical LLC	Bayou Vincent	41239/LA0122459	5	84	YES	55	2.4097E-06	3.0121E-06	10.0	5.0	20%	23.0	0.005986	0.004789	0.001197	21.500000	0.005595	0.004476	0.001119	0.000000	0.000000	0.000000	0.011581	0.009265	0.002316
Factory Direct Furniture	Bayou Bonfouca	41484/LAG530200	18	231	YES	40	1.7525E-06	2.1906E-06	10.0	5.0	20%	23.0	0.004353	0.003483	0.000871	21.500000	0.004069	0.003255	0.000814	0.000000	0.000000	0.000000	0.008423	0.006738	0.001685
Ernest Walder Sr	Bayou Bonfouca	41768/LAG530736	18	234	YES	360	1.5773E-05	1.9716E-05	10.0	5.0	20%	23.0	0.039180	0.031344	0.007836	21.500000	0.036625	0.029300	0.007325	0.000000	0.000000	0.000000	0.075805	0.060644	0.015161
LCR-M - Plumbing Supply	Bayou Vincent	41993/LAG530703	5	81	YES	120	5.2575E-06	6.5719E-06	10.0	5.0	20%	23.0	0.013060	0.010448	0.002612	21.500000	0.012208	0.009766	0.002442	0.000000	0.000000	0.000000	0.025268	0.020214	0.005054
J&K Management LLC	Bayou Vincent	41995/LAG532382	4	63	YES	180	7.8863E-06	9.8579E-06	10.0	5.0	20%	23.0	0.019590	0.015672	0.003918	21.500000	0.018312	0.014650	0.003662	0.000000	0.000000	0.000000	0.037902	0.030321	0.007580
Capitol Steel Inc - Sidell	Bayou Bonfouca	42161/LAG530763	N/A	N/A	NO	1400	6.1338E-05	7.6672E-05	10.0	5.0	20%	23.0	0.152363	0.121890	0.030473	21.500000	0.142426	0.113941	0.028485	0.000000	0.000000	0.000000	0.294789	0.235831	0.058958
New Life Ministries	Bayou Bonfouca	42622/LAG530943	18	232	YES	490	2.1468E-05	2.6835E-05	10.0	5.0	20%	23.0	0.053327	0.042661	0.010665	21.500000	0.049849	0.039879	0.009970	0.000000	0.000000	0.000000	0.103175	0.082540	0.020635
NU-Lite Electrical Wholesalers	Bayou Liberty	42686/LAG530397	53	601	YES	80	0.00000351	0.00000438	10.0	10.0	20%	23.0	0.008706	0.006965	0.001741	43.000000	0.016277	0.013022	0.003255	0.000000	0.000000	0.000000	0.024984	0.019987	0.004997
Piney Ridge Mobile Home Park LLC	Bayou Bonfouca	42841/LAG540932	18	222	YES	9,300	4.0746E-04	5.0933E-04	10.0	2.0	20%	23.0	1.012131	0.809705	0.202426	8.600000	0.378449	0.302759	0.075690	0.000000	0.000000	0.000000	1.390579	1.112464	0.278116
S&H Good Eats	Bayou Bonfouca	42865/LAG533440	18	224	YES	490	2.1468E-05	2.6835E-05	10.0	5.0	20%	23.0	0.053327	0.042661	0.010665	21.500000	0.049849	0.039879	0.009970	0.000000	0.000000	0.000000	0.103175	0.082540	0.020635
Coastal Property Holdings LLC - Shady Pines Mobile Home Park	Bayou Bonfouca	43212/LAG540642	18	228	YES	10,500	4.6003E-04	5.7054E-04	10.0	2.0	20%	23.0	1.142715	0.914172	0.228543	8.600000	0.427276	0.341821	0.085455	0.000000	0.000000	0.000000	1.569990	1.255992	0.313998
Skater's Paradise II, Inc.	Bayou Bonfouca	43242/LAG530811	18	230	YES	540	2.3659E-05	2.9574E-05	10.0	5.0	20%	23.0	0.058769	0.047015	0.011754	21.500000	0.054936	0.043949	0.010987	0.000000	0.000000	0.000000	0.113705	0.090964	0.022741
Sidell Welding Service Inc	Bayou Bonfouca	43249/LAG530660	N/A	N/A	NO	400	1.7525E-05	2.1906E-05	10.0	5.0	20%	23.0	0.043532	0.034826	0.008706	21.500000	0.040693	0.032555	0.008139	0.000000	0.000000	0.000000	0.084225	0.067380	0.016845

BAYOU BONFOUCA 040907

Input data into the shaded cells.

Point Source Loading Calculations																									
Facility Name	Waterbody	Reach No.	Element Number	Included in the Projection Model (Yes/No)	Anticipated flow (gpd)	Anticipated/ design flow (cms)	Flow with MOS (cms)	Proposed Permit Limits			UCBOD				UNBOD				Sub-Total of Point Source Phosphorus Loads			Sub-Total of Point Source BOD Loads			
								CBOD ₅ (mg/l)	NH ₃ N (mg/l)	MOS (%)	Ultimate Conc. (mg/l) (2)	Loads (kg/day) (1)	WLA (kg/day)	Reserve/ MOS Load (kg/day)	Ultimate Conc. (mg/l) (2)	Loads (kg/day) (1)	WLA (kg/day)	Reserve/ MOS Load (kg/day)	Loads (kg/day)	WLA (kg/day)	Reserve/ MOS Load (kg/day)	Loads (kg/day)	WLA (kg/day)	Reserve/ MOS (kg/day)	
						A	A1 = A/(1-E)	B	C	E	F = 2.3 x B	G = (86.4)(A1)(E)	H = (1-E) x G	I = (E)(G)	J = 4.3 x C	K = (86.4)(A1)(J)	L = (1-E) x K	M = (D)(K)	N = (86.4)(A1)(D)	O = (1-E) x N	P = E x N	G + K + N	H + L + O	I + M + P	
South Seas Chinese Restaurant	Bayou Bonfouca	43274/LAG530987	18	227	YES	1,950	8.5435E-05	1.0679E-04	10.0	5.0	20%	23.0	0.212221	0.169776	0.042444	21.500000	0.198380	0.158704	0.039676	0.000000	0.000000	0.000000	0.410601	0.328480	0.082120
Ellis Recycling	Bayou Vincent	43316/LAG480553	5	83	YES	120	5.2575E-06	6.5719E-06	10.0	5.0	20%	23.0	0.013060	0.010448	0.002612	21.500000	0.012208	0.009766	0.002442	0.000000	0.000000	0.000000	0.025268	0.020214	0.005054
St Tammany Parish School Board - Slidell Support Facility	Bayou Vincent	43403/LAG530531	9	135	YES	100	4.3813E-06	5.4766E-06	10.0	5.0	20%	23.0	0.010883	0.008707	0.002177	21.500000	0.010173	0.008139	0.002035	0.000000	0.000000	0.000000	0.021057	0.016845	0.004211
Wadleigh & Associates Inc Medi-Fitness Facility	Bayou Vincent	52386/LA0109495	5	87	YES	300	1.3144E-05	1.6430E-05	10.0	5.0	20%	23.0	0.032650	0.026120	0.006530	21.500000	0.030520	0.024416	0.006104	0.000000	0.000000	0.000000	0.063170	0.050536	0.012634
Blue Bell Creameries Inc	Bayou Liberty	68576/LAG532783	53	601	YES	780	0.00003417	0.00004272	10.0	10.0	20%	23.0	0.084888	0.067911	0.016978	43.000000	0.158704	0.126963	0.031741	0.000000	0.000000	0.000000	0.243592	0.194874	0.048718
I-12 Shell	Bayou Vincent	71531/LAG531734	9	125	YES	160	7.0100E-06	8.7625E-06	10.0	5.0	20%	23.0	0.017413	0.013930	0.003483	21.500000	0.016277	0.013022	0.003255	0.000000	0.000000	0.000000	0.033690	0.026952	0.006738
Jubilee #4815	Bayou Vincent	74005/LAG480587	7	102	YES	1,700	7.4482E-05	9.3103E-05	10.0	5.0	20%	23.0	0.185013	0.148011	0.037003	21.500000	0.172947	0.138358	0.034589	0.000000	0.000000	0.000000	0.357960	0.286368	0.071592
Circle K #1689	Bayou Bonfouca	75145/LAG533633	N/A	N/A	NO	1000	4.3813E-05	5.4766E-05	10.0	5.0	20%	23.0	0.108831	0.087064	0.021766	21.500000	0.101733	0.081386	0.020347	0.000000	0.000000	0.000000	0.210564	0.168451	0.042113
Eagle Carwash	Bayou Vincent	82445/LAG750317	N/A	N/A	NO	500	2.1906E-05	2.7383E-05	10.0	5.0	20%	23.0	0.054415	0.043532	0.010883	21.500000	0.050866	0.040693	0.010173	0.000000	0.000000	0.000000	0.105282	0.084225	0.021056
Terminix - Home Estates Drive Office Project	Gum Bayou	90273/LAG750602	N/A	N/A	NO	320	1.4020E-05	1.7525E-05	10.0	5.0	20%	23.0	0.034826	0.027861	0.006965	21.500000	0.032555	0.026044	0.006511	0.000000	0.000000	0.000000	0.067380	0.053904	0.013476
Charter Communications	Bayou Vincent	96374/LAG531494	9	119	YES	120	5.2575E-06	6.5719E-06	10.0	5.0	20%	23.0	0.013060	0.010448	0.002612	21.500000	0.012208	0.009766	0.002442	0.000000	0.000000	0.000000	0.025268	0.020214	0.005054
Adams Mobile Home Park	Bayou Vincent	98300/LAG541621	5	74	YES	2,100	9.2007E-05	1.1501E-04	10.0	5.0	20%	23.0	0.228545	0.182836	0.045709	21.500000	0.213640	0.170912	0.042728	0.000000	0.000000	0.000000	0.442186	0.353749	0.088437
Tymeless Flooring Inc	Bayou Bonfouca	99281/LAG531318	18	235	YES	100	4.3813E-06	5.4766E-06	10.0	5.0	20%	23.0	0.010883	0.008707	0.002177	21.500000	0.010173	0.008139	0.002035	0.000000	0.000000	0.000000	0.021057	0.016845	0.004211
Baker Sales Inc - Baker Sales Warehouse	Bayou Liberty	103353/LAG531763	53	611	YES	40	0.00000175	0.00000219	10.0	10.0	20%	23.0	0.004353	0.003483	0.000871	43.000000	0.008139	0.006511	0.001628	0.000000	0.000000	0.000000	0.012492	0.009993	0.002498
Johnson Apartments	Bayou Vincent	117172/LAG531511	7	107	YES	800	3.5050E-05	4.3813E-05	10.0	5.0	20%	23.0	0.087064	0.069651	0.017413	21.500000	0.081386	0.065109	0.016277	0.000000	0.000000	0.000000	0.168450	0.134760	0.033690
Beau's Air Conditioning & Heating LLC	Bayou Liberty	117735/LAG531519	53	621	YES	140	0.00000613	0.00000767	10.0	10.0	20%	23.0	0.015236	0.012189	0.003047	43.000000	0.028485	0.022788	0.005697	0.000000	0.000000	0.000000	0.043722	0.034977	0.008744
Venson Harold Seal Apartments	Bayou Vincent	117751/LAG531526	1	1	YES	750	3.2860E-05	4.1075E-05	10.0	5.0	20%	23.0	0.081624	0.065299	0.016325	21.500000	0.076301	0.061041	0.015260	0.000000	0.000000	0.000000	0.157925	0.126340	0.031585
Acadiana Stor-N-Lock	Bayou Bonfouca	120264/LAG531938	18	235	YES	40	1.7525E-06	2.1906E-06	10.0	5.0	20%	23.0	0.004353	0.003483	0.000871	21.500000	0.004069	0.003255	0.000814	0.000000	0.000000	0.000000	0.008423	0.006738	0.001685
CalWes Properties LLC - CalWes Center	Bayou Liberty	126385/LAG532174	53	620	YES	4145	0.00018160	0.00022700	10.0	10.0	20%	23.0	0.451094	0.360876	0.090219	43.000000	0.843350	0.674680	0.168670	0.000000	0.000000	0.000000	1.294445	1.035556	0.258889
Peace Lutheran Church - RV Units	Bayou Bonfouca	133232/LAG532329	18	233	YES	2,370	1.0384E-04	1.2980E-04	10.0	5.0	20%	23.0	0.257939	0.206351	0.051588	21.500000	0.241116	0.192893	0.048223	0.000000	0.000000	0.000000	0.499055	0.399244	0.099811
Jolly Investments LLC - Jolly Investments Apartments	Bayou Bonfouca	133963/LAG541455	18	221	YES	5,700	2.4973E-04	3.1216E-04	10.0	2.0	20%	23.0	0.620329	0.496263	0.124066	8.600000	0.231949	0.185559	0.046390	0.000000	0.000000	0.000000	0.852279	0.681823	0.170456
United Medical Care Walk In Clinic	Bayou Liberty	134229/LAG532037	53	615	YES	200	0.00000876	0.00001095	10.0	10.0	20%	23.0	0.021766	0.017413	0.004353	43.000000	0.040693	0.032554	0.008139	0.000000	0.000000	0.000000	0.062459	0.049967	0.012492
Good Shepherd Lutheran Church	Bayou Bonfouca	148472/LAG532580	14	183	YES	1,100	4.8194E-05	6.0243E-05	10.0	5.0	20%	23.0	0.119714	0.095771	0.023943	21.500000	0.111906	0.089525	0.022381	0.000000	0.000000	0.000000	0.231620	0.185296	0.046324
RDG Properties - Platform Crane - Bldg 2	Bayou Vincent	149820/LAG532253	7	107	YES	600	2.6288E-05	3.2860E-05	10.0	5.0	20%	23.0	0.065299	0.052240	0.013060	21.500000	0.061041	0.048833	0.012208	0.000000	0.000000	0.000000	0.126340	0.101072	0.025268
GBR Properties Inc - Advance Auto	Bayou Liberty	151898/LAG532293	53	625	YES	100	0.00000438	0.00000548	10.0	10.0	20%	23.0	0.010883	0.008707	0.002177	43.000000	0.020347	0.016277	0.004069	0.000000	0.000000	0.000000	0.031230	0.024984	0.006246

Winter TMDL Calculations for Point Source loads:

BAYOU BONFOUCA 040907

Input data into the shaded cells.

Point Source Loading Calculations																									
Facility Name	Waterbody	Reach No.	Element Number	Included in the Projection Model (Yes/No)	Anticipated flow (gpd)	Anticipated/ design flow (cms)	Flow with MOS (cms)	Proposed Permit Limits			UCBOD				UNBOD				Sub-Total of Point Source Phosphorus Loads			Sub-Total of Point Source BOD Loads			
								CBOD ₅ (mg/l)	NH ₃ N (mg/l)	MOS (%)	Ultimate Conc. (mg/l) (2)	Loads (kg/day) (1)	WLA (kg/day)	Reserve/ MOS Load (kg/day)	Ultimate Conc. (mg/l) (2)	Loads (kg/day) (1)	WLA (kg/day)	Reserve/ MOS Load (kg/day)	Loads (kg/day)	WLA (kg/day)	Reserve/ MOS Load (kg/day)	Loads (kg/day)	WLA (kg/day)	Reserve/ MOS (kg/day)	
						A	A1 = A/(1-E)	B	C	E	F = 2.3 x B	G = (86.4)(A1)(F)	H = (1-E) x G	I = (E)(G)	J = 4.3 x C	K = (86.4)(A1)(J)	L = (1-E) x K	M = (D)(K)	N = 86.4(A1)(D)	O = (1-E) x N	P = E x N	G + K + N	H + L + O	I + M + P	
RDG Properties - SE LA Veterans Healthcare & Omni Eng	Bayou Vincent	161936/LAG530000	9	136	YES	600	2.6288E-05	3.2860E-05	10.0	5.0	20%	23.0	0.065299	0.052240	0.013060	21.500000	0.061041	0.048833	0.012208	0.000000	0.000000	0.000000	0.126340	0.101072	0.025268
St Tammany Brake Tag Center - St Tammany Wholesale	Bayou Bonfouca	165431/LAG470290	18	231	YES	40	1.7525E-06	2.1906E-06	10.0	5.0	20%	23.0	0.004353	0.003483	0.000871	21.500000	0.004069	0.003255	0.000814	0.000000	0.000000	0.000000	0.008423	0.006738	0.001685
Coastal Marine Contractors - Main Yard - Ship & Barge Repair	Bayou Bonfouca	167032/LA0124877	N/A	N/A	NO	300	1.3144E-05	1.6430E-05	10.0	5.0	20%	23.0	0.032649	0.026119	0.006530	21.500000	0.030520	0.024416	0.006104	0.000000	0.000000	0.000000	0.063169	0.050535	0.012634
Manual Darby Property	Bayou Bonfouca	167139/LAG533313	N/A	N/A	NO	490	2.1468E-05	2.6835E-05	10.0	5.0	20%	23.0	0.053327	0.042662	0.010665	21.500000	0.049849	0.039879	0.009970	0.000000	0.000000	0.000000	0.103176	0.082541	0.020635
Guardian Angel Learning Center	Bayou Bonfouca	167920/LAG533301	N/A	N/A	NO	510	2.2344E-05	2.7931E-05	10.0	5.0	20%	23.0	0.055504	0.044403	0.011101	21.500000	0.051884	0.041507	0.010377	0.000000	0.000000	0.000000	0.107387	0.085910	0.021477
Sidell Masjid of Al-Islam	Bayou Vincent	167945/LAG533308	N/A	N/A	NO	15	6.5719E-07	8.2149E-07	10.0	5.0	20%	23.0	0.001632	0.001306	0.000326	21.500000	0.001526	0.001221	0.000305	0.000000	0.000000	0.000000	0.003158	0.002527	0.000632
Ozone Aggregates	Bayou Bonfouca	168041/LAG533333	N/A	N/A	NO	80	3.5050E-06	4.3813E-06	10.0	5.0	20%	23.0	0.008706	0.006965	0.001741	21.500000	0.008139	0.006511	0.001628	0.000000	0.000000	0.000000	0.016845	0.013476	0.003369
Arian Nurser & Preschool	Bayou Bonfouca	168045/LAG533353	N/A	N/A	NO	950	4.1622E-05	5.2028E-05	10.0	5.0	20%	23.0	0.103389	0.082711	0.020678	21.500000	0.096646	0.077317	0.019329	0.000000	0.000000	0.000000	0.200035	0.160028	0.040007
Romar Services Inc - Warehouse	Bayou Bonfouca	168139/LAG533302	N/A	N/A	NO	80	3.5050E-06	4.3813E-06	10.0	5.0	20%	23.0	0.008706	0.006965	0.001741	21.500000	0.008139	0.006511	0.001628	0.000000	0.000000	0.000000	0.016845	0.013476	0.003369
Carolyn Draperies	Bayou Bonfouca	168371/LAG533343	N/A	N/A	NO	20	8.7625E-07	1.0953E-06	10.0	5.0	20%	23.0	0.002177	0.001741	0.000435	21.500000	0.002035	0.001628	0.000407	0.000000	0.000000	0.000000	0.004211	0.003369	0.000842
Pentecost Missionary Baptist Church of Sidell	Bayou Bonfouca	169553/LAG533559	N/A	N/A	NO	1290	5.6518E-05	7.0648E-05	10.0	5.0	20%	23.0	0.140391	0.112313	0.028078	21.500000	0.131236	0.104988	0.026247	0.000000	0.000000	0.000000	0.271627	0.217302	0.054325
Honaker Funeral Home & Cemeteries	Bayou Bonfouca	169689/LAG533399	N/A	N/A	NO	1800	7.8863E-05	9.8578E-05	10.0	5.0	20%	23.0	0.195895	0.156716	0.039179	21.500000	0.183119	0.146495	0.036624	0.000000	0.000000	0.000000	0.379014	0.303212	0.075803
Coco' Auto/Truck Repair	Bayou Liberty	169692/LAG470301	N/A	N/A	NO	300	1.3144E-05	1.6430E-05	10.0	10.0	20%	23.0	0.032649	0.026119	0.006530	43.000000	0.061040	0.048832	0.012208	0.000000	0.000000	0.000000	0.093689	0.074951	0.018738
Sparrows Offshore LLC	Bayou Bonfouca	169789/LA0125351	N/A	N/A	NO	500	2.1906E-05	2.7383E-05	10.0	5.0	20%	23.0	0.054415	0.043532	0.010883	21.500000	0.050866	0.040693	0.010173	0.000000	0.000000	0.000000	0.105282	0.084225	0.021056
James & Leonard Brown Commercial Property	Bayou Vincent	169799/LAG533457	N/A	N/A	NO	500	2.1906E-05	2.7383E-05	10.0	5.0	20%	23.0	0.054415	0.043532	0.010883	21.500000	0.050866	0.040693	0.010173	0.000000	0.000000	0.000000	0.105282	0.084225	0.021056
RPM Pizza LLC	Bayou Bonfouca	170122/LAG533147	N/A	N/A	NO	1500	6.5719E-05	8.2149E-05	10.0	5.0	20%	23.0	0.163246	0.130597	0.032649	21.500000	0.152599	0.122080	0.030520	0.000000	0.000000	0.000000	0.315845	0.252676	0.063169
Lee's Hamburgers	Bayou Bonfouca	170398/LAG533422	N/A	N/A	NO	1500	6.5719E-05	8.2149E-05	10.0	5.0	20%	23.0	0.163246	0.130597	0.032649	21.500000	0.152599	0.122080	0.030520	0.000000	0.000000	0.000000	0.315845	0.252676	0.063169
Flowers Baking Co of New Orleans	Bayou Bonfouca	170858/LAG533465	N/A	N/A	NO	500	2.1906E-05	2.7383E-05	10.0	5.0	20%	23.0	0.054415	0.043532	0.010883	21.500000	0.050866	0.040693	0.010173	0.000000	0.000000	0.000000	0.105282	0.084225	0.021056
John L's Plumbing	Bayou Bonfouca	171511/LAG533505	N/A	N/A	NO	900	3.9431E-05	4.9289E-05	10.0	5.0	20%	23.0	0.097948	0.078358	0.019590	21.500000	0.091560	0.073248	0.018312	0.000000	0.000000	0.000000	0.189507	0.151606	0.037901
SUB-TOTAL Loads													14.77	11.81	2.95		11.12	8.90	2.22	0.00	0.00	0.00	25.8912	20.7129	5.1782

Winter TMDL Calculations for Point Source loads:

BAYOU BONFOUCA 040908

Input data into the shaded cells.

Point Source Loading Calculations																									
Facility Name	Waterbody	Reach No.	Element Number	Included in the Projection Model (Yes/No)	Anticipated flow (gpd)	Anticipated/design flow (cms)	Flow with MOS (cms)	Proposed Permit Limits			UCBOD			UNBOD			Sub-Total of Point Source Phosphorus Loads			Sub-Total of Point Source BOD Loads					
								CBOD ₅ (mg/l)	NH ₃ -N (mg/l)	MOS (%)	Ultimate Conc. (mg/l) (2)	Loads (kg/day) (1)	WLA (kg/day)	Reserve/MOS Load (kg/day)	Ultimate Conc. (mg/l) (2)	Loads (kg/day) (1)	WLA (kg/day)	Reserve/MOS Load (kg/day)	Loads (kg/day)	WLA (kg/day)	Reserve/MOS Load (kg/day)	Loads (kg/day)	WLA (kg/day)	Reserve/MOS (kg/day)	
						A	A1 = A/(1-E)	B	C	E	F = 2.3 x B	G = (86.4)(A1)/(F)	H = (1-E) x G	I = (E)(G)	J = 4.3 x C	K = (86.4)(A1)(J)	L = (1-E) x K	M = (D)(K)	N = 86.4(A1)(D)	O = (1-E) x N	P = E x N	G + K + N	H + L + O	I + M + P	
Sidell Easy Pay Tire Store	Bayou Liberty	5931/LAG470233	N/A	N/A	NO	100	4.3813E-06	5.4766E-06	30.0	15.0	20%	69.0	0.032649	0.026119	0.006530	64.500000	0.030520	0.024416	0.006104	0.000000	0.000000	0.000000	0.063169	0.050535	0.012634
Coin du Lestin Subdivision	Bayou Bonfouca	19211/LAG570065	35	389	YES	80,000	3.5050E-03	4.3813E-03	10.0	10.0	20%	23.0	8.706420	6.965136	1.741284	43.000000	16.277220	13.021776	3.255444	0.000000	0.000000	0.000000	24.983640	19.986912	4.996728
Pearl River Navigation Inc	Bayou Bonfouca	24247/LA0109461	24	289	YES	3,500	1.5334E-04	1.9168E-04	30.0	15.0	20%	69.0	1.142690	0.914152	0.228538	64.500000	1.068166	0.854533	0.213633	0.000000	0.000000	0.000000	2.210856	1.768685	0.442171
Acadian Gardens Condominium Association	Bayou Bonfouca	40443/LAG540085	31	346	YES	7,500	3.2859E-04	4.1074E-04	30.0	15.0	20%	69.0	2.448653	1.958922	0.489731	64.500000	2.288958	1.831166	0.457792	0.000000	0.000000	0.000000	4.737611	3.790088	0.947522
St Tammany Parish - Oakwood Estates STP	Bayou Bonfouca	43203/LAG570166	31	351	YES	12,400	5.4328E-04	6.7910E-04	10.0	10.0	20%	23.0	1.349508	1.079606	0.269902	43.000000	2.522992	2.018394	0.504598	0.000000	0.000000	0.000000	3.872500	3.098000	0.774500
J&J Auto Brokers	Bayou Liberty	104963/LAG470178	46	546	YES	40	0.00000175	0.00000219	10.0	10.0	20%	23.0	0.004353	0.003483	0.000871	43.000000	0.008139	0.006511	0.001628	0.000000	0.000000	0.000000	0.012492	0.009993	0.002498
Brian Harris Autoplex	Bayou Bonfouca	118103/LAG470186	N/A	N/A	NO	120	5.2575E-06	6.5719E-06	30.0	15.0	20%	69.0	0.039179	0.031343	0.007836	64.500000	0.036624	0.029299	0.007325	0.000000	0.000000	0.000000	0.075803	0.060642	0.015161
Sidell Marine Inc	Bayou Bonfouca	124476/LAG532176	22	282	YES	3,700	1.6211E-04	2.0264E-04	30.0	15.0	20%	69.0	1.208044	0.966435	0.241609	64.500000	1.129258	0.903407	0.225852	0.000000	0.000000	0.000000	2.337302	1.869842	0.467460
Carroll Road Building - STP Construction	Bayou Bonfouca	124764/LAG531773	25	295	YES	800	3.5050E-05	4.3813E-05	30.0	15.0	20%	69.0	0.261193	0.208954	0.052239	64.500000	0.244158	0.195327	0.048832	0.000000	0.000000	0.000000	0.505351	0.404281	0.101070
JGLS - J&D Investments	Bayou Bonfouca	125337/LAG531786			YES	160	7.0100E-06	8.7625E-06	30.0	15.0	20%	69.0	0.052239	0.041791	0.010448	64.500000	0.048832	0.039065	0.009766	0.000000	0.000000	0.000000	0.101071	0.080856	0.020214
ARC Mechanical Contractors	Bayou Bonfouca	138813/LAG532075			YES	100	4.3813E-06	5.4766E-06	30.0	15.0	20%	69.0	0.032649	0.026119	0.006530	64.500000	0.030520	0.024416	0.006104	0.000000	0.000000	0.000000	0.063169	0.050535	0.012634
Casadaban Marine Services	Bayou Vincent	143036/LAG533292	N/A	N/A	NO	500	2.1906E-05	2.7383E-05	30.0	15.0	20%	69.0	0.163246	0.130597	0.032649	64.500000	0.152599	0.122080	0.030520	0.000000	0.000000	0.000000	0.315845	0.252676	0.063169
SUB-TOTAL Loads												15.44	12.35	3.09		23.84	19.07	4.77	0.00	0.00	0.00	39.2788	31.4230	7.8558	

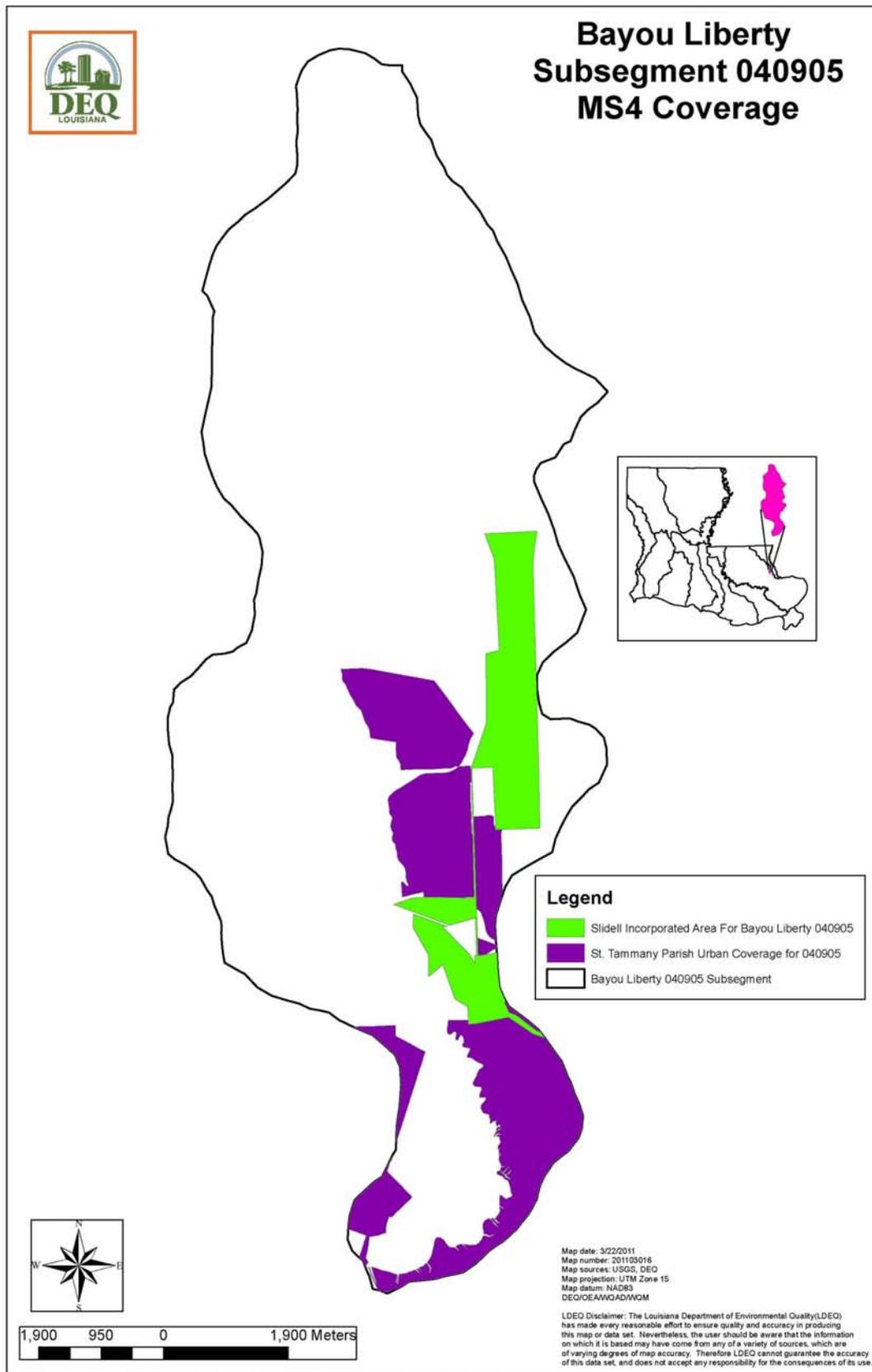
Winter TMDL calculations and Projection model calculations for Headwater / Tributary loads:

BAYOU BONFOUCA AND BAYOU LIBERTY

Shaded cells are input values for calculations. **MIN OF SAFETY (MOS) (%) =**
 Values to be used in the projection models. **If modeling the nitrogen series,**

Headwater / Tributary Load Determinations																
Headwater / Tributary Description and Reach #	Element	FROM CALIBRATION			BACKGROUND VALUES				Percent reduction of Man-Made loads	Reduced Man-Made Loads		PROJECTION VALUES		Total MOS (kg O ₂ /day)	Total CBOD LA (kg O ₂ /day)	Total NBOD LA (kg O ₂ /day)
		Seasonal Critical flow (cms)	UCBOD1 (mg O ₂ /L)	UNBOD (mg O ₂ /L)	Total UNBOD (mg O ₂ /L)	Background UCBOD1 conc. (mg O ₂ /L)	Background UNBOD conc. (mg O ₂ /L)	Background % Reduction		Reduced UCBOD load (kg O ₂ /day)	Reduced UNBOD load (kg O ₂ /day)	Projection UCBOD input conc. (mg O ₂ /L)	Projection UNBOD input conc. (mg O ₂ /L)			
B Vincent & Bonfouca	1	0.002832	2.20	1.00	1.00	0.00	0.00	0%	77%	0.124	0.056	0.633	0.288	0.045	0.124	0.056
Groundwater	40	0.028320	2.16	0.95	0.95	0.00	0.00	0%	77%	1.216	0.535	0.621	0.273	0.438	1.216	0.535
Browns Vill Rd (DD2)	67	0.002832	2.20	1.00	1.00	0.00	0.00	0%	77%	0.124	0.056	0.633	0.288	0.045	0.124	0.056
Drainage Ditch 8	102	0.002832	2.20	1.00	1.00	0.00	0.00	0%	77%	0.124	0.056	0.633	0.288	0.045	0.124	0.056
Drainage Ditch 9	119	0.002832	2.20	1.00	1.00	0.00	0.00	0%	77%	0.124	0.056	0.633	0.288	0.045	0.124	0.056
UPPER B BONFOUCA	159	0.002832	2.20	1.00	1.00	0.00	0.00	0%	77%	0.124	0.056	0.633	0.288	0.045	0.124	0.056
Drainage Ditch 23	183	0.002832	2.20	1.00	1.00	0.00	0.00	0%	77%	0.124	0.056	0.633	0.288	0.045	0.124	0.056
Highway 190(DD 5)	221	0.002832	2.20	1.00	1.00	0.00	0.00	0%	77%	0.124	0.056	0.633	0.288	0.045	0.124	0.056
West Drainage Canal	260	0.002832	2.20	1.00	1.00	0.00	0.00	0%	77%	0.124	0.056	0.633	0.288	0.045	0.124	0.056
Drainage Ditch 6	284	0.002832	2.20	1.00	1.00	0.00	0.00	0%	0%	0.538	0.245	2.750	1.250	0.196	0.538	0.245
Tributary 2	295	0.002832	2.20	1.00	1.00	0.00	0.00	0%	0%	0.538	0.245	2.750	1.250	0.196	0.538	0.245
Canal 26	324	0.002832	2.20	1.00	1.00	0.00	0.00	0%	0%	0.538	0.245	2.750	1.250	0.196	0.538	0.245
Tributary 4	346	0.002832	2.20	1.00	1.00	0.00	0.00	0%	0%	0.538	0.245	2.750	1.250	0.196	0.538	0.245
BAYOU LIBERTY	433	0.028320	2.20	1.00	1.00	0.00	0.00	0%	80%	1.077	0.489	0.550	0.250	0.391	1.077	0.489
Tributary 1	439	0.002832	2.20	1.00	1.00	0.00	0.00	0%	80%	0.108	0.049	0.550	0.250	0.039	0.108	0.049
Drainage Ditch 22	470	0.002832	2.20	1.00	1.00	0.00	0.00	0%	80%	0.108	0.049	0.550	0.250	0.039	0.108	0.049
Drainage Ditch 20	482	0.002832	2.20	1.00	1.00	0.00	0.00	0%	80%	0.108	0.049	0.550	0.250	0.039	0.108	0.049
Highway 190	536	0.002832	2.20	1.00	1.00	0.00	0.00	0%	80%	0.108	0.049	0.550	0.250	0.039	0.108	0.049
Drainage Ditch 18	576	0.002832	2.20	1.00	1.00	0.00	0.00	0%	38%	0.334	0.152	1.705	0.775	0.121	0.334	0.152
Drainage Ditch 19	585	0.002832	2.20	1.00	1.00	0.00	0.00	0%	38%	0.334	0.152	1.705	0.775	0.121	0.334	0.152
Drainage Ditch 4	601	0.002832	2.20	1.00	1.00	0.00	0.00	0%	38%	0.334	0.152	1.705	0.775	0.121	0.334	0.152
Tributary 9	667	0.002832	2.20	1.00	1.00	0.00	0.00	0%	38%	0.334	0.152	1.705	0.775	0.121	0.334	0.152
Tributary 6	680	0.002832	2.20	1.00	1.00	0.00	0.00	0%	38%	0.334	0.152	1.705	0.775	0.121	0.334	0.152
Tributary 10	698	0.002832	2.20	1.00	1.00	0.00	0.00	0%	38%	0.334	0.152	1.705	0.775	0.121	0.334	0.152
Tributary 8	715	0.002832	2.20	1.00	1.00	0.00	0.00	0%	38%	0.334	0.152	1.705	0.775	0.121	0.334	0.152
Marina 1	727	0.002832	2.20	1.00	1.00	0.00	0.00	0%	38%	0.334	0.152	1.705	0.775	0.121	0.334	0.152
Marina 2	730	0.002832	2.20	1.00	1.00	0.00	0.00	0%	38%	0.334	0.152	1.705	0.775	0.121	0.334	0.152
Hwy 190	762	0.002832	2.20	1.00	1.00	0.00	0.00	0%	35%	0.350	0.159	1.788	0.813	0.127	0.350	0.159
BAYOU PAQUET	776	0.028320	2.16	0.95	0.95	0.00	0.00	0%	35%	3.435	1.511	1.755	0.772	1.237	3.435	1.511
Drainage Ditch 16	797	0.002832	2.20	1.00	1.00	0.00	0.00	0%	35%	0.350	0.159	1.788	0.813	0.127	0.350	0.159
Drainage Ditch 17	819	0.002832	2.20	1.00	1.00	0.00	0.00	0%	35%	0.350	0.159	1.788	0.813	0.127	0.350	0.159
Tributary 24	861	0.002832	2.20	1.00	1.00	0.00	0.00	0%	35%	0.350	0.159	1.788	0.813	0.127	0.350	0.159
Tributary 25	868	0.002832	2.20	1.00	1.00	0.00	0.00	0%	35%	0.350	0.159	1.788	0.813	0.127	0.350	0.159
SUB-TOTAL TMDL LOADING										14.06	6.32			5.09	14.06	6.32

Appendix E3 – MS4 Calculations



MS4 Calcs for 040905 Bayou Liberty

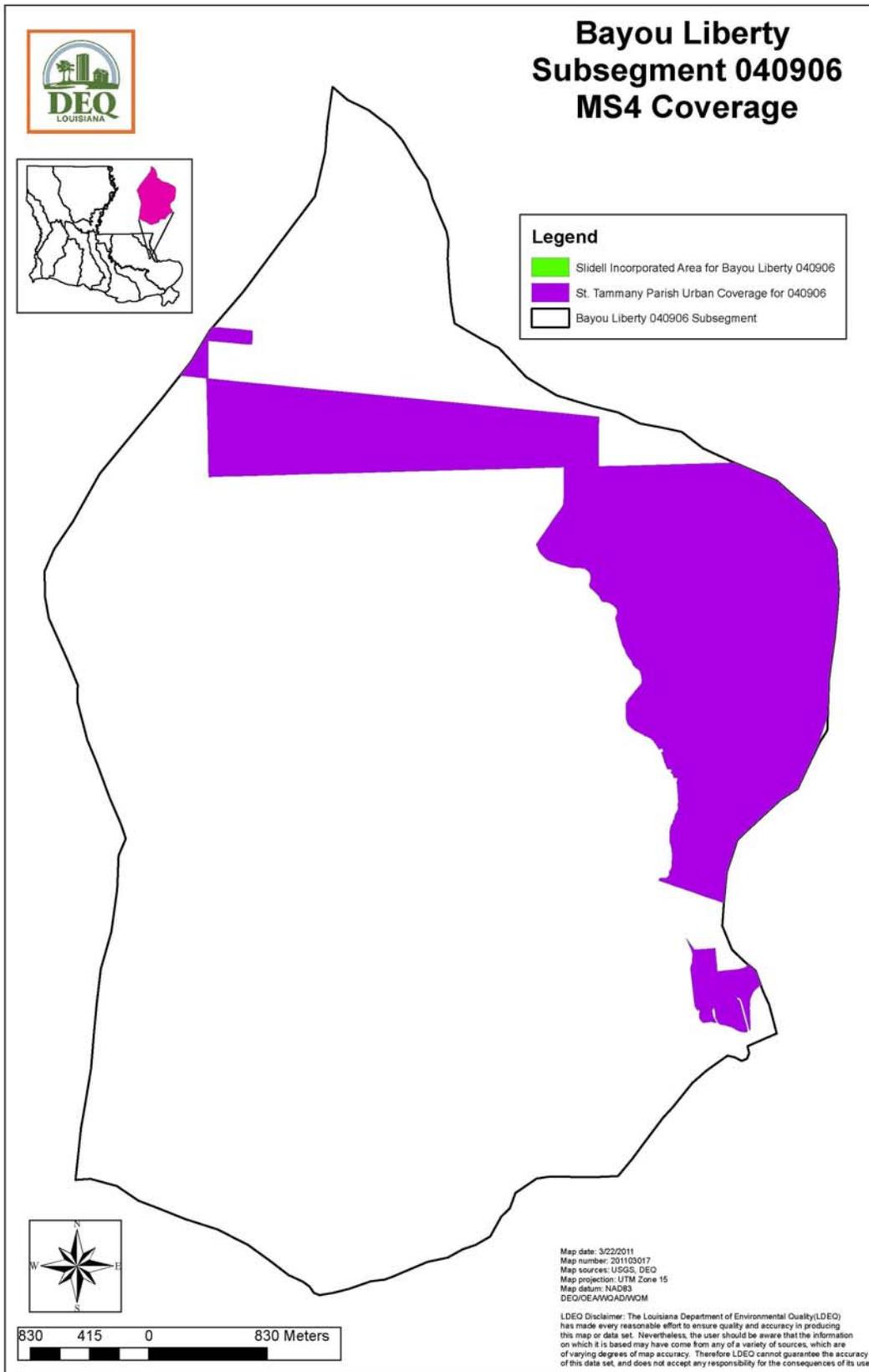
SLIDELL	Area for Slidell Incorporated within subsegment 040905	1171.442 acres
STPA	MS4 responsibility for St. Tammany Parish =	Urbanized area not covered by incorporated areas
STPA	MS4 responsibility for St. Tammany Parish =	2471.9080 acres
SA	Total Area of Subsegment 040905 =	19121.9255 acres
% of subsegment 040905 covered by SLIDELL =		(SLIDELL/SA) * 100
% of subsegment 040905 covered by SLIDELL =		6.13
% of subsegment 040905 covered by STPA =		(STPA/SA) * 100
% of subsegment 040905 covered by STPA =		12.93

Summer TMDL:

	LA	MOS			
Nonpoint Loads =	1669	417			
SLIDELL =	LA *	0.0613 MOS *	0.0613		
SLIDELL =	102	26			128
STPA =	LA *	0.1293 MOS *	0.1293		
STPA =	216	54			270
Remaining Nonpoint LA = LA - SLIDELL LA - STPA LA					
Remaining Nonpoint LA =	1351				
Remaining Nonpoint MOS = MOS - SLIDELL MOS - STPA MOS					
Remaining Nonpoint MOS =	338				

Winter TMDL:

	LA	MOS			
Nonpoint Loads =	1621	406			
SLIDELL =	LA *	0.0613 MOS *	0.0613		
SLIDELL =	99	25			124
STPA =	LA *	0.1293 MOS *	0.1293		
STPA =	210	52			262
Remaining Nonpoint LA = LA - SLIDELL LA - STPA LA					
Remaining Nonpoint LA =	1312				
Remaining Nonpoint MOS = MOS - SLIDELL MOS - STPA MOS					
Remaining Nonpoint MOS =	329				



MS4 Calcs for 040906 Bayou Liberty

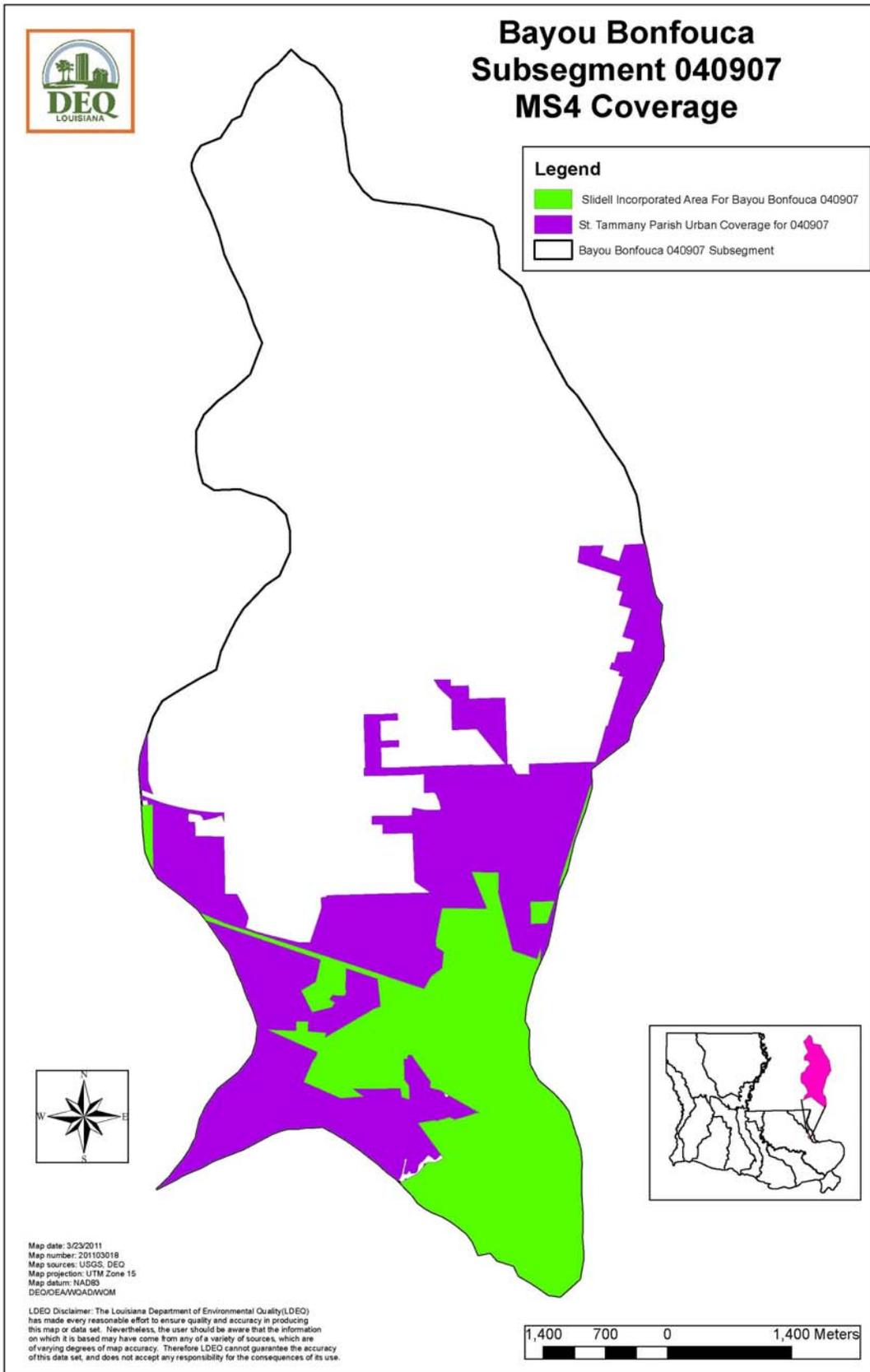
SLIDELL	Area for Slidell Incorporated within subsegment 040905	0.00 acres
STPA	MS4 responsibility for St. Tammany Parish =	Urbanized area not covered by incorporated areas
STPA	MS4 responsibility for St. Tammany Parish =	1354.26 acres
SA	Total Area of Subsegment 040906 =	7334.69 acres
% of subsegment 040906 covered by SLIDELL =	(SLIDELL/SA) * 100	
% of subsegment 040906 covered by SLIDELL =		0.00
% of subsegment 040906 covered by STPA =	(STPA/SA) * 100	
% of subsegment 040906 covered by STPA =		18.46

Summer TMDL:

	LA	MOS			
Nonpoint Loads =	1698	424			
SLIDELL =	LA *	0.0000 MOS *	0.0000		
SLIDELL =	0	0		0	
STPA =	LA *	0.1846 MOS *	0.1846		
STPA =	314	78		392	
Remaining Nonpoint LA = LA - SLIDELL LA - STPA LA					
Remaining Nonpoint LA =	1384				
Remaining Nonpoint MOS = MOS - SLIDELL MOS - STPA MOS					
Remaining Nonpoint MOS =	346				

Winter TMDL:

	LA	MOS			
Nonpoint Loads =	1621	405			
SLIDELL =	LA *	0.0000 MOS *	0.0000		
SLIDELL =	0	0		0	
STPA =	LA *	0.1846 MOS *	0.1846		
STPA =	299	75		374	
Remaining Nonpoint LA = LA - SLIDELL LA - STPA LA					
Remaining Nonpoint LA =	1322				
Remaining Nonpoint MOS = MOS - SLIDELL MOS - STPA MOS					
Remaining Nonpoint MOS =	330				



MS4 Calcs for 040907 Bayou Liberty

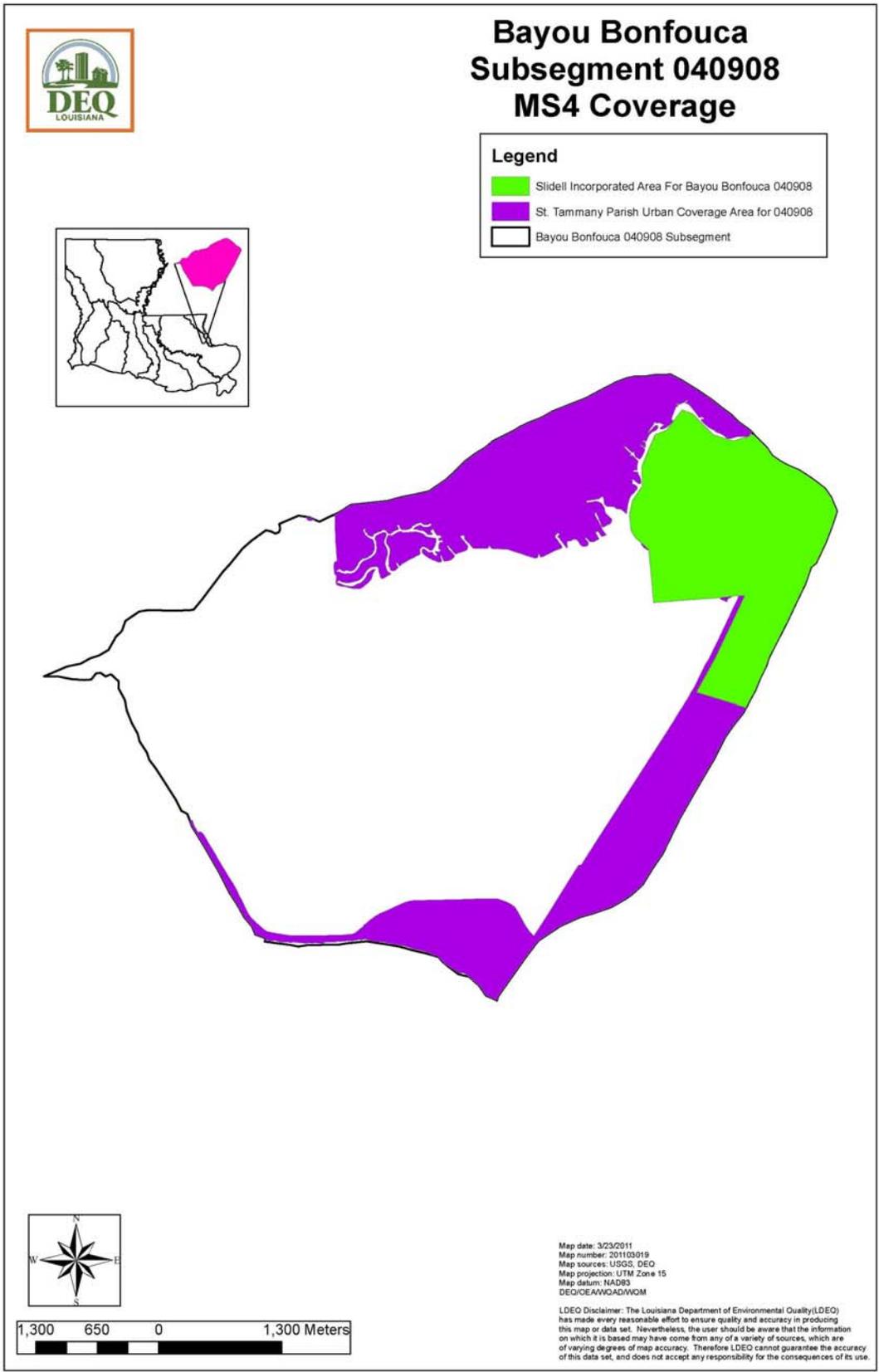
SLIDELL	Area for Slidell Incorporated within subsegment 040905	1771.84 acres
STPA	MS4 responsibility for St. Tammany Parish =	Urbanized area not covered by incorporated areas
STPA	MS4 responsibility for St. Tammany Parish =	2473.69 acres
SA	Total Area of Subsegment 040907 =	12034.85 acres
% of subsegment 040907 covered by SLIDELL =	(SLIDELL/SA) * 100	
% of subsegment 040907 covered by SLIDELL =		14.72
% of subsegment 040907 covered by STPA =	(STPA/SA) * 100	
% of subsegment 040907 covered by STPA =		20.55

Summer TMDL:

	LA	MOS			
Nonpoint Loads =	512		128		
SLIDELL =	LA *	0.1472 MOS *		0.1472	
SLIDELL =	75		19		94
STPA =	LA *	0.2055 MOS *		0.2055	
STPA =	105		26		132
Remaining Nonpoint LA = LA - SLIDELL LA - STPA LA					
Remaining Nonpoint LA =		331			
Remaining Nonpoint MOS = MOS - SLIDELL MOS - STPA MOS					
Remaining Nonpoint MOS =		83			

Winter TMDL:

	LA	MOS			
Nonpoint Loads =	349		88		
SLIDELL =	LA *	0.1472 MOS *		0.1472	
SLIDELL =	51		13		64
STPA =	LA *	0.2055 MOS *		0.2055	
STPA =	72		18		90
Remaining Nonpoint LA = LA - SLIDELL LA - STPA LA					
Remaining Nonpoint LA =		226			
Remaining Nonpoint MOS = MOS - SLIDELL MOS - STPA MOS					
Remaining Nonpoint MOS =		57			



MS4 Calcs for 040908 Bayou Liberty

SLIDELL	Area for Slidell Incorporated within subsegment 040905	931.82 acres
STPA	MS4 responsibility for St. Tammany Parish =	Urbanized area not covered by incorporated areas
STPA	MS4 responsibility for St. Tammany Parish =	1607.93 acres
SA	Total Area of Subsegment 040908 =	7578.64 acres
% of subsegment 040908 covered by SLIDELL =	(SLIDELL/SA) * 100	
% of subsegment 040908 covered by SLIDELL =		12.30
% of subsegment 040908 covered by STPA =	(STPA/SA) * 100	
% of subsegment 040908 covered by STPA =		21.22

Summer TMDL:

	LA	MOS			
Nonpoint Loads =	5186	1297			
SLIDELL =	LA * 0.1230	MOS * 0.1230		0.1230	
SLIDELL =	638	159			797
STPA =	LA * 0.2122	MOS * 0.2122		0.2122	
STPA =	1100	275			1375
Remaining Nonpoint LA = LA - SLIDELL LA - STPA LA					
Remaining Nonpoint LA =	3448				
Remaining Nonpoint MOS = MOS - SLIDELL MOS - STPA MOS					
Remaining Nonpoint MOS =	862				

Winter TMDL:

	LA	MOS			
Nonpoint Loads =	4734	1184			
SLIDELL =	LA * 0.1230	MOS * 0.1230		0.1230	
SLIDELL =	582	146			728
STPA =	LA * 0.2122	MOS * 0.2122		0.2122	
STPA =	1004	251			1256
Remaining Nonpoint LA = LA - SLIDELL LA - STPA LA					
Remaining Nonpoint LA =	3148				
Remaining Nonpoint MOS = MOS - SLIDELL MOS - STPA MOS					
Remaining Nonpoint MOS =	787				

Appendix E4 – Reference Stream Data

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

From Report by DeEttre "BOD STATISTICS for the REFERENCE STREAMS" dated July 18, 1997										
Stream	Date	Time/ Sample	Site	BOD Dilution* NS, S (mg/l)	CBODu (mg/l)	kd (1/day)	NBODu (mg/l)	kn (1/day)	BODu (mg/l)	BOD60 (mg/l)
Beaucoup Creek	10/10/1995	1315	1	100, 100	4.65	0.06	4.12	0.17	9.95	7.8
		1330	1	100, 100	1.8	0.096	4.78	0.17	7.68	5.5
		1335	1	100, 100	1.7	0.172	8.5	0.18	9.49	6.9
Big Roaring Bayou	10/10/1995	1000	1	100, 100	3.57	0.194	4.51	0.017	6.23	6.5
		1010	1	100, 100	4.06	0.211	6.07	0.017	8.33	8
		1020	1	100, 100	2.82	0.141	5.66	0.015	6.43	6.3
Chemin- a-Haut	10/10/1995	1845	1	100, 100	2.81	0.182	6.52	0.017	7.25	7.1
		1900	1	100, 100	1.4	0.226	3.77	0.017	4.27	4.1
		1915	1	100, 100	2.48	0.126	3.58	0.018	4.7	4.9
Mid Fork B. D'Arbonne	8/14/1995	1830	1	100, 100	1.35	0.081	13.09	0.021	11.44	9
		1840	1	100, 100	0.65	0.226	13.46	0.023	15.75	9.5
		1850	1	100, 100	0.58	0.226	10.36	0.033	13.08	8.6
Indian Bayou	10/9/1995	1200	1	100, 100	3.27	0.106	7.66	0.018	8.61	8.1
		1215	1	100, 100	3.31	0.119	6.83	0.018	8.61	7.8
		1230	1	100, 100	2.25	0.111	7.3	0.017	8.5	6.8
Kisatchie Bayou	10/25/1995	805	1	200, 300	1.7	0.187	3.55	0.018	3.84	4.1
		0840-2	2	200, 300	1.2	0.187	3.85	0.021	3.83	4
		0840-3	3	200, 300	1.69	0.141	2.6	0.017	3.26	3.4
Leading Bayou	10/10/1995	1100	1	100, 100	1.04	0.182	7.7	0.018	7.24	6.1
		1105	1	100, 100	0.94	0.191	8.15	0.017	7.88	6.3
		1110	1	100, 100	1.02	0.221	7.62	0.021	6.93	6.4
Meridian Creek	8/15/1995	740	1	200, 300	0.61	0.226	9.87	0.023	9.17	7.1
		805	2	200, 300	0.81	0.226	9.03	0.038	9.43	7.8
		850	3	200, 300	0.81	0.226	9.85	0.023	9.45	7.2
Pearl Creek	10/17/1995	730	1	200, 300	2.71	0.119	2.24	0.035	4.6	4.7
		830	2	200, 300	2.06	0.035	2.23	0.02	4.06	3.3
		1135	3	200, 300	2.25	0.035	0.92	0.02	3.68	2.8
		1115-trib	Trib	200, 300	2.25	0.035	0.28	0.226	2.7	2.4
Saline Bayou	10/24/1995	800	1	200, 300	1.69	0.111	2.98	0.018	3.7	3.7
		830	2	200, 300	1.5	0.172	3.46	0.017	3.68	3.6
		2000	3	200, 300	1.7	0.187	3.94	0.018	4.22	4.4
Kisatchie Bayou	8/20/1996	800	1	300, 300	1.54	0.141	4.2	0.018	4.52	4.09
		1303	3	300, 300	1.51	0.096	4.23	0.018	5.65	4.11
		1935	4	300, 300	1.68	0.081	4.49	0.018	5.15	4.66
	8/22/1996	215	5	300, 300	2.59	0.05	2.73	0.02	5.44	4.23
Sixmile Creek	9/17/1996	805	1	300, 300	0.9	0.202	4.01	0.018	4.21	3.61
		958	2	300, 300	2.26	0.187	2.46	0.016	4	4.17
		1730	3	300, 300	1.78	0.187	4.58	0.018	4.7	4.6
Meridian Creek	8/7/1996	755	1	300, 300	14.47	0.03	0.22	0.02	15.12	12.3
		1000	2	300, 300	6.86	0.033	4.92	0.018	14.11	9.54
		1250	3	300, 300	4.06	0.048	7.73	0.018	12.89	9.1
Calcasieu River	9/4/1996	830	1	300, 300	2.36	0.035	3.08	0.018	5.79	4.15
		952	2	300, 300	2.24	0.035	3.56	0.018	6.06	4.34
		1533	2A	300, 300	9.58	0.035	10.92	0.017	23.25	15.5
		1612	3	300, 300	3.15	0.035	3.13	0.017	7.38	4.85
Average					2.57		5.44			

REFERENCE STREAM NONPOINT LOADING													
REFERENCE STREAM	WIDTH (ft)	NONPOINT FLOW (cfs/mi)	NONPOINT NBOD _U (lb/mi/day)	NONPOINT NBOD _U (gm O ₂ /m ² /day)	NONPOINT CBOD _U (lb/mi/day)	NONPOINT CBOD _U (gm O ₂ /m ² /day)	TEMPERATURE (deg C)	DISSOLVED OXYGEN LEVEL (mg/L)	SOD @ 20 deg C (gm O ₂ /m ² -d)	TOTAL BENTHIC LOAD @ 20 deg C (gm O ₂ /m ² -day)	STREAM TEMP (deg C)	SOD @ STREAM TEMP (gm O ₂ /m ² -day)	BENTHIC LOAD @ STREAM TEMP (gm O ₂ /m ² -day)
Big Roaring	52		5.35	0.095	38.70	0.688	20.150	5.880	1.45	2.234	20.15	1.466	2.249
Chemin-a-haut	40		1.46	0.034	8.10	0.187	17.170	5.530	2.95	3.171	17.17	2.410	2.631
Indian Bayou	72		6.97	0.090	16.95	0.218	20.820	6.280	1.52	1.827	20.80	1.609	1.917
Leading Bayou	10		0.238	0.022	0.34	0.031	14.250	7.640	2.23	2.278	14.25	1.476	1.529
Middle fork d'Arbonne	42		15.26	0.336	13.55	0.298	28.820	4.510	1.22	1.850	28.82	2.281	2.915
Beaucoup	26		14	0.498	4.75	0.169	16.450	3.530	4.20	4.867	16.45	3.260	3.927
Salline Bayou	35	0.77	61.93	1.637	20.08	0.531	16.110	8.280	2.25	4.417	16.11	1.704	3.872
Sixmile Bayou	54	0.45	0	0.000	0.00	0.000	24.180	7.770	0.00	0.000	24.18	0.000	0.000
Kisatchie Bayou (1995, sites 2-3)	N/A		N/A	N/A	N/A	N/A	14.34	9.61	N/A	N/A	N/A	N/A	N/A
Kisatchie Bayou (1996, Sites 3-4)	56		Not Done	Not Done	Not Done	Not Done	28.77	7.38	Not Done	Not Done	28.77	Not Done	Not Done
Kisatchie Bayou (1996, Sites 4-5)	59		Not Done	Not Done	Not Done	Not Done	27.70	6.61	Not Done	Not Done	27.70	Not Done	Not Done
Meridian Creek (1995, Sites 2-3)	17.21		N/A	N/A	N/A	N/A	25.00	5.52	N/A	N/A	25.00	N/A	N/A
Meridian Creek (1996, Sites 2-3)	18.04		0	0.000	0.00	0.000	25.770	5.140	1.00	1.000	25.77	1.510	1.510
Pearl Creek (Sites 2-3)	17.9		0	0.000	0.00	0.000	15.870	9.220	0.00	0.000	15.87	0.000	0.000
Calcasieu River (Sites 2-3)	72		Not Done	Not Done	Not Done	Not Done	27.86	7.72	Not Done	Not Done	27.86	Not Done	Not Done
Average		0.61	10.5208	0.271	10.25	0.21	21.55	6.71	1.68	2.16	22.06	1.57	2.055

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

Site ID Number	Waterbody	Site Description	Subsegment	Collection Date	Collection Time	LAB ID NUMBER	Chloride, Ion Chromatograph (ppm)	Sulfate (ppm)	Specific Conductance (umhos/cm)	Sodium (ppm)	SALINITY (ppt)	Alkalinity (ppm)	Hardness (ppm)	pH, Ultimate BOD survey	TDS (ppm)	TSS (ppm)	Turbidity (NTU)	Color (PCU)	Ammonia-Nitrogen (ppm)	Nitrate+Nitrite Nitrogen (ppm)	TKN (ppm)	TOC (ppm)	TP (ppm)	
0447	Anacoco Bayou	north of Rosepine, downstream of bridge on Hawkins Road	110506	1/29/2003	11:00:00 AM	AF01822	4.6	3.2	45.3	12.9		9.7	13.9	5.96	52.7	15.2	19		ND	0.09	0.41	6.1	0.09	
				10/8/2003	11:30:00 AM	AF22918	9.2	4.4	120	10.7		36.4	32.3	6.6	75.3	6.5	7.6	35	ND	0.56	0.25	5.1	0.1	
0450	Little Kisatchie Bayou	north of Leesville, downstream of bridge on LA Hwy 118 in Kisatchie National Forest	101103	11/20/2002	10:05:00 AM	AF04741	2.8	4.5	30.7	2.5		3.5	5.6	6.65	59.3	6.5	12		ND	ND	ND	3	0.08	
				10/8/2003	10:05:00 AM	AF22923	3.9	5.9	50.5	5		7.6	8.8	6.92	67.3	ND	2.6	25	ND	ND	0.1	3.7	0.06	
				3/11/2004	9:10:00 AM	AG06009	2.9	4.4	31.5			3.9	6.7	6.55	56	4	13		ND	ND	0.11	4	0.09	
0457	Chemin-A-Haut Creek	north of Bastrop, upstream of bridge on Chem Cutoff Road	80401	11/20/2002	10:10:00 AM	AE25657	14.7	4.5	133	11.6		43.6	40.5	6.52	99.3	ND	8.1		ND	ND	0.7	9.9	0.07	
				10/22/2003	9:50:00 AM	AF24138	18.1	ND	204	16.5		83.2	70.2	6.89	114	ND	2.8		ND	0.06	0.27	7.3	0.07	
0458	Bayou Bartholomew	northeast of Bastrop, upstream of bridge on Knox Ferry Road	80401	11/20/2002	11:00:00 AM	AE25662	15.2	12.6	133	9.1		41.6	46.2	6.32	125	18	58		ND	0.18	0.89	8.1	0.23	
				10/22/2003	10:25:00 AM	AF24143	19.9	6.4	231	15.7		89.7	92.7	7.07	150	23.3	22		ND	0.08	0.31	7.2	0.11	
				1/28/2004	9:15:00 AM	AG02244	8.9	6.4	111	6.7		30.4	34.9	6.65	111	29	80		ND	ND	0.8	12	0.27	
0466	Duck Slough	east of Pineville, upstream of bridge on Muddy Bayou Road in	101501	11/20/2002	11:50:00 AM	AE25667	2.4	ND	48.5	2.9		15.4	21.1	5.89	91.3	30.7	16		0.16	ND	1.93	30.7	0.11	
				1/28/2004	11:15:00 AM	AG02249	2.1	ND	37.3	1.8		8.9	14.9	NR	62	9.5	17		ND	ND	1.01	27	0.05	
				11/20/2002	11:10:00 AM	AE25672	2.2	ND	49.3	2.1		20.3	26.5	5.93	105	22.7	22		ND	ND	1.85	33.2	0.08	
0487	Little Bayou Pierre	north of Simpson, downstream of bridge on LA Hwy 118 in Kisatchie National Forest	101103	1/28/2004	12:00:00 PM	AG02254	1.8	ND	47.1	1.5		14	21.7	NR	72.7	6	18		ND	ND	1.69	34.8	0.06	
						AF04746	3.2	5.3	35.7	2.9		4	6.9	5.93	53.3	4.5	11		ND	ND	ND	3.1	0.08	
				10/8/2003	9:45:00 AM	AF22933	5.1	9.2	64.6	7.1		10.1	12.1	6.85	88	ND	4	25	ND	ND	ND	3.5	0.07	
0488	Bear Head Creek	west/northwest of DeQuincy, downstream of bridge on LA Hwy 118 in Kisatchie National Forest	30807	3/11/2004	9:10:00 AM	AG06013	3.1	5.5	37.2			4.2	7.9	6.49	65.3	16.5	13		ND	ND	0.19	5.1	0.07	
				1/29/2003	12:10:00 PM	AF01827	9.6	1.8	45.2	5.2		ND	9.1	6.07	70	9.5	25		ND	ND	0.83	9.1	ND	
				10/8/2003	1:10:00 PM	AF22933	5.1	2	37.6	3.7		2.6	11.5	6.49	75.3	4.7	9.3	180	ND	ND	0.66	20.4	0.08	
0489	Bechwith Creek	north of DeQuincy, downstream of bridge on Smokey Cove Pentecostal Church Road	30803	1/29/2003	1:34:00 PM	AF01842	8.2	2.4	49.5	5.2		6.3	12.7	5.53	64.7	14.3	23		ND	ND	0.31	7.4	0.11	
				10/8/2003	1:50:00 PM	AF22938	5.2	2.4	50.9	3.2		9.5	16.6	6.44	80.7	9.3	13	110	ND	ND	1.11	14.1	0.1	
				3/11/2004	9:10:00 AM	AG06017	6.9	1.6	52.8			8.5	14.7	6.51	74	7	20		ND	0.06	0.7	13.9	ND	
0490	Castor Creek	east of Oberlin, downstream of bridge on Parish Road 146	50303	1/29/2003	10:45:00 AM	AF01847	5.4	2.7	49.2	4.3		12.7	14.4	6.3	87.3	14	44		0.15	0.14	0.58	7.2	0.13	
				10/8/2003	10:45:00 AM	AF22943	6.6	2.4	77	4.2		22.5	22.7	6.83	77.3	8	13	110	ND	ND	1.04	12.9	0.17	
				11/20/2002	11:30:00 AM	AF01852	12.9	4.1	93.2	10.7		16.6	19.7	6.26	108	34.7	64		0.13	0.44	0.94	7.3	0.18	
0491	Bayou Nezpique	northwest of mamou, upstream of bridge on LA Hwy. 376	50301	10/8/2003	11:45:00 AM	AF22948	33.1	6.3	290	43.1		85.2	46.2	8.07	219	6	37	90	0.18	0.33	1.54	14.1	0.26	
				3/11/2004	9:10:00 AM	AG06029	6.6	2.5	79			23.3	22.7	6.94	135	21.5	82		0.12	0.26	1.4	17.2	0.22	
				11/20/2002	10:53:00 AM	AE25687	4	ND	22.2	2		2.2	ND	5.08	26.7	4	3.7		ND	0.07	0.36	6.8	0.14	
0494	Bogue Lusa Creek	near Sheridan, downstream of bridge on LA Hwy 439	90401	10/22/2003	11:30:00 AM	AF24148	3.9	ND	22.3	2.2		2.9	ND	7.42	22.7	ND	2.9		ND	0.08	0.2	4.1	0.07	
				1/28/2004	11:20:00 AM	AG02259	3.9	ND	24.1	2		2.5	5.4	6.66	ND	ND	4.3		ND	0.09	0.54	4.9	ND	
				11/20/2002	9:30:00 AM	AE25692	5.3	ND	45.2	3.1		9.2	11.5	5.49	30	9	9.2		ND	0.81	0.51	3	0.11	
0495	Tchefuncte River	west of Wilmer, downstream of bridge on LA Hwy 10	40801	10/22/2003	10:40:00 AM	AF24153	5	3.2	37.6			6.5	8.4		22	4	4.3		ND	0.84	0.19	ND	0.08	
				1/28/2004	10:45:00 AM	AG02264	5.3	ND	48.6			8.2	10.8		23.3	ND	7.1		0.23	0.85	0.85	3.6	0.11	
				3/11/2004	9:10:00 AM	AG06041	5.1	ND	47.4			8.3	11.9		37.3	9	9.2		0.14	0.84	0.35	2.7	0.07	
0496	Crittenden Creek	north of Greensburg, upstream of bridge on LA Hwy 441	40501	AF04751	4	ND	34.1	2.4		7.1	8.3	6.38	34	6.3	7.8			ND	0.18	0.18	ND	ND	0.07	
				10/8/2003	2:25:00 PM	AF22958	4.1	ND	32.7	3		6.9	7.2	7.36	30	5	4.2	25	ND	0.19	ND	ND	0.07	
				3/11/2004	9:10:00 AM	AG06103	3.7	ND	34.9			7.8	9.5	6.78	ND	8	9.2		ND	0.19	0.2	3.3	0.07	
0497				AF04756	3.7	ND	35.2	3.5		7.9	7.9			36.7	16.5	15			ND	0.07	ND	ND	0.07	
				1/29/2003	9:35:00 AM	AF01857	4.1	ND	31.9	3.7		8	7.7	6.56	22	4.5	6			ND	0.07	ND	ND	0.07
				10/8/2003	3:35:00 PM	AF22968	3.9	ND	30.6	3.4		7.6	7.8	6.8	38.7	31	13	15		ND	0.08	0.21	ND	0.08
				3/11/2004	9:10:00 AM	AG06107	3.7	1.3	34.5			7.5	8.2	6.76	17.3	7	9.7		ND	0.08	0.18	3	0.11	
0498	Middle Fork Thompson Creek	north of Jackson, downstream of bridge on LA Hwy 421	70502	AF04766	5.9	5.6	60.5	5.4		12.3	12.9	6.6	46	6.5	7.1			ND	ND	ND	ND	ND	ND	
				11/20/2002	10:30:00 AM	AE25707	6.4	4.3	60.8	6.6		15.3	15		50.7	ND	3.9			ND	0.09	0.21	ND	0.05
				10/22/2003	10:30:00 AM	AF24158	7.6	2.6	66.4	7.5		17.7	13.9	6.61	52.7	4	2.5		ND	0.05	ND	ND	0.07	
				1/28/2004	11:15:00 AM	AG02269	4.7	4.7	52.7	4.1		8.9	11.3	NR	42.7	7	26		ND	0.2	0.56	4.2	0.07	
0525	West Fork Thompson Creek	north of Jackson, upstream of bridge on Laurel Hill Creek Rd./Harris Conner Rd.	70502	AF04771	6.7	9.6	90.7	7.7		23.5	22.2	6.8	132	11	10			ND	ND	0.16	2.2	0.09		
				11/20/2002	11:45:00 AM	AE25712	8.7	7.3	107	12.6		32.8	24.7	6.26	76	4	6.5		ND	0.44	0.41	2.3	0.06	
				10/22/2003	9:45:00 AM	AF24163	8.3	4.3	93.7	10.6		30.4	21.1		66.7	ND	2.9		ND	0.1	0.19	2.2	0.06	
				1/28/2004	10:05:00 AM	AG02274	5.7	7.6	84.8	6.6		17.6	20.1	6.58	65.3	9.5	26		ND	0.5	0.32	5.6	0.13	
0526	Little Cornite Creek	northeast of Norwood, downstream of bridge on Parish Rd, 1 mi east of LA Hwy 19	40101	1/28/2004	10:05:00 AM	AG02279	5.6	7.8	85.3	6.6		17.5	20.4	6.61	58.7	8	27		ND	0.5	0.27	5.3	0.06	
				11/20/2002	9:05:00 AM	AF04776	8.7	2.3	66	6.7		13.7	14.5	6.5	47.3	10.5	10.1		ND	0.24	0.27	2	0.09	
				10/22/2003	11:30:00 AM	AF24173	9.1	1.7	60.1	7.8		12	11.9	6.25	46.7	5.5	6.3		ND	0.37	0.49	2.2	0.07	
				1/28/2004	12:50:00 PM	AG02284	7.3	2.9	65.5	5.4		11.2	14.4	6.57	53.3	5	19		ND	0.42	0.85	5.7	0.08	
0527	Bogue Falaya River	north of Folsom, downstream of bridge on Joseph Road	40804	10/22/2003	12:45:00 PM	AF24183	3.9	ND	25.7	2.4		4.6	5.9	6.39	24.7	5.5	3.3		ND	0.07	0.33	3.1	ND	
				1/28/2004	10:00:00 AM	AG02289	4.5	ND	29.6	2.4		4	6.9	6.44	ND	ND	3.8		0.12	0.07	0.51	4.7	ND	
				3/11/2004	9:10:00 AM	AG06111	3.9	ND	27.5			4.4	6.6	6.86	29.3	ND	4.5		ND	0.06	0.19	6.1	ND	

Appendix F – Survey Data Measurements and Analysis Results

Appendix F1 – Water Quality Data

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

Facility	Site No.	Date	Chlorides	NH3-N	NO2+NO3	TKN	Calculated	Calculated	TP	Calculated
							Org-N	TN		NBOD
BB Superfund Site	3921	6/23/2009 10:05	23.5	0.42	0.08	0.63	0.21	0.71	1.10	2.71
Coin du Lestin (TRG)	3858	6/23/2009 11:20	56.1	0.28	0.01	0.56	0.28	0.57	1.65	2.41
Coin du Lestin (FD)	3858	6/23/2009 11:20	52.5	0.28	12.80	0.56	0.28	13.36	1.64	2.41
Eagle Lake MHP	3857	6/23/2009 12:30	34.4	0.28	13.00	0.56	0.28	13.56	3.05	2.41
Huntwyck Village	3880	6/23/2009 13:30	52.5	0.28	20.90	0.70	0.42	21.60	0.73	3.01
Oakmont	3879	6/23/2009 14:00	47.0	0.42	3.42	0.65	0.23	4.07	3.36	2.80
The Meadows	3878	6/23/2009 15:15	150.0	0.56	15.10	0.70	0.14	15.80	2.52	3.01
Timber Ridge	3881	6/23/2009 12:10	41.6	0.28	0.10	0.56	0.28	0.66	1.40	2.41
Average										

Site	Site No.	River		Date	Chlorides	NH3-N	NO2+NO3	TKN	Calculated	Calculated	TP	Chlorophyll a	Calculated	Color	Turbidity
		Kilometer	Reach						Org-N	TN			NBOD	(PCU)	(NTU)
BV01	3850	19.5	2-3	6/17/09 10:50	7.23	0.56	0.19	0.70	0.14	0.89	0.29		3.01	3	5.4
BV02	3851	17.6	4-5	6/17/09 11:15	30.8	5.18	0.03	7.49	2.31	7.52	2.99		32.21	131	46.8
BV03	3849	14.9	11-12	6/17/09 11:50	18.1	0.56	0.03	0.91	0.35	0.94	0.57	24.60	3.91	76	93.9
BB02	3848	13.3	19-20	6/17/09 9:15	203	1.12	0.02	1.47	0.35	1.49	0.41	49.90	6.32	24	7.9
BB02	3848	13.3	19-20	6/17/09 9:15	206	1.12	0.02	1.47	0.35	1.49	0.40		6.32	23	7.8
BB03	3852	8.6	27-28	6/17/09 11:00	1530	0.84	0.03	1.26	0.42	1.29	0.21	8.81	5.42	1	5.5
BB05	3855	4.5	35-36	6/17/09 11:45	2040	0.98	0.02	1.33	0.35	1.35	0.19	12.90	5.72	3	6.9
BB06	3853	0.5	91	6/17/09 7:40	2380	0.70	0.02	0.98	0.28	1.00	0.08	7.42	4.21	4	12.0
BB07	3856	0.0	Lake	6/17/09 7:15	2200	0.56	0.03	0.7	0.14	0.73	0.08	5.55	3.01	1	12.5
BL03	3861	12.6	44-45	6/17/09 8:35	125.00	2.24	0.37	3.15	0.91	3.52	3.72	14.80	13.55	17	9.1
BL04	3862	10.0	47-48	6/17/09 9:15	247.00	0.84	0.04	1.05	0.21	1.09	1.12	57.10	4.52	25	5.7
BL04	3862	10.0	47-48	6/17/09 9:15	257.00	0.84	0.04	1.05	0.21	1.09	1.13		4.52	15	5.7
BL05	3868	6.9	54-55	6/17/09 11:10	1960.00	0.98	0.03	1.05	0.07	1.08	0.35	3.23	4.52	19	17.0
BL07	3867	3.3	66-67	6/17/09 12:10	1310.00	0.84	0.02	1.19	0.35	1.21	0.52	65.20	5.12	26	21.7
BL08	3866	0.4	90	6/17/2009 7:55	2390	0.28	0.02	0.56	0.28	0.58	0.13	6.77	2.41	13	10.2
BP02	3864	2.4	81-82	6/17/2009 10:30	1760	1.12	0.03	1.54	0.42	1.57	0.63	14.60	6.62	38	10.0
BP03	3870	1.6	82-83	6/17/2009 11:15	1870.00	0.70	0.03	0.98	0.28	1.01	0.44		4.21	65	15.2
BP04	3869	0.2	88-89	6/17/2009 12:00	2250.00	0.98	0.02	1.33	0.35	1.35	0.23	13.60	5.72	35	12.4

* Calculated

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

Sample_Point_ID	Lab_Sample_Type	Analysis_DateTime	Parameter_Name	Result	Result_Units
3870	TRG	6/23/2009	Sodium	1160	mg/L
3870	TRG	6/23/2009	Hardness (As CaCO3)	496	mg/L
3870	TRG	6/20/2009	Phosphorus, Total	0.439	mg/L
3870	TRG	6/25/2009	Nitrate-Nitrite (as N)		mg/L
3866	TRG	6/18/2009	Turbidity	10.2	ntu
3866	TRG	6/19/2009	Total Suspended Solids	11	mg/L
3866	TRG	6/19/2009	Total Dissolved Solids (Residue,filterable)	4330	mg/L
3866	TRG	6/25/2009	Sulfate	328	mg/L
3866	TRG	6/27/2009	Specific Conductance	7220	umhos/cm
3866	TRG	6/18/2009	True Color	13	PCU
3866	TRG	6/20/2009	Alkalinity, Total (As CaCO3)	52	mg/L
3866	TRG	6/25/2009	Chloride	2390	mg/L
3866	TRG	6/23/2009	Sodium	1390	mg/L
3866	TRG	6/20/2009	Phosphorus, Total	0.131	mg/L
3866	TRG	6/25/2009	Nitrate-Nitrite (as N)		mg/L
3866	TRG	6/23/2009	Hardness (As CaCO3)	600	mg/L
3862	FD	6/20/2009	Alkalinity, Total (As CaCO3)	150	mg/L
3862	FD	6/25/2009	Chloride	247	mg/L
3862	FD	6/18/2009	True Color	25	PCU
3862	FD	6/19/2009	Total Suspended Solids		mg/L
3862	FD	6/27/2009	Specific Conductance	1020	umhos/cm
3862	FD	6/25/2009	Sulfate	32.6	mg/L
3862	FD	6/19/2009	Total Dissolved Solids (Residue,filterable)	554	mg/L
3862	FD	6/18/2009	Turbidity	5.71	ntu
3862	FD	6/22/2009	Sodium	185	mg/L
3862	FD	6/25/2009	Nitrate-Nitrite (as N)		mg/L
3862	FD	6/20/2009	Phosphorus, Total	1.12	mg/L
3862	FD	6/23/2009	Hardness (As CaCO3)	72	mg/L
3867	TRG	6/18/2009	Turbidity	21.7	ntu
3867	TRG	6/19/2009	Total Suspended Solids	15	mg/L
3867	TRG	6/19/2009	Total Dissolved Solids (Residue,filterable)	2570	mg/L
3867	TRG	6/25/2009	Sulfate	178	mg/L
3867	TRG	6/27/2009	Specific Conductance	4340	umhos/cm
3867	TRG	6/18/2009	True Color	26	PCU
3867	TRG	6/25/2009	Chloride	1310	mg/L
3867	TRG	6/25/2009	Alkalinity, Total (As CaCO3)	112	mg/L

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

3867	TRG	6/23/2009	Sodium	817	mg/L
3867	TRG	6/20/2009	Phosphorus, Total	0.518	mg/L
3867	TRG	6/23/2009	Hardness (As CaCO3)	404	mg/L
3867	TRG	6/25/2009	Nitrate-Nitrite (as N)		mg/L
3868	TRG	6/18/2009	Turbidity	17	ntu
3868	TRG	6/25/2009	Chloride	1960	mg/L
3868	TRG	6/19/2009	Total Suspended Solids	30	mg/L
3868	TRG	6/19/2009	Total Dissolved Solids (Residue,filterable)	3390	mg/L
3868	TRG	6/27/2009	Specific Conductance	5750	umhos/cm
3868	TRG	6/25/2009	Sulfate	242	mg/L
3868	TRG	6/18/2009	True Color	19	PCU
3868	TRG	6/25/2009	Alkalinity, Total (As CaCO3)	78	mg/L
3868	TRG	6/23/2009	Sodium	1080	mg/L
3868	TRG	6/20/2009	Phosphorus, Total	0.349	mg/L
3868	TRG	6/25/2009	Nitrate-Nitrite (as N)	0.012	mg/L
3868	TRG	6/23/2009	Hardness (As CaCO3)	532	mg/L
3862	FB	6/18/2009	Turbidity		ntu
3862	FB	6/19/2009	Total Suspended Solids		mg/L
3862	FB	6/19/2009	Total Dissolved Solids (Residue,filterable)		mg/L
3862	FB	6/25/2009	Sulfate		mg/L
3862	FB	6/27/2009	Specific Conductance		umhos/cm
3862	FB	6/25/2009	Alkalinity, Total (As CaCO3)		mg/L
3862	FB	6/25/2009	Chloride		mg/L
3862	FB	6/22/2009	Sodium	0.411	mg/L
3862	FB	6/25/2009	Nitrate-Nitrite (as N)		mg/L
3862	FB	6/20/2009	Phosphorus, Total		mg/L
3862	FB	6/23/2009	Hardness (As CaCO3)		mg/L
3862	TRG	6/25/2009	Alkalinity, Total (As CaCO3)	144	mg/L
3862	TRG	6/25/2009	Chloride	257	mg/L
3862	TRG	6/18/2009	True Color	15	PCU
3862	TRG	6/19/2009	Total Dissolved Solids (Residue,filterable)	517	mg/L
3862	TRG	6/25/2009	Sulfate	33.8	mg/L
3862	TRG	6/18/2009	Turbidity	5.65	ntu
3862	TRG	6/19/2009	Total Suspended Solids		mg/L
3862	TRG	6/27/2009	Specific Conductance	1020	umhos/cm
3862	TRG	6/22/2009	Sodium	184	mg/L
3862	TRG	6/23/2009	Hardness (As CaCO3)	68	mg/L
3862	TRG	6/25/2009	Nitrate-Nitrite (as N)	0.021	mg/L

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

3862	TRG	6/22/2009	Phosphorus, Total	1.13	mg/L
3864	TRG	6/18/2009	Turbidity	9.99	ntu
3864	TRG	6/19/2009	Total Suspended Solids	15	mg/L
3864	TRG	6/19/2009	Total Dissolved Solids (Residue,filterable)	3340	mg/L
3864	TRG	6/25/2009	Sulfate	232	mg/L
3864	TRG	6/27/2009	Specific Conductance	5750	umhos/cm
3864	TRG	6/18/2009	True Color	38	PCU
3864	TRG	6/25/2009	Chloride	1760	mg/L
3864	TRG	6/25/2009	Alkalinity, Total (As CaCO3)	118	mg/L
3864	TRG	6/23/2009	Sodium	953	mg/L
3864	TRG	6/25/2009	Nitrate-Nitrite (as N)		mg/L
3864	TRG	6/22/2009	Phosphorus, Total	0.632	mg/L
3864	TRG	6/25/2009	Hardness (As CaCO3)	536	mg/L
3869	TRG	6/25/2009	Sulfate	295	mg/L
3869	TRG	6/18/2009	Turbidity	12.4	ntu
3869	TRG	6/19/2009	Total Suspended Solids	16	mg/L
3869	TRG	6/19/2009	Total Dissolved Solids (Residue,filterable)	4270	mg/L
3869	TRG	6/27/2009	Specific Conductance	7040	umhos/cm
3869	TRG	6/25/2009	Chloride	2250	mg/L
3869	TRG	6/18/2009	True Color	35	PCU
3869	TRG	6/25/2009	Alkalinity, Total (As CaCO3)	74	mg/L
3869	TRG	6/23/2009	Sodium	1280	mg/L
3869	TRG	6/20/2009	Phosphorus, Total	0.226	mg/L
3869	TRG	6/25/2009	Nitrate-Nitrite (as N)		mg/L
3869	TRG	6/25/2009	Hardness (As CaCO3)	592	mg/L
3870	TRG	6/18/2009	Turbidity	15.2	ntu
3870	TRG	6/19/2009	Total Suspended Solids	18	mg/L
3870	TRG	6/19/2009	Total Dissolved Solids (Residue,filterable)	3700	mg/L
3870	TRG	6/25/2009	Sulfate	251	mg/L
3870	TRG	6/27/2009	Specific Conductance	6090	umhos/cm
3870	TRG	6/18/2009	True Color	65	PCU
3870	TRG	6/25/2009	Chloride	1870	mg/L
3870	TRG	6/20/2009	Alkalinity, Total (As CaCO3)	100	mg/L
3870	TRG	6/22/2009	Ammonia (as Nitrogen)	0.7	mg/L
3870	TRG	6/22/2009	Nitrogen, Kjeldahl, Total	0.98	mg/L
3866	TRG	6/22/2009	Ammonia (as Nitrogen)	0.28	mg/L
3866	TRG	6/22/2009	Nitrogen, Kjeldahl, Total	0.56	mg/L
3862	FD	6/22/2009	Ammonia (as Nitrogen)	0.84	mg/L

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

3862	FD	6/22/2009	Nitrogen, Kjeldahl, Total	1.05	mg/L
3867	TRG	6/22/2009	Ammonia (as Nitrogen)	0.84	mg/L
3867	TRG	6/22/2009	Nitrogen, Kjeldahl, Total	1.19	mg/L
3868	TRG	6/22/2009	Ammonia (as Nitrogen)	0.98	mg/L
3868	TRG	6/22/2009	Nitrogen, Kjeldahl, Total	1.05	mg/L
3862	FB	6/22/2009	Ammonia (as Nitrogen)		mg/L
3862	FB	6/22/2009	Nitrogen, Kjeldahl, Total		mg/L
3862	TRG	6/22/2009	Ammonia (as Nitrogen)	0.84	mg/L
3862	TRG	6/22/2009	Nitrogen, Kjeldahl, Total	1.05	mg/L
3864	TRG	6/22/2009	Ammonia (as Nitrogen)	1.12	mg/L
3864	TRG	6/22/2009	Nitrogen, Kjeldahl, Total	1.54	mg/L
3869	TRG	6/22/2009	Ammonia (as Nitrogen)	0.98	mg/L
3869	TRG	6/22/2009	Nitrogen, Kjeldahl, Total	1.33	mg/L
3856	TRG	6/26/2009	Chloride	2200	mg/L
3856	TRG	6/18/2009	True Color	1	PCU
3856	TRG	6/27/2009	Specific Conductance	6820	umhos/cm
3856	TRG	6/25/2009	Sulfate	304	mg/L
3856	TRG	6/24/2009	Total Dissolved Solids (Residue,filterable)	4410	mg/L
3856	TRG	6/18/2009	Turbidity	12.5	ntu
3856	TRG	6/24/2009	Total Suspended Solids	13	mg/L
3856	TRG	6/25/2009	Alkalinity, Total (As CaCO3)	36	mg/L
3856	TRG	6/24/2009	Sodium	1270	mg/L
3856	TRG	6/25/2009	Hardness (As CaCO3)	672	mg/L
3856	TRG	6/25/2009	Nitrate-Nitrite (as N)		mg/L
3856	TRG	6/22/2009	Phosphorus, Total	0.079	mg/L
3851	TRG	6/24/2009	Total Dissolved Solids (Residue,filterable)	561	mg/L
3851	TRG	6/18/2009	Turbidity	46.8	ntu
3851	TRG	6/18/2009	True Color	131	PCU
3851	TRG	6/25/2009	Sulfate		mg/L
3851	TRG	6/27/2009	Specific Conductance	750	umhos/cm
3851	TRG	6/25/2009	Alkalinity, Total (As CaCO3)	376	mg/L
3851	TRG	6/26/2009	Chloride	30.8	mg/L
3851	TRG	6/24/2009	Total Suspended Solids	37	mg/L
3851	TRG	6/22/2009	Sodium	164	mg/L
3851	TRG	6/25/2009	Hardness (As CaCO3)	32	mg/L
3851	TRG	6/25/2009	Nitrate-Nitrite (as N)	0.028	mg/L
3851	TRG	6/24/2009	Phosphorus, Total	2.99	mg/L
3853	TRG	6/18/2009	True Color	4	PCU

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

3853	TRG	6/25/2009	Chloride	2380	mg/L
3853	TRG	6/27/2009	Specific Conductance	7010	umhos/cm
3853	TRG	6/25/2009	Sulfate		mg/L
3853	TRG	6/24/2009	Total Dissolved Solids (Residue,filterable)	4400	mg/L
3853	TRG	6/24/2009	Total Suspended Solids	13	mg/L
3853	TRG	6/18/2009	Turbidity	12	ntu
3853	TRG	6/25/2009	Alkalinity, Total (As CaCO3)	44	mg/L
3853	TRG	6/24/2009	Sodium	1340	mg/L
3853	TRG	6/25/2009	Hardness (As CaCO3)	696	mg/L
3853	TRG	6/25/2009	Nitrate-Nitrite (as N)		mg/L
3853	TRG	6/24/2009	Phosphorus, Total	0.079	mg/L
3849	TRG	6/25/2009	Chloride	18.1	mg/L
3849	TRG	6/25/2009	Alkalinity, Total (As CaCO3)	142	mg/L
3849	TRG	6/18/2009	True Color	76	PCU
3849	TRG	6/27/2009	Specific Conductance	330	umhos/cm
3849	TRG	6/25/2009	Sulfate	302	mg/L
3849	TRG	6/24/2009	Total Dissolved Solids (Residue,filterable)	298	mg/L
3849	TRG	6/18/2009	Turbidity	93.9	ntu
3849	TRG	6/24/2009	Total Suspended Solids	187	mg/L
3849	TRG	6/22/2009	Sodium	74.2	mg/L
3849	TRG	6/25/2009	Hardness (As CaCO3)	24	mg/L
3849	TRG	6/25/2009	Nitrate-Nitrite (as N)	0.019	mg/L
3849	TRG	6/24/2009	Phosphorus, Total	0.566	mg/L
3850	TRG	6/27/2009	Specific Conductance	494	umhos/cm
3850	TRG	6/25/2009	Sulfate	10.3	mg/L
3850	TRG	6/24/2009	Total Dissolved Solids (Residue,filterable)	319	mg/L
3850	TRG	6/24/2009	Total Suspended Solids	26	mg/L
3850	TRG	6/18/2009	Turbidity	5.42	ntu
3850	TRG	6/18/2009	True Color	3	PCU
3850	TRG	6/25/2009	Chloride	7.23	mg/L
3850	TRG	6/25/2009	Alkalinity, Total (As CaCO3)	270	mg/L
3850	TRG	6/22/2009	Sodium	129	mg/L
3850	TRG	6/24/2009	Phosphorus, Total	0.287	mg/L
3850	TRG	6/26/2009	Nitrate-Nitrite (as N)	0.185	mg/L
3850	TRG	6/25/2009	Hardness (As CaCO3)		mg/L
3861	TRG	6/18/2009	Turbidity	9.08	ntu
3861	TRG	6/24/2009	Total Suspended Solids	11	mg/L
3861	TRG	6/24/2009	Total Dissolved Solids (Residue,filterable)	579	mg/L

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

3861	TRG	6/25/2009	Sulfate	25.7	mg/L
3861	TRG	6/18/2009	True Color	17	PCU
3861	TRG	6/25/2009	Alkalinity, Total (As CaCO3)	270	mg/L
3861	TRG	6/25/2009	Chloride	125	mg/L
3861	TRG	6/27/2009	Specific Conductance	881	umhos/cm
3861	TRG	6/22/2009	Sodium	198	mg/L
3861	TRG	6/24/2009	Phosphorus, Total	3.72	mg/L
3861	TRG	6/25/2009	Hardness (As CaCO3)	40	mg/L
3861	TRG	6/29/2009	Nitrate-Nitrite (as N)	0.322	mg/L
3852	TRG	6/27/2009	Specific Conductance	4770	umhos/cm
3852	TRG	6/25/2009	Alkalinity, Total (As CaCO3)	72	mg/L
3852	TRG	6/25/2009	Chloride	1530	mg/L
3852	TRG	6/18/2009	True Color	1	PCU
3852	TRG	6/25/2009	Sulfate	196	mg/L
3852	TRG	6/24/2009	Total Dissolved Solids (Residue,filterable)	2940	mg/L
3852	TRG	6/24/2009	Total Suspended Solids	5	mg/L
3852	TRG	6/18/2009	Turbidity	5.54	ntu
3852	TRG	6/24/2009	Sodium	853	mg/L
3852	TRG	6/24/2009	Phosphorus, Total	0.211	mg/L
3852	TRG	6/29/2009	Nitrate-Nitrite (as N)		mg/L
3852	TRG	6/25/2009	Hardness (As CaCO3)	404	mg/L
3848	TRG	6/25/2009	Alkalinity, Total (As CaCO3)	112	mg/L
3848	TRG	6/25/2009	Chloride	206	mg/L
3848	TRG	6/18/2009	True Color	23	PCU
3848	TRG	6/27/2009	Specific Conductance	862	umhos/cm
3848	TRG	6/25/2009	Sulfate	30.8	mg/L
3848	TRG	6/24/2009	Total Dissolved Solids (Residue,filterable)	518	mg/L
3848	TRG	6/24/2009	Total Suspended Solids		mg/L
3848	TRG	6/18/2009	Turbidity	7.84	ntu
3848	TRG	6/22/2009	Sodium	151	mg/L
3848	TRG	6/29/2009	Nitrate-Nitrite (as N)		mg/L
3848	TRG	6/25/2009	Hardness (As CaCO3)	80	mg/L
3848	TRG	6/24/2009	Phosphorus, Total	0.397	mg/L
3848	FB	6/25/2009	Chloride		mg/L
3848	FB	6/25/2009	Alkalinity, Total (As CaCO3)		mg/L
3848	FB	6/27/2009	Specific Conductance		umhos/cm
3848	FB	6/24/2009	Total Dissolved Solids (Residue,filterable)		mg/L
3848	FB	6/24/2009	Total Suspended Solids		mg/L

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

3848	FB	6/18/2009	Turbidity		ntu
3848	FB	6/26/2009	Sulfate		mg/L
3848	FB	6/22/2009	Sodium	0.283	mg/L
3848	FB	6/26/2009	Hardness (As CaCO3)		mg/L
3848	FB	6/29/2009	Nitrate-Nitrite (as N)		mg/L
3848	FB	6/24/2009	Phosphorus, Total		mg/L
3848	FD	6/18/2009	Turbidity	7.93	ntu
3848	FD	6/25/2009	Chloride	203	mg/L
3848	FD	6/25/2009	Alkalinity, Total (As CaCO3)	106	mg/L
3848	FD	6/18/2009	True Color	24	PCU
3848	FD	6/27/2009	Specific Conductance	878	umhos/cm
3848	FD	6/26/2009	Sulfate	32.3	mg/L
3848	FD	6/24/2009	Total Dissolved Solids (Residue,filterable)	509	mg/L
3848	FD	6/24/2009	Total Suspended Solids		mg/L
3848	FD	6/22/2009	Sodium	149	mg/L
3848	FD	6/29/2009	Nitrate-Nitrite (as N)		mg/L
3848	FD	6/24/2009	Phosphorus, Total	0.405	mg/L
3848	FD	6/26/2009	Hardness (As CaCO3)	88	mg/L
3855	TRG	6/18/2009	Turbidity	6.88	ntu
3855	TRG	6/24/2009	Total Suspended Solids	8	mg/L
3855	TRG	6/25/2009	Alkalinity, Total (As CaCO3)	72	mg/L
3855	TRG	6/25/2009	Chloride	2040	mg/L
3855	TRG	6/18/2009	True Color	3	PCU
3855	TRG	6/24/2009	Total Dissolved Solids (Residue,filterable)	4050	mg/L
3855	TRG	6/26/2009	Sulfate	260	mg/L
3855	TRG	6/27/2009	Specific Conductance	6390	umhos/cm
3855	TRG	6/22/2009	Sodium	1170	mg/L
3855	TRG	6/26/2009	Hardness (As CaCO3)	528	mg/L
3855	TRG	6/29/2009	Nitrate-Nitrite (as N)		mg/L
3855	TRG	6/24/2009	Phosphorus, Total	0.189	mg/L
3856	TRG	6/23/2009	Ammonia (as Nitrogen)	0.56	mg/L
3856	TRG	6/22/2009	Nitrogen, Kjeldahl, Total	0.7	mg/L
3851	TRG	6/23/2009	Ammonia (as Nitrogen)	5.18	mg/L
3851	TRG	6/22/2009	Nitrogen, Kjeldahl, Total	7.49	mg/L
3853	TRG	6/23/2009	Ammonia (as Nitrogen)	0.7	mg/L
3853	TRG	6/22/2009	Nitrogen, Kjeldahl, Total	0.98	mg/L
3849	TRG	6/23/2009	Ammonia (as Nitrogen)	0.56	mg/L
3849	TRG	6/22/2009	Nitrogen, Kjeldahl, Total	0.91	mg/L

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

3850	TRG	6/23/2009	Ammonia (as Nitrogen)	0.56	mg/L
3850	TRG	6/22/2009	Nitrogen, Kjeldahl, Total	0.7	mg/L
3861	TRG	6/23/2009	Ammonia (as Nitrogen)	2.24	mg/L
3861	TRG	6/22/2009	Nitrogen, Kjeldahl, Total	3.15	mg/L
3852	TRG	6/23/2009	Ammonia (as Nitrogen)	0.84	mg/L
3848	TRG	6/23/2009	Ammonia (as Nitrogen)	1.12	mg/L
3848	TRG	6/22/2009	Nitrogen, Kjeldahl, Total	1.47	mg/L
3852	TRG	6/22/2009	Nitrogen, Kjeldahl, Total	1.26	mg/L
3848	FB	6/23/2009	Ammonia (as Nitrogen)		mg/L
3848	FB	6/22/2009	Nitrogen, Kjeldahl, Total		mg/L
3848	FD	6/23/2009	Ammonia (as Nitrogen)	1.12	mg/L
3848	FD	6/22/2009	Nitrogen, Kjeldahl, Total	1.47	mg/L
3855	TRG	6/23/2009	Ammonia (as Nitrogen)	0.98	mg/L
3855	TRG	6/22/2009	Nitrogen, Kjeldahl, Total	1.33	mg/L
19211	TRG	6/29/2009	Specific Conductance	624	umhos/cm
19211	TRG	6/30/2009	Alkalinity, Total (As CaCO3)	172	mg/L
19211	TRG	6/24/2009	True Color	3	PCU
19211	TRG	6/29/2009	Sulfate	25.6	mg/L
19211	TRG	6/26/2009	Total Dissolved Solids (Residue,filterable)	387	mg/L
19211	TRG	6/26/2009	Total Suspended Solids	5	mg/L
19211	TRG	6/24/2009	Turbidity	3.78	ntu
19211	TRG	6/25/2009	Chloride	52.5	mg/L
19211	TRG	6/25/2009	Sodium	123	mg/L
19211	TRG	6/30/2009	Hardness (As CaCO3)	104	mg/L
19211	TRG	6/29/2009	Nitrate-Nitrite (as N)	10.9	mg/L
19211	TRG	6/26/2009	Phosphorus, Total	1.64	mg/L
19211	FD	6/30/2009	Alkalinity, Total (As CaCO3)	170	mg/L
19211	FD	6/25/2009	Chloride	56.1	mg/L
19211	FD	6/24/2009	True Color	2	PCU
19211	FD	6/26/2009	Total Dissolved Solids (Residue,filterable)	385	mg/L
19211	FD	6/29/2009	Specific Conductance	617	umhos/cm
19211	FD	6/29/2009	Sulfate	25.7	mg/L
19211	FD	6/26/2009	Total Suspended Solids	6	mg/L
19211	FD	6/24/2009	Turbidity	3.84	ntu
19211	FD	6/26/2009	Sodium	133	mg/L
19211	FD	6/26/2009	Phosphorus, Total	1.65	mg/L
19211	FD	6/29/2009	Nitrate-Nitrite (as N)	9.88	mg/L
19211	FD	6/30/2009	Hardness (As CaCO3)	104	mg/L

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

19211	FB	6/24/2009	Turbidity		ntu
19211	FB	6/26/2009	Total Suspended Solids		mg/L
19211	FB	6/26/2009	Total Dissolved Solids (Residue,filterable)		mg/L
19211	FB	6/25/2009	Chloride		mg/L
19211	FB	6/29/2009	Specific Conductance		umhos/cm
19211	FB	6/24/2009	True Color		PCU
19211	FB	6/29/2009	Sulfate		mg/L
19211	FB	6/30/2009	Alkalinity, Total (As CaCO3)		mg/L
19211	FB	6/26/2009	Sodium	0.127	mg/L
19211	FB	6/29/2009	Nitrate-Nitrite (as N)	0.015	mg/L
19211	FB	6/30/2009	Hardness (As CaCO3)		mg/L
19211	FB	6/26/2009	Phosphorus, Total		mg/L
4716	TRG	6/26/2009	Total Suspended Solids		mg/L
4716	TRG	6/26/2009	Total Dissolved Solids (Residue,filterable)	292	mg/L
4716	TRG	6/29/2009	Sulfate	11.4	mg/L
4716	TRG	6/29/2009	Specific Conductance	437	umhos/cm
4716	TRG	6/24/2009	True Color	2	PCU
4716	TRG	6/25/2009	Chloride	23.5	mg/L
4716	TRG	6/24/2009	Turbidity	2.33	ntu
4716	TRG	6/30/2009	Alkalinity, Total (As CaCO3)	190	mg/L
4716	TRG	6/26/2009	Sodium	97.5	mg/L
4716	TRG	6/30/2009	Hardness (As CaCO3)	88	mg/L
4716	TRG	6/29/2009	Nitrate-Nitrite (as N)	0.075	mg/L
4716	TRG	6/26/2009	Phosphorus, Total	1.1	mg/L
19785	TRG	6/26/2009	Total Dissolved Solids (Residue,filterable)	498	mg/L
19785	TRG	6/30/2009	Alkalinity, Total (As CaCO3)	244	mg/L
19785	TRG	6/25/2009	Chloride	34.4	mg/L
19785	TRG	6/24/2009	True Color	9	PCU
19785	TRG	6/29/2009	Sulfate	27.8	mg/L
19785	TRG	6/26/2009	Total Suspended Solids	7	mg/L
19785	TRG	6/24/2009	Turbidity	4.24	ntu
19785	TRG	6/29/2009	Specific Conductance	771	umhos/cm
19785	TRG	6/26/2009	Sodium	169	mg/L
19785	TRG	6/30/2009	Nitrate-Nitrite (as N)	13.3	mg/L
19785	TRG	6/30/2009	Hardness (As CaCO3)	48	mg/L
19785	TRG	6/26/2009	Phosphorus, Total	3.05	mg/L
19119	TRG	6/29/2009	Specific Conductance	1020	umhos/cm
19119	TRG	6/30/2009	Alkalinity, Total (As CaCO3)	288	mg/L

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

19119	TRG	6/24/2009	True Color	6	PCU
19119	TRG	6/29/2009	Sulfate	25.6	mg/L
19119	TRG	6/26/2009	Total Dissolved Solids (Residue,filterable)	590	mg/L
19119	TRG	6/26/2009	Total Suspended Solids		mg/L
19119	TRG	6/24/2009	Turbidity	2.77	ntu
19119	TRG	6/25/2009	Chloride	150	mg/L
19119	TRG	6/26/2009	Sodium	238	mg/L
19119	TRG	6/30/2009	Hardness (As CaCO3)	60	mg/L
19119	TRG	6/30/2009	Nitrate-Nitrite (as N)	0.111	mg/L
19119	TRG	6/26/2009	Phosphorus, Total	2.52	mg/L
33837	TRG	6/24/2009	Turbidity	14.6	ntu
33837	TRG	6/26/2009	Total Suspended Solids	21	mg/L
33837	TRG	6/26/2009	Total Dissolved Solids (Residue,filterable)	427	mg/L
33837	TRG	6/29/2009	Sulfate	55.6	mg/L
33837	TRG	6/29/2009	Specific Conductance	849	umhos/cm
33837	TRG	6/24/2009	True Color	22	PCU
33837	TRG	6/25/2009	Chloride	41.6	mg/L
33837	TRG	6/30/2009	Alkalinity, Total (As CaCO3)	318	mg/L
33837	TRG	6/26/2009	Sodium	150	mg/L
33837	TRG	6/26/2009	Phosphorus, Total	1.4	mg/L
33837	TRG	6/30/2009	Hardness (As CaCO3)	56	mg/L
33837	TRG	6/30/2009	Nitrate-Nitrite (as N)	0.046	mg/L
19476	TRG	6/29/2009	Specific Conductance	570	umhos/cm
19476	TRG	6/25/2009	Chloride	52.5	mg/L
19476	TRG	6/24/2009	True Color		PCU
19476	TRG	6/26/2009	Total Dissolved Solids (Residue,filterable)	353	mg/L
19476	TRG	6/26/2009	Total Suspended Solids	10	mg/L
19476	TRG	6/24/2009	Turbidity	4.38	ntu
19476	TRG	6/29/2009	Sulfate	33.8	mg/L
19476	TRG	6/30/2009	Alkalinity, Total (As CaCO3)	172	mg/L
19476	TRG	6/26/2009	Sodium	125	mg/L
19476	TRG	6/26/2009	Phosphorus, Total	0.733	mg/L
19476	TRG	6/30/2009	Hardness (As CaCO3)	44	mg/L
19476	TRG	6/30/2009	Nitrate-Nitrite (as N)	2.19	mg/L
19471	TRG	6/30/2009	Alkalinity, Total (As CaCO3)	164	mg/L
19471	TRG	6/25/2009	Chloride	47	mg/L
19471	TRG	6/24/2009	True Color		PCU
19471	TRG	6/29/2009	Specific Conductance	587	umhos/cm

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

19471	TRG	6/29/2009	Sulfate	33.2	mg/L
19471	TRG	6/26/2009	Total Dissolved Solids (Residue,filterable)	376	mg/L
19471	TRG	6/24/2009	Turbidity	3.25	ntu
19471	TRG	6/26/2009	Total Suspended Solids	12	mg/L
19471	TRG	6/26/2009	Sodium	126	mg/L
19471	TRG	6/30/2009	Hardness (As CaCO3)	64	mg/L
19471	TRG	6/26/2009	Phosphorus, Total	3.36	mg/L
19471	TRG	6/30/2009	Nitrate-Nitrite (as N)	10.1	mg/L
3862	FB	7/2/2009	Total Organic Carbon		mg/L
3862	TRG	7/2/2009	Total Organic Carbon	11.6	mg/L
3862	FD	7/2/2009	Total Organic Carbon	12.2	mg/L
3864	TRG	7/2/2009	Total Organic Carbon	22.1	mg/L
3866	TRG	7/2/2009	Total Organic Carbon	11.8	mg/L
3867	TRG	7/2/2009	Total Organic Carbon	17	mg/L
3868	TRG	7/2/2009	Total Organic Carbon	15.4	mg/L
3869	TRG	7/2/2009	Total Organic Carbon	14.7	mg/L
3870	TRG	7/2/2009	Total Organic Carbon	18.4	mg/L
3856	TRG	7/2/2009	Total Organic Carbon	8.75	mg/L
3851	TRG	7/7/2009	Total Organic Carbon	49.4	mg/L
3853	TRG	7/2/2009	Total Organic Carbon	9.85	mg/L
3849	TRG	7/2/2009	Total Organic Carbon	13.3	mg/L
3850	TRG	7/2/2009	Total Organic Carbon	4.52	mg/L
3861	TRG	7/2/2009	Total Organic Carbon	12.2	mg/L
3852	TRG	7/2/2009	Total Organic Carbon	13.9	mg/L
3848	FD	7/2/2009	Total Organic Carbon	15.3	mg/L
3855	TRG	7/2/2009	Total Organic Carbon	14.5	mg/L
19211	TRG	7/7/2009	Total Organic Carbon	6.11	mg/L
19211	FD	7/7/2009	Total Organic Carbon	6.38	mg/L
19211	FB	7/7/2009	Total Organic Carbon		mg/L
4716	TRG	7/7/2009	Total Organic Carbon	2.82	mg/L
19785	TRG	7/7/2009	Total Organic Carbon	11.4	mg/L
19119	TRG	7/7/2009	Total Organic Carbon	9.32	mg/L
33837	TRG	7/7/2009	Total Organic Carbon	15.4	mg/L
19476	TRG	7/7/2009	Total Organic Carbon	6.74	mg/L
19471	TRG	7/7/2009	Total Organic Carbon	5.98	mg/L
3848	TRG	7/2/2009	Total Organic Carbon	16	mg/L
3848	FB	7/2/2009	Total Organic Carbon		mg/L
3866	TRG	6/25/2009	Chlorophyll a	6.77	ug/L

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

3867	TRG	6/25/2009	Chlorophyll a	65.2	ug/L
3868	TRG	6/25/2009	Chlorophyll a	3.23	ug/L
3862	TRG	6/25/2009	Chlorophyll a	57.1	ug/L
3864	TRG	6/25/2009	Chlorophyll a	14.6	ug/L
3869	TRG	6/25/2009	Chlorophyll a	13.6	ug/L
3866	TRG	6/25/2009	Pheophytin a	28.1	ug/L
3867	TRG	6/25/2009	Pheophytin a	188	ug/L
3868	TRG	6/25/2009	Pheophytin a	22.7	ug/L
3862	TRG	6/25/2009	Pheophytin a	162	ug/L
3864	TRG	6/25/2009	Pheophytin a	76.0	ug/L
3869	TRG	6/25/2009	Pheophytin a	46.8	ug/L
3855	TRG	6/25/2009	Chlorophyll a	12.9	ug/L
3848	TRG	6/25/2009	Chlorophyll a	49.9	ug/L
3852	TRG	6/25/2009	Chlorophyll a	8.81	ug/L
3861	TRG	6/25/2009	Chlorophyll a	14.8	ug/L
3849	TRG	6/25/2009	Chlorophyll a	24.6	ug/L
3853	TRG	6/25/2009	Chlorophyll a	7.42	ug/L
3855	TRG	6/25/2009	Pheophytin a	44.7	ug/L
3848	TRG	6/25/2009	Pheophytin a	164	ug/L
3852	TRG	6/25/2009	Pheophytin a	36.8	ug/L
3861	TRG	6/25/2009	Pheophytin a	90.3	ug/L
3849	TRG	6/25/2009	Pheophytin a	158	ug/L
3853	TRG	6/25/2009	Pheophytin a	27.0	ug/L
3856	TRG	6/25/2009	Chlorophyll a	5.55	ug/L
3856	TRG	6/25/2009	Pheophytin a	21.3	ug/L
19211	TRG	6/29/2009	Ammonia (as Nitrogen)	0.28	mg/L
19211	FD	6/29/2009	Ammonia (as Nitrogen)	0.28	mg/L
19211	FB	6/29/2009	Ammonia (as Nitrogen)		mg/L
4716	TRG	6/29/2009	Ammonia (as Nitrogen)	0.42	mg/L
19785	TRG	6/29/2009	Ammonia (as Nitrogen)	0.28	mg/L
19211	TRG	6/28/2009	Nitrogen, Kjeldahl, Total	0.56	mg/L
19211	FD	6/28/2009	Nitrogen, Kjeldahl, Total	0.56	mg/L
19211	FB	6/28/2009	Nitrogen, Kjeldahl, Total		mg/L
4716	TRG	6/28/2009	Nitrogen, Kjeldahl, Total	0.63	mg/L
19785	TRG	6/28/2009	Nitrogen, Kjeldahl, Total	0.56	mg/L
19119	TRG	6/29/2009	Ammonia (as Nitrogen)	0.56	mg/L
33837	TRG	6/29/2009	Ammonia (as Nitrogen)	0.28	mg/L
19476	TRG	6/29/2009	Ammonia (as Nitrogen)	0.28	mg/L

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

19471	TRG	6/29/2009	Ammonia (as Nitrogen)	0.42	mg/L
19119	TRG	6/28/2009	Nitrogen, Kjeldahl, Total	0.7	mg/L
33837	TRG	6/28/2009	Nitrogen, Kjeldahl, Total	0.56	mg/L
19476	TRG	6/28/2009	Nitrogen, Kjeldahl, Total	0.7	mg/L
19471	TRG	6/28/2009	Nitrogen, Kjeldahl, Total	0.65	mg/L
3856	TRG	8/21/2009	Total Organic Carbon	29	mg/L
3851	TRG	8/21/2009	Total Organic Carbon	18.4	mg/L
3853	TRG	8/21/2009	Total Organic Carbon	9.63	mg/L
3849	TRG	8/21/2009	Total Organic Carbon	2.1	mg/L
3850	TRG	8/21/2009	Total Organic Carbon	5.28	mg/L
3861	TRG	8/21/2009	Total Organic Carbon	1.82	mg/L
3852	TRG	8/21/2009	Total Organic Carbon	12.2	mg/L
3848	FD	8/21/2009	Total Organic Carbon	13	mg/L
3855	TRG	8/21/2009	Total Organic Carbon	25.8	mg/L
3848	TRG	8/22/2009	Total Organic Carbon	12.9	mg/L
3848	FB	8/21/2009	Total Organic Carbon		mg/L
3848	FB	8/24/2009	Total Kjeldahl Nitrogen		mg/L
3848	TRG	8/24/2009	Total Kjeldahl Nitrogen	1.05	mg/L
3848	FD	8/24/2009	Total Kjeldahl Nitrogen	1.05	mg/L
3849	TRG	8/24/2009	Total Kjeldahl Nitrogen	1.05	mg/L
3850	TRG	8/24/2009	Total Kjeldahl Nitrogen	0.7	mg/L
3851	TRG	8/24/2009	Total Kjeldahl Nitrogen	25.2	mg/L
3852	TRG	8/24/2009	Total Kjeldahl Nitrogen	0.77	mg/L
3853	TRG	8/24/2009	Total Kjeldahl Nitrogen	0.98	mg/L
3855	TRG	8/24/2009	Total Kjeldahl Nitrogen	1.05	mg/L
3856	TRG	8/24/2009	Total Kjeldahl Nitrogen	0.7	mg/L
3861	TRG	8/24/2009	Total Kjeldahl Nitrogen	2.24	mg/L
3862	FB	8/21/2009	Total Organic Carbon		mg/L
3862	TRG	8/21/2009	Total Organic Carbon	8.31	mg/L
3862	FD	8/21/2009	Total Organic Carbon	9.89	mg/L
3864	TRG	8/21/2009	Total Organic Carbon	18.4	mg/L
3866	TRG	8/21/2009	Total Organic Carbon	9.48	mg/L
3867	TRG	8/21/2009	Total Organic Carbon	11.3	mg/L
3868	TRG	8/21/2009	Total Organic Carbon	11.6	mg/L
3869	TRG	8/21/2009	Total Organic Carbon	11.9	mg/L
3870	TRG	8/21/2009	Total Organic Carbon	7.76	mg/L
3862	FB	8/24/2009	Total Kjeldahl Nitrogen		mg/L
3862	TRG	8/24/2009	Total Kjeldahl Nitrogen	0.7	mg/L

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

3862	FD	8/24/2009	Total Kjeldahl Nitrogen	0.7	mg/L
3864	TRG	8/24/2009	Total Kjeldahl Nitrogen	1.4	mg/L
3866	TRG	8/24/2009	Total Kjeldahl Nitrogen	1.05	mg/L
3867	TRG	8/24/2009	Total Kjeldahl Nitrogen	0.98	mg/L
3868	TRG	8/24/2009	Total Kjeldahl Nitrogen	0.77	mg/L
3869	TRG	8/24/2009	Total Kjeldahl Nitrogen	0.98	mg/L
3870	TRG	8/24/2009	Total Kjeldahl Nitrogen	1.05	mg/L
19211	FB	8/31/2009	Total Organic Carbon		mg/L
19211	TRG	8/31/2009	Total Organic Carbon	2.56	mg/L
19211	FD	8/31/2009	Total Organic Carbon	2.74	mg/L
19785	TRG	8/31/2009	Total Organic Carbon	3.97	mg/L
19471	TRG	8/31/2009	Total Organic Carbon	2.88	mg/L
19476	TRG	8/31/2009	Total Organic Carbon	3.41	mg/L
33837	TRG	8/31/2009	Total Organic Carbon	15	mg/L
19119	TRG	8/31/2009	Total Organic Carbon	3.96	mg/L
4716	TRG	8/31/2009	Total Organic Carbon	0.576	mg/L
19211	FB	9/1/2009	Total Kjeldahl Nitrogen		mg/L
19211	TRG	9/1/2009	Total Kjeldahl Nitrogen	1.05	mg/L
19211	FD	9/1/2009	Total Kjeldahl Nitrogen	1.05	mg/L
19785	TRG	9/1/2009	Total Kjeldahl Nitrogen	1.4	mg/L
19471	TRG	9/1/2009	Total Kjeldahl Nitrogen	1.26	mg/L
19476	TRG	9/1/2009	Total Kjeldahl Nitrogen	1.12	mg/L
33837	TRG	9/1/2009	Total Kjeldahl Nitrogen	56	mg/L
19119	TRG	9/1/2009	Total Kjeldahl Nitrogen	1.4	mg/L
4716	TRG	9/1/2009	Total Kjeldahl Nitrogen	0.7	mg/L

Appendix F2 – Cross Sections and Discharge Measurements

Bayou Bonfouca								
Field Data Summary -- Discharges and Cross Sections								
Survey Site #	LEAU Site #	River Kilometers	Width (ft)	Width (m)	Depth (ft)	Depth (m)	Flow (cfs)	Flow (cms)
BV01*	3850	19.5	0.75	0.229	0.30	0.091	0.194	0.0055
BV02	3851	17.6						
BV03	3849	14.9	15.50	4.724	0.89	0.271	-0.680	-0.0193
BB01	3847	1.1						
BB02	3848	13.3	35.55	10.836	2.86	0.872		
BB03	3852	8.6	305.40	93.086	5.26	1.603		
BB05	3855	4.5	255.00	77.724	4.71	1.436	449.980	12.7420
BB06	3853	0.0	346.40	105.583	6.42	1.957		

* A velocity was measured & width & depth were estimated from personal observation and upstream photo DSC00730.

Bayou Liberty								
Field Data Summary -- Discharges and Cross Sections								
Site #	LEAU Site #	River Kilometers	Width (ft)	Width (m)	Depth (ft)	Depth (m)	Flow (cfs)	Flow (cms)
BL01	3859	16.8		0.000		0.000		0.0000
BL03	3861	12.6	29.00	8.839	1.55	0.472	-1.050	-0.0297
BL04	3862	10	61.00	18.593	4.58	1.396		0.0000
BL05	3868	6.9	140.00	42.672	7.47	2.277		0.0000
BL07	3867	3.3	171.00	52.121	7.02	2.140		0.0000
BL08	3866	0.4	1397.50	425.958	6.99	2.131	98.930	2.8014
BL09	3876	6.1	101.00	30.785	6.16	1.878		0.0000
BL10	3877	6.2	81.00	24.689	2.89	0.881		

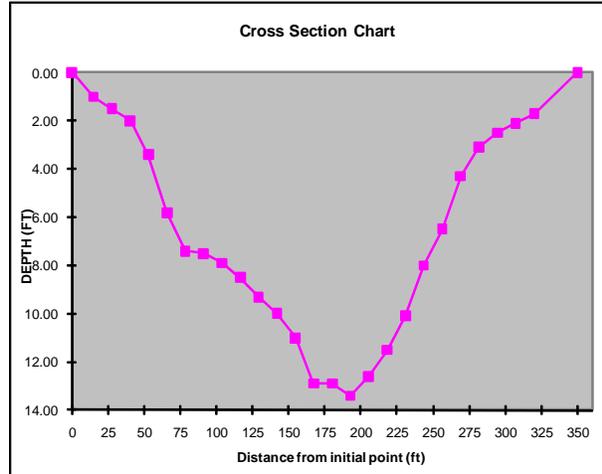
Bayou Paquet								
Field Data Summary -- Discharges and Cross Sections								
Site #	LEAU Site #	River Kilometers	Width (ft)	Width (m)	Depth (ft)	Depth (m)	Flow (cfs)	Flow (cms)
BP02	3864	2.4	62.00	18.898	3.45	1.052		
BP03	3870	1.6	70.00	21.336	4.76	1.451		
BP04	3869	0.2				0.000	-4.700	0.0140
BP05	3874	1.9	54.00	16.459	3.07	0.936		
BP06	3875	2	60.00	18.288	3.24	0.988		
BP07	3873	1.3	66.00	20.117	2.44	0.744		
BP08	3871	1.1	105.00	32.004	2.54	0.774		
BP09	3872	1.1	54.00	16.459	3.09	0.942		

STREAM CROSS-SECTION SPREADSHEET

Site Number: 3853 Subsegment: 040908 Waterbody: Bayou Bonfouca
 Site Description: Upstream of Lake Pontchartrain
 Type of Equipment: Fathometer Hydrotrac Manual
 Initial Bank: RDB LDB
 Tapedown: _____
 Gauge Height: _____
 Date: 6/17/2009

WIDTH ¹ (ft):	350.00
AREA ² (ft ²):	2262.87
AVG. DEPTH ³ (ft):	6.47

Subsection	Distance from initial point (ft)	Width ⁴ (ft)	Depth (ft)	Area ⁵ (sq.ft.)	Area of element as % of Total Area ^{6,7}
1	0.00	7.50	0.00	0.00	
2	15.00	13.85	1.00	13.85	0.61%
3	27.70	12.70	1.50	19.05	0.84%
4	40.40	12.70	2.00	25.40	1.12%
5	53.10	12.70	3.40	43.18	1.91%
6	65.80	12.70	5.80	73.66	3.26%
7	78.50	12.70	7.40	93.98	4.15%
8	91.20	12.70	7.50	95.25	4.21%
9	103.90	12.70	7.90	100.33	4.43%
10	116.60	12.70	8.50	107.95	4.77%
11	129.30	12.70	9.30	118.11	5.22%
12	142.00	12.70	10.00	127.00	5.61%
13	154.70	12.70	11.00	139.70	6.17%
14	167.40	12.70	12.90	163.83	7.24%
15	180.10	12.70	12.90	163.83	7.24%
16	192.80	12.70	13.40	170.18	7.52%
17	205.50	12.70	12.60	160.02	7.07%
18	218.20	12.70	11.50	146.05	6.45%
19	230.90	12.70	10.10	128.27	5.67%
20	243.60	12.70	8.00	101.60	4.49%
21	256.30	12.70	6.50	82.55	3.65%
22	269.00	12.70	4.30	54.61	2.41%
23	281.70	12.70	3.10	39.37	1.74%
24	294.40	12.70	2.50	31.75	1.40%
25	307.10	12.80	2.10	26.88	1.19%
26	320.00	21.45	1.70	36.47	1.61%
27	350.00	15.00	0.00	0.00	0.00%
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
Total		350.00		2262.87	100.00%



Data Collection Crew		Office Data Work	
Measurement made by:	Beard	Data Input by / Date:	Jones 8/4/09
Notetaker/Recorder:	Jones	Data Input Checked by / Date:	Beard 8/5/09
Other:			

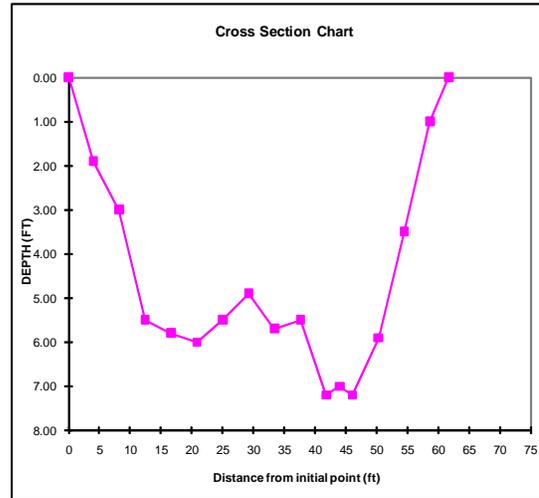
- Note 1: WIDTH (ft) = sum of the width column
- Note 2: AREA (sq.ft.) = sum of the area column
- Note 3: AVG. DEPTH (ft) = area/width (using the values from this table)
- Note 4: Width of element
- Note 5: Area=Width*Depth for element
- Note 6: Percent area = element area/total area x 100%
- Note 7: Percent area should be less than 10% as per USGS standard.
- Note 8: Blank fields are cleared from all calculations.
- Note 9: The cross sections are taken at areas representative of the stream.

STREAM CROSS-SECTION SPREADSHEET

Site Number: 3862 Subsegment: 040905 Waterbody: Bayou Liberty
 Site Description: At bridge on bike path
 Type of Equipment: Fathometer Hydrotrac Manual
 Initial Bank: RDB LDB
 Tapedown: 13.30
 Gauge Height: _____
 Date: 6/17/2009

WIDTH ¹ (ft):	61.70
AREA ² (ft ²):	287.50
AVG. DEPTH ³ (ft):	4.66

Subsection	Distance from initial point (ft)	Width ⁴ (ft)	Depth (ft)	Area ⁵ (sq.ft.)	Area of element as % of Total Area ⁶ & 7
1	0.0	2.00	0.00	0.00	
2	4.0	4.10	1.90	7.80	2.71%
3	8.2	4.21	3.00	12.62	4.39%
4	12.4	4.21	5.50	23.14	8.05%
5	16.6	4.21	5.80	24.40	8.49%
6	20.8	4.21	6.00	25.25	8.78%
7	25.0	4.21	5.50	23.14	8.05%
8	29.2	4.21	4.90	20.62	7.17%
9	33.5	4.21	5.70	23.98	8.34%
10	37.7	4.21	5.50	23.14	8.05%
11	41.9	3.17	7.20	22.82	7.94%
12	44.0	2.12	7.00	14.81	5.15%
13	46.1	3.15	7.20	22.68	7.89%
14	50.3	4.20	5.90	24.80	8.63%
15	54.5	4.20	3.50	14.70	5.11%
16	58.7	3.60	1.00	3.60	1.25%
17	61.7	1.50	0.00	0.00	0.00%
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
Total		61.70		287.50	100.00%



Data Collection Crew		Office Data Work	
Measurement made by:	Derek Borne	Data Inputted by / Date:	Derek Borne 7-31-09
Notetaker/Recorder:	Chad Keith	Data Input Checked by / Date:	Chad Keith 7-31-09
Other:			

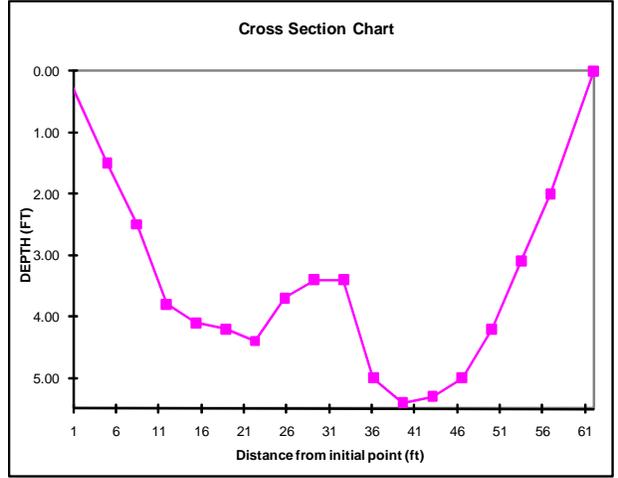
- Note 1: WIDTH (ft) = sum of the width column
- Note 2: AREA (sq.ft.) = sum of the area column
- Note 3: AVG. DEPTH (ft) = area/width (using the values from this table)
- Note 4: Width of element
- Note 5: Area=Width*Depth for element
- Note 6: Percent area = element area/total area x 100%
- Note 7: Percent area should be less than 10% as per USGS standard.
- Note 8: Blank fields are cleared from all calculations.
- Note 9: The cross sections are taken at areas representative of the stream.

STREAM CROSS-SECTION SPREADSHEET

Site Number: 3864 Subsegment: 040906 Waterbody: Bayou Paquet
 Site Description: 200 yds Above Bayou Paquet Rd
 Type of Equipment: Fathometer Hydrotrac Manual
 Initial Bank: RDB LDB
 Tapedown: N/A
 Gauge Height: N/A
 Date: 6/17/2009

WIDTH ¹ (ft):	62.00
AREA ² (ft ²):	214.15
AVG. DEPTH ³ (ft):	3.45

Subsection	Distance from initial point (ft)	Width ⁴ (ft)	Depth (ft)	Area ⁵ (sq.ft.)	Area of element as % of Total Area ^{6 & 7}
1	0.0	2.50	0.00	0.00	
2	5.0	4.23	1.50	6.35	2.97%
3	8.5	3.47	2.50	8.67	4.05%
4	11.9	3.47	3.80	13.17	6.15%
5	15.4	3.47	4.10	14.21	6.64%
6	18.9	3.47	4.20	14.56	6.80%
7	22.3	3.47	4.40	15.25	7.12%
8	25.8	3.47	3.70	12.83	5.99%
9	29.3	3.47	3.40	11.79	5.50%
10	32.7	3.47	3.40	11.79	5.50%
11	36.2	3.47	5.00	17.33	8.09%
12	39.7	3.47	5.40	18.72	8.74%
13	43.1	3.47	5.30	18.37	8.58%
14	46.6	3.47	5.00	17.33	8.09%
15	50.1	3.47	4.20	14.56	6.80%
16	53.5	3.47	3.10	10.75	5.02%
17	57.0	4.23	2.00	8.47	3.95%
18	62.0	2.50	0.00	0.00	0.00%
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
Total		62.00		214.15	100.00%



Data Collection Crew		Office Data Work	
Measurement made by:	Bryan Alleman	Data Input by / Date:	Ty Yoes 8/3/09
Notetaker/Recorder:	Ty Yoes	Data Input Checked by / Date:	Bryan Alleman 8/3/09
Other:			

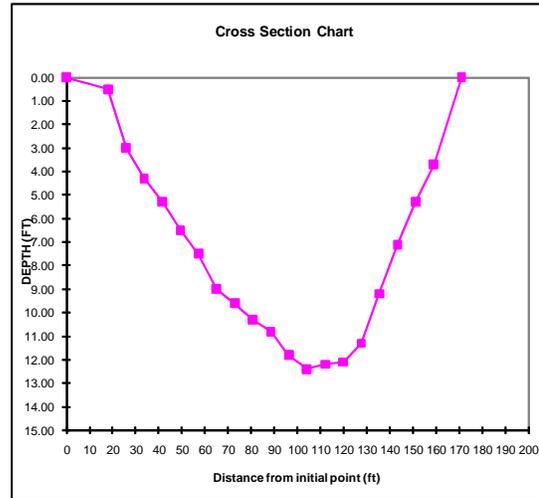
- Note 1: WIDTH (ft) = sum of the width column
- Note 2: AREA (sq.ft.) = sum of the area column
- Note 3: AVG. DEPTH (ft) = area/width (using the values from this table)
- Note 4: Width of element
- Note 5: Area=Width*Depth for element
- Note 6: Percent area = element area/total area x 100%
- Note 7: Percent area should be less than 10% as per USGS standard.
- Note 8: Blank fields are cleared from all calculations.
- Note 9: The cross sections are taken at areas representative of the stream.

STREAM CROSS-SECTION SPREADSHEET

Site Number: 3867 Subsegment: 040905 Waterbody: Bayou Liberty
 Site Description: at estuary site
 Type of Equipment: Fathometer Hydrotrac Manual
 Initial Bank: RDB LDB
 Tapedown: NA
 Gauge Height: _____
 Date: 6/16/2009

WIDTH ¹ (ft):	171.00
AREA ² (ft ²):	1200.13
AVG. DEPTH ³ (ft):	7.02

Subsection	Distance from initial point (ft)	Width ⁴ (ft)	Depth (ft)	Area ⁵ (sq.ft.)	Area of element as % of Total Area ^{6 & 7}
1	0.0	9.00	0.00	0.00	
2	18.0	12.92	0.50	6.46	0.54%
3	25.8	7.83	3.00	23.50	1.96%
4	33.7	7.83	4.30	33.68	2.81%
5	41.5	7.83	5.30	41.52	3.46%
6	49.3	7.83	6.50	50.92	4.24%
7	57.2	7.83	7.50	58.75	4.90%
8	65.0	7.83	9.00	70.50	5.87%
9	72.8	7.83	9.60	75.20	6.27%
10	80.7	7.83	10.30	80.68	6.72%
11	88.5	7.83	10.80	84.60	7.05%
12	96.3	7.83	11.80	92.43	7.70%
13	104.2	7.83	12.40	97.13	8.09%
14	112.0	7.83	12.20	95.57	7.96%
15	119.8	7.83	12.10	94.78	7.90%
16	127.7	7.83	11.30	88.52	7.38%
17	135.5	7.83	9.20	72.07	6.00%
18	143.3	7.83	7.10	55.62	4.63%
19	151.2	7.83	5.30	41.52	3.46%
20	159.0	9.92	3.70	36.69	3.06%
21	171.0	6.00	0.00	0.00	0.00%
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
Total	171.00			1200.13	100.00%



Data Collection Crew	Derek Borne	Chad Keith	Office Data Work
Measurement made by:	Derek Borne		Data Inputted by / Date: Derek Borne 7-31-09
Notetaker/Recorder:	Chad Keith		Data Input Checked by / Date: Chad Keith 7-31-09
Other:			

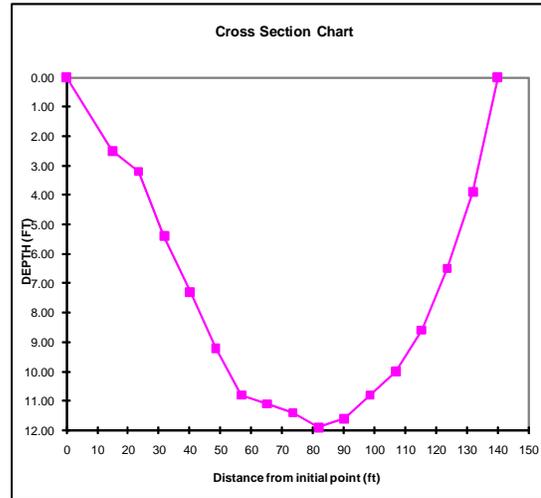
- Note 1: WIDTH (ft) = sum of the width column
- Note 2: AREA (sq.ft.) = sum of the area column
- Note 3: AVG. DEPTH (ft) = area/width (using the values from this table)
- Note 4: Width of element
- Note 5: Area=Width*Depth for element
- Note 6: Percent area = element area/total area x 100%
- Note 7: Percent area should be less than 10% as per USGS standard.
- Note 8: Blank fields are cleared from all calculations.
- Note 9: The cross sections are taken at areas representative of the stream.

STREAM CROSS-SECTION SPREADSHEET

Site Number: 3868 Subsegment: 040905 Waterbody: Bayou Liberty
 Site Description: at estuary site
 Type of Equipment: Fathometer Hydrotrac Manual
 Initial Bank: RDB LDB
 Tapedown: NA
 Gauge Height: _____
 Date: 6/16/2009

WIDTH ¹ (ft):	140.00
AREA ² (ft ²):	1045.56
AVG. DEPTH ³ (ft):	7.47

Subsection	Distance from initial point (ft)	Width ⁴ (ft)	Depth (ft)	Area ⁵ (sq.ft.)	Area of element as % of Total Area ⁶ & 7
1	0.0	7.50	0.00	0.00	
2	15.0	11.68	2.50	29.20	2.79%
3	23.4	8.36	3.20	26.74	2.56%
4	31.7	8.36	5.40	45.13	4.32%
5	40.1	8.36	7.30	61.01	5.83%
6	48.4	8.36	9.20	76.89	7.35%
7	56.8	8.36	10.80	90.26	8.63%
8	65.1	8.36	11.10	92.76	8.87%
9	73.5	8.36	11.40	95.27	9.11%
10	81.9	8.36	11.90	99.45	9.51%
11	90.2	8.36	11.60	96.94	9.27%
12	98.6	8.36	10.80	90.26	8.63%
13	106.9	8.36	10.00	83.57	7.99%
14	115.3	8.36	8.60	71.87	6.87%
15	123.6	8.36	6.50	54.32	5.20%
16	132.0	8.18	3.90	31.90	3.05%
17	140.0	4.00	0.00	0.00	0.00%
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
Total	140.00			1045.56	100.00%



Data Collection Crew		Office Data Work	
Measurement made by:	Derek Borne	Data Inputted by / Date:	Derek Borne 7-31-09
Notetaker/Recorder:	Chad Keith	Data Input Checked by / Date:	Chad Keith 7-31-09
Other:			

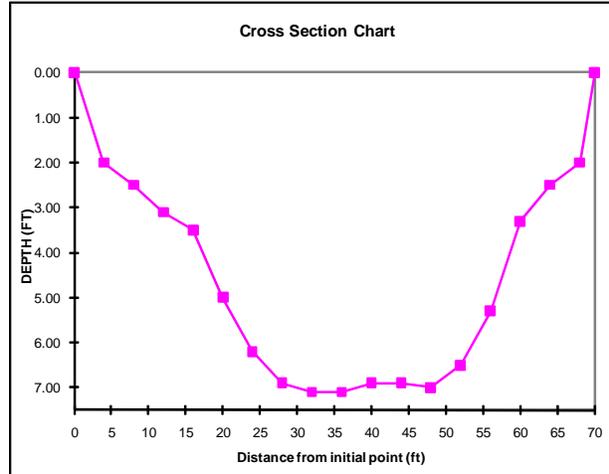
- Note 1: WIDTH (ft) = sum of the width column
- Note 2: AREA (sq.ft.) = sum of the area column
- Note 3: AVG. DEPTH (ft) = area/width (using the values from this table)
- Note 4: Width of element
- Note 5: Area=Width*Depth for element
- Note 6: Percent area = element area/total area x 100%
- Note 7: Percent area should be less than 10% as per USGS standard.
- Note 8: Blank fields are cleared from all calculations.
- Note 9: The cross sections are taken at areas representative of the stream.

STREAM CROSS-SECTION SPREADSHEET

Site Number: 3870 Subsegment: 040906 Waterbody: Bayou Paquet
 Site Description: Estuary Site
 Type of Equipment: Fathometer Hydrotrac Manual
 Initial Bank: RDB LDB
 Tapedown: N/A
 Gauge Height: N/A
 Date: N/A

WIDTH ¹ (ft):	70.00
AREA ² (ft ²):	333.20
AVG. DEPTH ³ (ft):	4.76

Subsection	Distance from initial point (ft)	Width ⁴ (ft)	Depth (ft)	Area ⁵ (sq.ft.)	Area of element as % of Total Area ^{6 & 7}
1	0.0	2.00	0.00	0.00	
2	4.0	4.00	2.00	8.00	2.40%
3	8.0	4.00	2.50	10.00	3.00%
4	12.0	4.00	3.10	12.40	3.72%
5	16.0	4.00	3.50	14.00	4.20%
6	20.0	4.00	5.00	20.00	6.00%
7	24.0	4.00	6.20	24.80	7.44%
8	28.0	4.00	6.90	27.60	8.28%
9	32.0	4.00	7.10	28.40	8.52%
10	36.0	4.00	7.10	28.40	8.52%
11	40.0	4.00	6.90	27.60	8.28%
12	44.0	4.00	6.90	27.60	8.28%
13	48.0	4.00	7.00	28.00	8.40%
14	52.0	4.00	6.50	26.00	7.80%
15	56.0	4.00	5.30	21.20	6.36%
16	60.0	4.00	3.30	13.20	3.96%
17	64.0	4.00	2.50	10.00	3.00%
18	68.0	3.00	2.00	6.00	1.80%
19	70.0	1.00	0.00	0.00	0.00%
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
Total		70.00		333.20	100.00%



Data Collection Crew		Office Data Work	
Measurement made by:	Bryan Alleman	Data Inputted by / Date:	Ty Yoes 8/3/09
Notetaker/Recorder:	Ty Yoes	Data Input Checked by / Date:	Bryan Alleman 8/3/09
Other:			

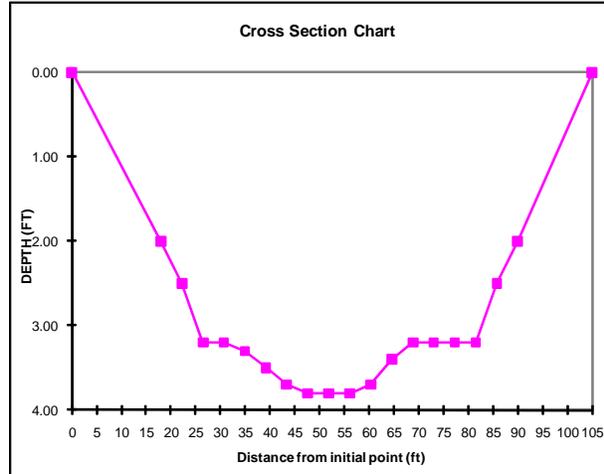
- Note 1: WIDTH (ft) = sum of the width column
- Note 2: AREA (sq.ft.) = sum of the area column
- Note 3: AVG. DEPTH (ft) = area/width (using the values from this table)
- Note 4: Width of element
- Note 5: Area=Width*Depth for element
- Note 6: Percent area = element area/total area x 100%
- Note 7: Percent area should be less than 10% as per USGS standard.
- Note 8: Blank fields are cleared from all calculations.
- Note 9: The cross sections are taken at areas representative of the stream.

STREAM CROSS-SECTION SPREADSHEET

Site Number: 3871 Subsegment: 040906 Waterbody: Bayou Paquet
 Site Description: Cross-Section Site
 Type of Equipment: Fathometer Hydrotrac Manual
 Initial Bank: RDB LDB
 Tapedown: N/A
 Gauge Height: N/A
 Date: N/A

WIDTH ¹ (ft):	105.00
AREA ² (ft ²):	266.79
AVG. DEPTH ³ (ft):	2.54

Subsection	Distance from initial point (ft)	Width ⁴ (ft)	Depth (ft)	Area ⁵ (sq.ft.)	Area of element as % of Total Area ^{6 & 7}
1	0.0	9.00	0.00	0.00	
2	18.0	11.12	2.00	22.24	8.33%
3	22.2	4.24	2.50	10.59	3.97%
4	26.5	4.24	3.20	13.55	5.08%
5	30.7	4.24	3.20	13.55	5.08%
6	34.9	4.24	3.30	13.98	5.24%
7	39.2	4.24	3.50	14.82	5.56%
8	43.4	4.24	3.70	15.67	5.87%
9	47.6	4.24	3.80	16.09	6.03%
10	51.9	4.24	3.80	16.09	6.03%
11	56.1	4.24	3.80	16.09	6.03%
12	60.4	4.24	3.70	15.67	5.87%
13	64.6	4.24	3.40	14.40	5.40%
14	68.8	4.24	3.20	13.55	5.08%
15	73.1	4.24	3.20	13.55	5.08%
16	77.3	4.24	3.20	13.55	5.08%
17	81.5	4.24	3.20	13.55	5.08%
18	85.8	4.24	2.50	10.59	3.97%
19	90.0	9.62	2.00	19.24	7.21%
20	105.0	7.50	0.00	0.00	0.00%
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
Total		105.00		266.79	100.00%



Data Collection Crew		Office Data Work	
Measurement made by:	Bryan Alleman	Data Input by / Date:	Ty Yoes 8/3/09
Notetaker/Recorder:	Ty Yoes	Data Input Checked by / Date:	Bryan Alleman 8/3/09
Other:			

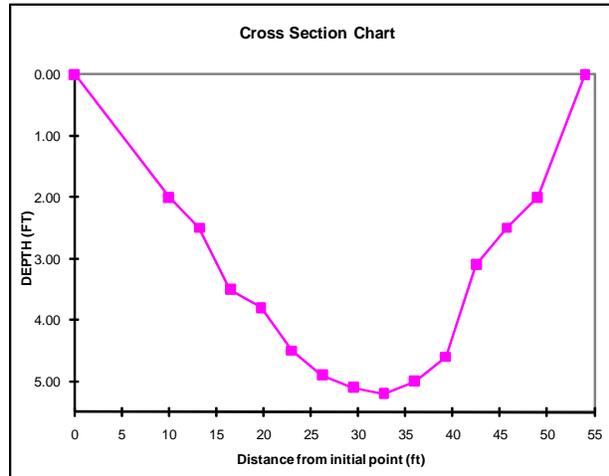
- Note 1: WIDTH (ft) = sum of the width column
- Note 2: AREA (sq.ft.) = sum of the area column
- Note 3: AVG. DEPTH (ft) = area/width (using the values from this table)
- Note 4: Width of element
- Note 5: Area=Width*Depth for element
- Note 6: Percent area = element area/total area x 100%
- Note 7: Percent area should be less than 10% as per USGS standard.
- Note 8: Blank fields are cleared from all calculations.
- Note 9: The cross sections are taken at areas representative of the stream.

STREAM CROSS-SECTION SPREADSHEET

Site Number: 3872 Subsegment: 040906 Waterbody: Bayou Paquet
 Site Description: Cross-Section Site
 Type of Equipment: Fathometer Hydrotrac Manual
 Initial Bank: RDB LDB
 Tapedown: N/A
 Gauge Height: N/A
 Date: N/A

WIDTH ¹ (ft):	54.00
AREA ² (ft ²):	166.78
AVG. DEPTH ³ (ft):	3.09

Subsection	Distance from initial point (ft)	Width ⁴ (ft)	Depth (ft)	Area ⁵ (sq.ft.)	Area of element as % of Total Area ^{6 & 7}
1	0.0	5.00	0.00	0.00	
2	10.0	6.63	2.00	13.25	7.94%
3	13.3	3.25	2.50	8.13	4.87%
4	16.5	3.25	3.50	11.38	6.82%
5	19.8	3.25	3.80	12.35	7.41%
6	23.0	3.25	4.50	14.63	8.77%
7	26.3	3.25	4.90	15.93	9.55%
8	29.5	3.25	5.10	16.58	9.94%
9	32.8	3.25	5.20	16.90	10.13%
10	36.0	3.25	5.00	16.25	9.74%
11	39.3	3.25	4.60	14.95	8.96%
12	42.5	3.25	3.10	10.08	6.04%
13	45.8	3.25	2.50	8.13	4.87%
14	49.0	4.13	2.00	8.25	4.95%
15	54.0	2.50	0.00	0.00	0.00%
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
Total		54.00		166.78	100.00%



Data Collection Crew		Office Data Work	
Measurement made by:	Bryan Alleman	Data Inputted by / Date:	Ty Yoes 8/3/09
Notetaker/Recorder:	Ty Yoes	Data Input Checked by / Date:	Bryan Alleman 8/3/09
Other:			

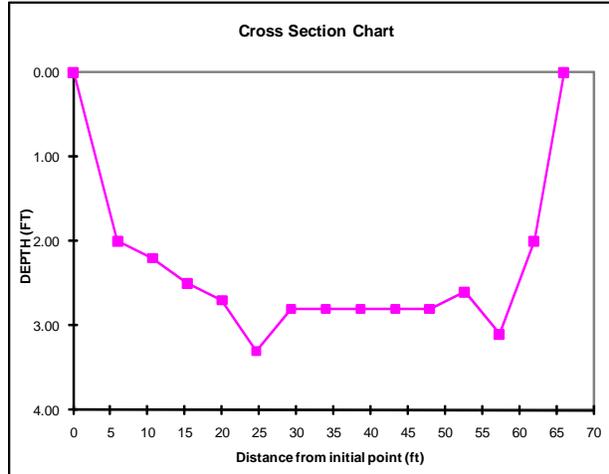
- Note 1: WIDTH (ft) = sum of the width column
- Note 2: AREA (sq.ft.) = sum of the area column
- Note 3: AVG. DEPTH (ft) = area/width (using the values from this table)
- Note 4: Width of element
- Note 5: Area=Width*Depth for element
- Note 6: Percent area = element area/total area x 100%
- Note 7: Percent area should be less than 10% as per USGS standard.
- Note 8: Blank fields are cleared from all calculations.
- Note 9: The cross sections are taken at areas representative of the stream.

STREAM CROSS-SECTION SPREADSHEET

Site Number: 3873 Subsegment: 040906 Waterbody: Bayou Paquet
 Site Description: Cross-Section Site
 Type of Equipment: Fathometer Hydrotrac Manual
 Initial Bank: RDB LDB
 Tapedown: N/A
 Gauge Height: N/A
 Date: N/A

WIDTH ¹ (ft):	66.00
AREA ² (ft ²):	161.20
AVG. DEPTH ³ (ft):	2.44

Subsection	Distance from initial point (ft)	Width ⁴ (ft)	Depth (ft)	Area ⁵ (sq.ft.)	Area of element as % of Total Area ^{6 & 7}
1	0.0	3.00	0.00	0.00	
2	6.0	5.33	2.00	10.67	6.62%
3	10.7	4.67	2.20	10.27	6.37%
4	15.3	4.67	2.50	11.67	7.24%
5	20.0	4.67	2.70	12.60	7.82%
6	24.7	4.67	3.30	15.40	9.55%
7	29.3	4.67	2.80	13.07	8.11%
8	34.0	4.67	2.80	13.07	8.11%
9	38.7	4.67	2.80	13.07	8.11%
10	43.3	4.67	2.80	13.07	8.11%
11	48.0	4.67	2.80	13.07	8.11%
12	52.7	4.67	2.60	12.13	7.53%
13	57.3	4.67	3.10	14.47	8.97%
14	62.0	4.33	2.00	8.67	5.38%
15	66.0	2.00	0.00	0.00	0.00%
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
Total		66.00		161.20	100.00%



Data Collection Crew		Office Data Work	
Measurement made by:	Bryan Alleman	Data Inputted by / Date:	Ty Yoes 8/3/09
Notetaker/Recorder:	Ty Yoes	Data Input Checked by / Date:	Bryan Alleman 8/3/09
Other:			

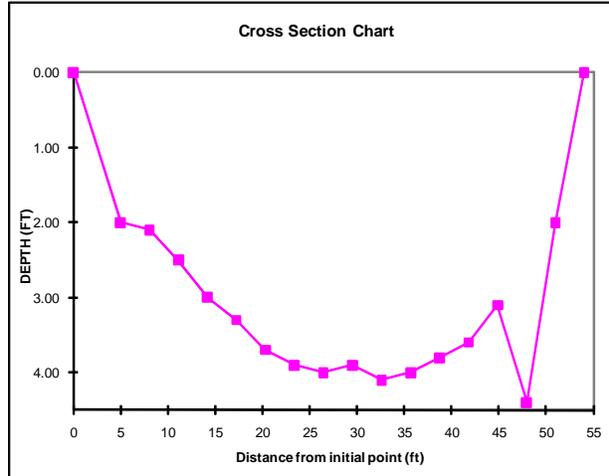
- Note 1: WIDTH (ft) = sum of the width column
- Note 2: AREA (sq.ft.) = sum of the area column
- Note 3: AVG. DEPTH (ft) = area/width (using the values from this table)
- Note 4: Width of element
- Note 5: Area=Width*Depth for element
- Note 6: Percent area = element area/total area x 100%
- Note 7: Percent area should be less than 10% as per USGS standard.
- Note 8: Blank fields are cleared from all calculations.
- Note 9: The cross sections are taken at areas representative of the stream.

STREAM CROSS-SECTION SPREADSHEET

Site Number: 3874 Subsegment: 040906 Waterbody: Bayou Paquet
 Site Description: Cross-Section Site
 Type of Equipment: Fathometer Hydrotrac Manual
 Initial Bank: RDB LDB
 Tapedown: N/A
 Gauge Height: N/A
 Date: N/A

WIDTH ¹ (ft):	54.00
AREA ² (ft ²):	165.62
AVG. DEPTH ³ (ft):	3.07

Subsection	Distance from initial point (ft)	Width ⁴ (ft)	Depth (ft)	Area ⁵ (sq.ft.)	Area of element as % of Total Area ^{6 & 7}
1	0.0	2.50	0.00	0.00	
2	5.0	4.03	2.00	8.07	4.87%
3	8.1	3.07	2.10	6.44	3.89%
4	11.1	3.07	2.50	7.67	4.63%
5	14.2	3.07	3.00	9.20	5.55%
6	17.3	3.07	3.30	10.12	6.11%
7	20.3	3.07	3.70	11.35	6.85%
8	23.4	3.07	3.90	11.96	7.22%
9	26.5	3.07	4.00	12.27	7.41%
10	29.5	3.07	3.90	11.96	7.22%
11	32.6	3.07	4.10	12.57	7.59%
12	35.7	3.07	4.00	12.27	7.41%
13	38.7	3.07	3.80	11.65	7.04%
14	41.8	3.07	3.60	11.04	6.67%
15	44.9	3.07	3.10	9.51	5.74%
16	47.9	3.07	4.40	13.49	8.15%
17	51.0	3.03	2.00	6.07	3.66%
18	54.0	1.50	0.00	0.00	0.00%
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
Total		54.00		165.62	100.00%



Data Collection Crew		Office Data Work	
Measurement made by:	Bryan Alleman	Data Inputted by / Date:	Ty Yoes 8/3/09
Notetaker/Recorder:	Ty Yoes	Data Input Checked by / Date:	Bryan Alleman 8/3/09
Other:			

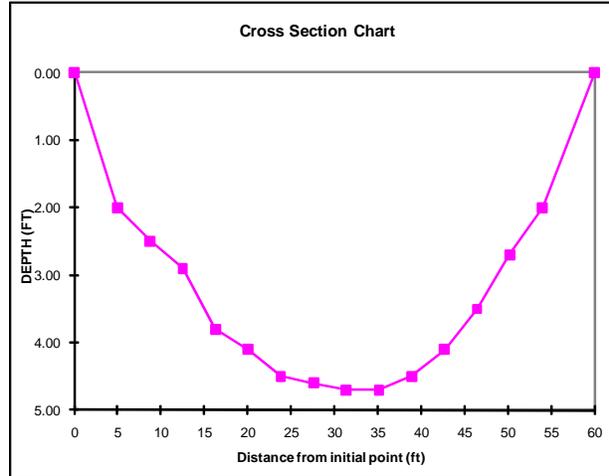
- Note 1: WIDTH (ft) = sum of the width column
- Note 2: AREA (sq.ft.) = sum of the area column
- Note 3: AVG. DEPTH (ft) = area/width (using the values from this table)
- Note 4: Width of element
- Note 5: Area=Width*Depth for element
- Note 6: Percent area = element area/total area x 100%
- Note 7: Percent area should be less than 10% as per USGS standard.
- Note 8: Blank fields are cleared from all calculations.
- Note 9: The cross sections are taken at areas representative of the stream.

STREAM CROSS-SECTION SPREADSHEET

Site Number: 3875 Subsegment: 040906 Waterbody: Bayou Paquet
 Site Description: Cross-Section Site
 Type of Equipment: Fathometer Hydrotrac Manual
 Initial Bank: RDB LDB
 Tapedown: N/A
 Gauge Height: N/A
 Date: N/A

WIDTH ¹ (ft):	60.00
AREA ² (ft ²):	194.18
AVG. DEPTH ³ (ft):	3.24

Subsection	Distance from initial point (ft)	Width ⁴ (ft)	Depth (ft)	Area ⁵ (sq.ft.)	Area of element as % of Total Area ^{6 & 7}
1	0.0	2.50	0.00	0.00	
2	5.0	4.38	2.00	8.77	4.52%
3	8.8	3.77	2.50	9.42	4.85%
4	12.5	3.77	2.90	10.93	5.63%
5	16.3	3.77	3.80	14.32	7.38%
6	20.1	3.77	4.10	15.45	7.96%
7	23.8	3.77	4.50	16.96	8.73%
8	27.6	3.77	4.60	17.34	8.93%
9	31.4	3.77	4.70	17.71	9.12%
10	35.2	3.77	4.70	17.71	9.12%
11	38.9	3.77	4.50	16.96	8.73%
12	42.7	3.77	4.10	15.45	7.96%
13	46.5	3.77	3.50	13.19	6.79%
14	50.2	3.77	2.70	10.18	5.24%
15	54.0	4.89	2.00	9.77	5.03%
16	60.0	3.00	0.00	0.00	0.00%
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
Total		60.00		194.18	100.00%



Data Collection Crew		Office Data Work	
Measurement made by:	Bryan Alleman	Data Input by / Date:	Ty Yoes 8/3/09
Notetaker/Recorder:	Ty Yoes	Data Input Checked by / Date:	Bryan Alleman 8/3/09
Other:			

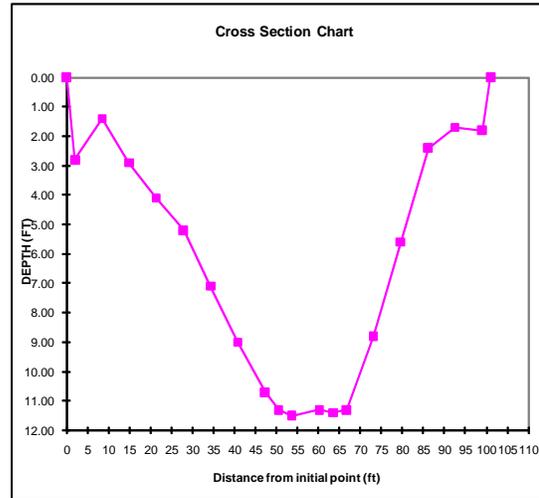
- Note 1: WIDTH (ft) = sum of the width column
- Note 2: AREA (sq.ft.) = sum of the area column
- Note 3: AVG. DEPTH (ft) = area/width (using the values from this table)
- Note 4: Width of element
- Note 5: Area=Width*Depth for element
- Note 6: Percent area = element area/total area x 100%
- Note 7: Percent area should be less than 10% as per USGS standard.
- Note 8: Blank fields are cleared from all calculations.
- Note 9: The cross sections are taken at areas representative of the stream.

STREAM CROSS-SECTION SPREADSHEET

Site Number: 3876 Subsegment: 040905 Waterbody: Bayou Liberty
 Site Description: At Estuary site in loop
 Type of Equipment: Fathometer Hydrotrac Manual
 Initial Bank: RDB LDB
 Tapedown: NA
 Gauge Height: _____
 Date: 6/16/2009

WIDTH ¹ (ft):	101.00
AREA ² (ft ²):	621.74
AVG. DEPTH ³ (ft):	6.16

Subsection	Distance from initial point (ft)	Width ⁴ (ft)	Depth (ft)	Area ⁵ (sq.ft.)	Area of element as % of Total Area ⁶ & 7
1	0.0	1.00	0.00	0.00	
2	2.0	4.23	2.80	11.85	1.91%
3	8.5	6.47	1.40	9.05	1.46%
4	14.9	6.47	2.90	18.75	3.02%
5	21.4	6.47	4.10	26.51	4.26%
6	27.9	6.47	5.20	33.63	5.41%
7	34.3	6.47	7.10	45.91	7.38%
8	40.8	6.47	9.00	58.20	9.36%
9	47.3	4.85	10.70	51.90	8.35%
10	50.5	3.22	11.30	36.35	5.85%
11	53.7	4.85	11.50	55.78	8.97%
12	60.2	4.88	11.30	55.09	8.86%
13	63.5	3.25	11.40	37.05	5.96%
14	66.7	4.83	11.30	54.52	8.77%
15	73.1	6.43	8.80	56.61	9.11%
16	79.6	6.50	5.60	36.40	5.85%
17	86.1	6.47	2.40	15.52	2.50%
18	92.5	6.45	1.70	10.97	1.76%
19	99.0	4.25	1.80	7.65	1.23%
20	101.0	1.00	0.00	0.00	0.00%
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
Total	101.00			621.74	100.00%



Data Collection Crew	Derek Borne	Chad Keith	Office Data Work
Measurement made by:	Derek Borne		Data Inputted by / Date: Derek Borne 7-31-09
Notetaker/Recorder:	Chad Keith		Data Input Checked by / Date: Chad Keith 7-31-09
Other:			

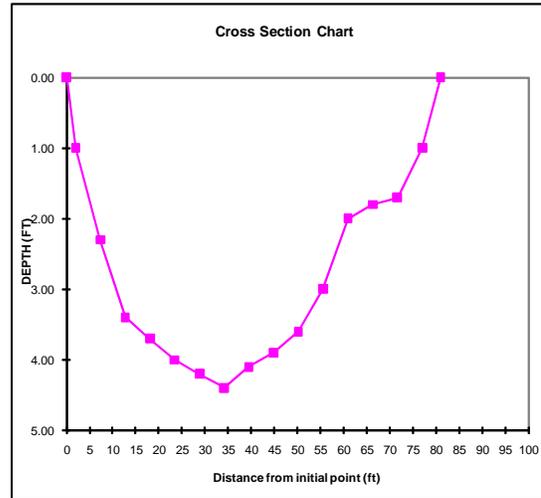
- Note 1: WIDTH (ft) = sum of the width column
- Note 2: AREA (sq.ft.) = sum of the area column
- Note 3: AVG. DEPTH (ft) = area/width (using the values from this table)
- Note 4: Width of element
- Note 5: Area=Width*Depth for element
- Note 6: Percent area = element area/total area x 100%
- Note 7: Percent area should be less than 10% as per USGS standard.
- Note 8: Blank fields are cleared from all calculations.
- Note 9: The cross sections are taken at areas representative of the stream.

STREAM CROSS-SECTION SPREADSHEET

Site Number: 3877 Subsegment: 040905 Waterbody: Bayou Liberty
 Site Description: At estuary site in loop
 Type of Equipment: Fathometer Hydrotrac Manual
 Initial Bank: RDB LDB
 Tapedown: NA
 Gauge Height: _____
 Date: 6/16/2009

WIDTH ¹ (ft):	81.00
AREA ² (ft ²):	233.89
AVG. DEPTH ³ (ft):	2.89

Subsection	Distance from initial point (ft)	Width ⁴ (ft)	Depth (ft)	Area ⁵ (sq.ft.)	Area of element as % of Total Area ⁶ & 7
1	0.0	1.00	0.00	0.00	
2	2.0	3.68	1.00	3.68	1.57%
3	7.4	5.36	2.30	12.32	5.27%
4	12.7	5.36	3.40	18.21	7.79%
5	18.1	5.36	3.70	19.82	8.47%
6	23.4	5.36	4.00	21.43	9.16%
7	28.8	5.36	4.20	22.50	9.62%
8	34.1	5.36	4.40	23.57	10.08%
9	39.5	5.36	4.10	21.96	9.39%
10	44.9	5.36	3.90	20.89	8.93%
11	50.2	5.36	3.60	19.29	8.25%
12	55.6	5.36	3.00	16.07	6.87%
13	60.9	5.36	2.00	10.71	4.58%
14	66.3	5.36	1.80	9.64	4.12%
15	71.6	5.36	1.70	9.11	3.89%
16	77.0	4.68	1.00	4.68	2.00%
17	81.0	2.00	0.00	0.00	0.00%
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
Total		81.00		233.89	100.00%



Data Collection Crew		Derek Borne	Chad Keith	Office Data Work	
Measurement made by:	Derek Borne			Data Inputted by / Date:	Derek Borne 7-31-09
Notetaker/Recorder:	Chad Keith			Data Input Checked by / Date:	Chad Keith 7-31-09
Other:					

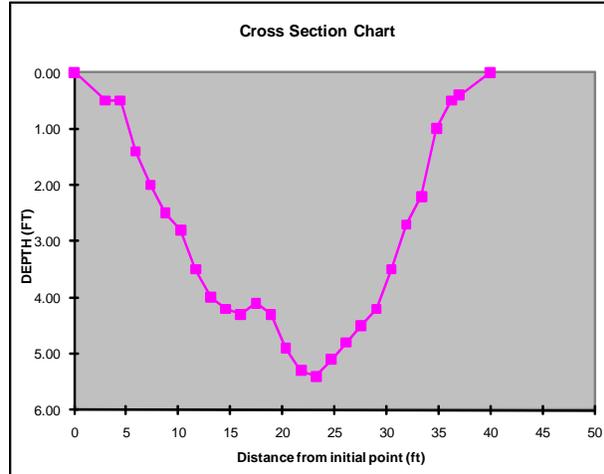
- Note 1: WIDTH (ft) = sum of the width column
- Note 2: AREA (sq.ft.) = sum of the area column
- Note 3: AVG. DEPTH (ft) = area/width (using the values from this table)
- Note 4: Width of element
- Note 5: Area=Width*Depth for element
- Note 6: Percent area = element area/total area x 100%
- Note 7: Percent area should be less than 10% as per USGS standard.
- Note 8: Blank fields are cleared from all calculations.
- Note 9: The cross sections are taken at areas representative of the stream.

STREAM CROSS-SECTION SPREADSHEET

Site Number: 3848 Subsegment: 040907 Waterbody: Bayou Bonfouca
 Site Description: just below West Hall Ave.
 Type of Equipment: Fathometer Hydrotrac Manual
 Initial Bank: RDB LDB
 Tapedown: _____
 Gauge Height: _____
 Date: 6/18/2009

WIDTH ¹ (ft):	40.00
AREA ² (ft ²):	114.09
AVG. DEPTH ³ (ft):	2.85

Subsection	Distance from initial point (ft)	Width ⁴ (ft)	Depth (ft)	Area ⁵ (sq.ft.)	Area of element as % of Total Area ^{6 & 7}
1	0.0	1.50	0.00	0.00	
2	3.0	2.22	0.50	1.11	0.97%
3	4.4	1.45	0.50	0.72	0.63%
4	5.9	1.45	1.40	2.03	1.78%
5	7.3	1.45	2.00	2.89	2.54%
6	8.8	1.45	2.50	3.62	3.17%
7	10.2	1.45	2.80	4.05	3.55%
8	11.7	1.45	3.50	5.06	4.44%
9	13.1	1.45	4.00	5.79	5.07%
10	14.6	1.45	4.20	6.08	5.33%
11	16.0	1.45	4.30	6.22	5.45%
12	17.5	1.45	4.10	5.93	5.20%
13	18.9	1.45	4.30	6.22	5.45%
14	20.4	1.45	4.90	7.09	6.21%
15	21.8	1.45	5.30	7.67	6.72%
16	23.3	1.45	5.40	7.81	6.85%
17	24.7	1.45	5.10	7.38	6.47%
18	26.1	1.45	4.80	6.94	6.09%
19	27.6	1.45	4.50	6.51	5.71%
20	29.0	1.45	4.20	6.08	5.33%
21	30.5	1.45	3.50	5.06	4.44%
22	31.9	1.45	2.70	3.91	3.42%
23	33.4	1.45	2.20	3.18	2.79%
24	34.8	1.45	1.00	1.45	1.27%
25	36.3	1.09	0.50	0.54	0.48%
26	37.0	1.86	0.40	0.74	0.65%
27	40.0	1.50	0.00	0.00	0.00%
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
Total		40.00		114.09	100.00%



Data Collection Crew		Office Data Work	
Measurement made by:	C. Casanova	Data Input by / Date:	G. LaFleur 8/6/2009
Notetaker/Recorder:	G. LaFleur	Data Input Checked by / Date:	
Other:			

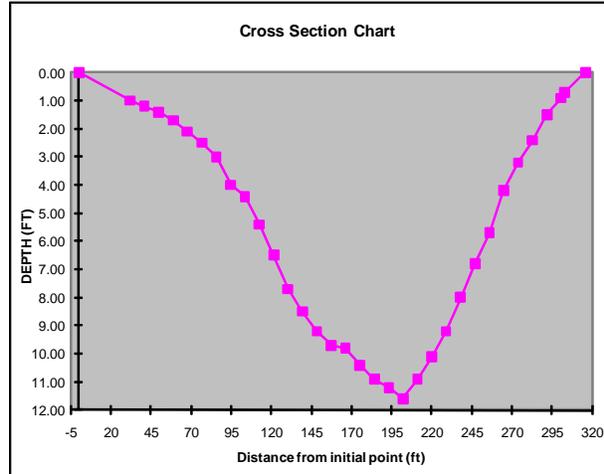
- Note 1: WIDTH (ft) = sum of the width column
- Note 2: AREA (sq.ft.) = sum of the area column
- Note 3: AVG. DEPTH (ft) = area/width (using the values from this table)
- Note 4: Width of element
- Note 5: Area=Width*Depth for element
- Note 6: Percent area = element area/total area x 100%
- Note 7: Percent area should be less than 10% as per USGS standard.
- Note 8: Blank fields are cleared from all calculations.
- Note 9: The cross sections are taken at areas representative of the stream.

STREAM CROSS-SECTION SPREADSHEET

Site Number: 3852 Subsegment: 040908 Waterbody: Bayou Bonfouca
 Site Description: estuary
 Type of Equipment: Fathometer Hydrotrac Manual
 Initial Bank: RDB LDB
 Tapedown: _____
 Gauge Height: _____
 Date: 6/18/2009

WIDTH ¹ (ft):	316.00
AREA ² (ft ²):	1672.08
AVG. DEPTH ³ (ft):	5.29

Subsection	Distance from initial point (ft)	Width ⁴ (ft)	Depth (ft)	Area ⁵ (sq.ft.)	Area of element as % of Total Area ^{6 & 7}
1	0.0	16.00	0.00	0.00	
2	32.0	20.48	1.00	20.48	1.22%
3	41.0	8.96	1.20	10.75	0.64%
4	49.9	8.96	1.40	12.54	0.75%
5	58.9	8.96	1.70	15.23	0.91%
6	67.8	8.96	2.10	18.81	1.13%
7	76.8	8.96	2.50	22.40	1.34%
8	85.8	8.96	3.00	26.88	1.61%
9	94.7	8.96	4.00	35.83	2.14%
10	103.7	8.96	4.40	39.42	2.36%
11	112.6	8.96	5.40	48.38	2.89%
12	121.6	8.96	6.50	58.23	3.48%
13	130.5	8.96	7.70	68.98	4.13%
14	139.5	8.96	8.50	76.15	4.55%
15	148.5	8.96	9.20	82.42	4.93%
16	157.4	8.96	9.70	86.90	5.20%
17	166.4	8.96	9.80	87.80	5.25%
18	175.3	8.96	10.40	93.17	5.57%
19	184.3	8.96	10.90	97.65	5.84%
20	193.3	8.96	11.20	100.34	6.00%
21	202.2	8.96	11.60	103.92	6.22%
22	211.2	8.96	10.90	97.65	5.84%
23	220.1	8.96	10.10	90.48	5.41%
24	229.1	8.96	9.20	82.42	4.93%
25	238.0	8.96	8.00	71.67	4.29%
26	247.0	8.96	6.80	60.92	3.64%
27	256.0	8.96	5.70	51.06	3.05%
28	264.9	8.96	4.20	37.63	2.25%
29	273.9	8.96	3.20	28.67	1.71%
30	282.8	8.96	2.40	21.50	1.29%
31	291.8	8.96	1.50	13.44	0.80%
32	300.8	5.60	0.90	5.04	0.30%
33	303.0	7.62	0.70	5.33	0.32%
34	316.0	6.50	0.00	0.00	0.00%
35					
36					
37					
38					
39					
40					
Total		316.00		1672.08	100.00%



Data Collection Crew		Office Data Work	
Measurement made by:	C. Casanova	Data Input by / Date:	G. LaFleur 08/25/09
Notetaker/Recorder:	G. LaFleur	Data Input Checked by / Date:	
Other:			

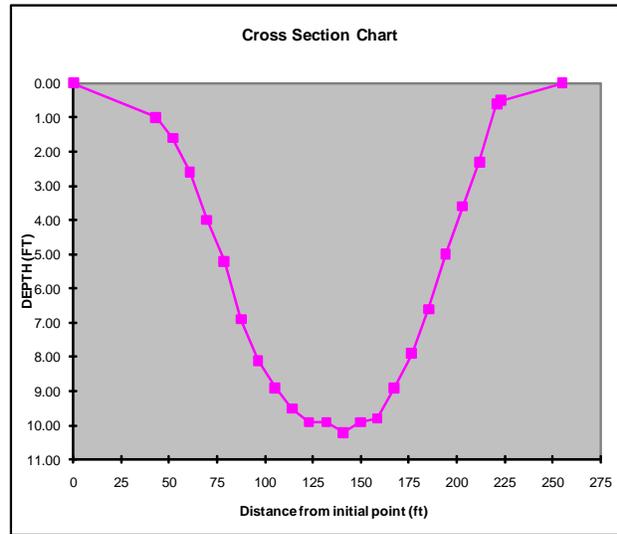
- Note 1: WIDTH (ft) = sum of the width column
- Note 2: AREA (sq.ft.) = sum of the area column
- Note 3: AVG. DEPTH (ft) = area/width (using the values from this table)
- Note 4: Width of element
- Note 5: Area=Width*Depth for element
- Note 6: Percent area = element area/total area x 100%
- Note 7: Percent area should be less than 10% as per USGS standard.
- Note 8: Blank fields are cleared from all calculations.
- Note 9: The cross sections are taken at areas representative of the stream.

STREAM CROSS-SECTION SPREADSHEET

Site Number: 3855 Subsegment: 040908 Waterbody: Bayou Bonfouca
 Site Description: estuary
 Type of Equipment: Fathometer Hydrotrac Manual
 Initial Bank: RDB LDB
 Tapedown: _____
 Gauge Height: _____
 Date: 6/18/2009

WIDTH ¹ (ft):	255.00
AREA ² (ft ²):	1200.50
AVG. DEPTH ³ (ft):	4.71

Subsection	Distance from initial point (ft)	Width ⁴ (ft)	Depth (ft)	Area ⁵ (sq.ft.)	Area of element as % of Total Area ^{6 & 7}
1	0.0	21.50	0.00	0.00	
2	43.0	25.94	1.00	25.94	2.16%
3	51.9	8.89	1.60	14.22	1.18%
4	60.8	8.89	2.60	23.11	1.93%
5	69.7	8.89	4.00	35.56	2.96%
6	78.6	8.89	5.20	46.22	3.85%
7	87.4	8.89	6.90	61.33	5.11%
8	96.3	8.89	8.10	72.00	6.00%
9	105.2	8.89	8.90	79.11	6.59%
10	114.1	8.89	9.50	84.44	7.03%
11	123.0	8.89	9.90	88.00	7.33%
12	131.9	8.89	9.90	88.00	7.33%
13	140.8	8.89	10.20	90.67	7.55%
14	149.7	8.89	9.90	88.00	7.33%
15	158.6	8.89	9.80	87.11	7.26%
16	167.4	8.89	8.90	79.11	6.59%
17	176.3	8.89	7.90	70.22	5.85%
18	185.2	8.89	6.60	58.67	4.89%
19	194.1	8.89	5.00	44.44	3.70%
20	203.0	8.89	3.60	32.00	2.67%
21	211.9	8.89	2.30	20.44	1.70%
22	220.8	5.56	0.60	3.33	0.28%
23	223.0	17.11	0.50	8.56	0.71%
24	255.0	16.00	0.00	0.00	0.00%
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
Total		255.00		1200.50	100.00%



Data Collection Crew		Office Data Work	
Measurement made by:	C. Casanova	Data Input by / Date:	G. LaFleur / 8-25-09
Notetaker/Recorder:	G. LaFleur	Data Input Checked by / Date:	
Other:			

- Note 1: WIDTH (ft) = sum of the width column
- Note 2: AREA (sq.ft.) = sum of the area column
- Note 3: AVG. DEPTH (ft) = area/width (using the values from this table)
- Note 4: Width of element
- Note 5: Area=Width*Depth for element
- Note 6: Percent area = element area/total area x 100%
- Note 7: Percent area should be less than 10% as per USGS standard.
- Note 8: Blank fields are cleared from all calculations.
- Note 9: The cross sections are taken at areas representative of the stream.

Appendix F3 – Field Notes

WATERBODY INSITU DATA

SITE	SITE NUMBER	River Kilometer	DATE & TIME	Reaches	TEMP (C)	pH	SP COND		% SAT	SAMPLE		
							(uS/cm)	DO (mg/l)		SALINITY (ppt)	DEPTH (m)	SECCHI (in)
BV01	3850	19.5	6/17/2009 10:50	2-3	33.82	9.16	520.9	6.53	92.30	0.26	0.05	---
BV02	3851	17.6	6/17/2009 11:15	4&6	27.21	7.75	760.9	1.25	15.90	0.39	0.15	---
BV03	3849	14.9	6/17/2009 11:50	11-12	27.90	7.34	338.3	1.62	20.80	0.17	0.50	12
BB02	3848	13.3	6/17/2009 9:15	19-20	29.60	7.16	870.1	0.76	9.70	0.45	1.00	24
BB03	3852	8.6	6/17/2009 11:00	27-28	31.54	7.26	4888.0	4.21	58.00	2.68	1.00	42
BB05	3855	4.5	6/17/2009 11:45	35-36	31.29	7.55	6530.0	6.01	83.50	3.62	1.00	33
BB06	3853	0.5	6/17/2009 7:40	91	30.22	7.55	7325.0	6.53	88.70	4.08	1.00	18
BB07	3856	0.0	6/17/2009 7:20	Lake	29.98	7.56	7096.0	6.80	91.90	3.94	1.00	18
BL03	3861	12.6	6/17/2009 8:35	44-45	29.33	7.65	925.5	1.33	17.50	0.48	0.50	16
BL04	3862	10.0	6/17/2009 9:15	47-48	29.52	7.28	1042.0	1.64	21.10	0.54	1.00	25
BL05	3868	6.9	6/17/2009 11:10	54-55	31.31	7.16	5583.0	3.64	49.90	3.09	1.00	30
BL07	3867	3.3	6/17/2009 12:10	66-67	31.99	7.44	3906.0	3.75	52.00	2.12	1.00	24
BL08	3866	0.4	6/17/2009 7:55	90	30.44	7.54	7468.0	6.16	83.90	4.16	1.00	18
BP02	3864	2.4	6/17/2009 10:30	81-82	32.08	7.05	5780.0	2.16	36.10	3.17	1.00	24
BP03	3870	1.6	6/17/2009 11:15	82-83	32.07	7.33	6238.0	4.48	66.70	3.47	0.45	18
BP04	3869	0.2	6/17/2009 12:00	88-89	32.72	7.62	7093.0	7.03	100.40	3.94	1.00	12

Bayou Liberty
Subsegments: 040905 & 040906
Project # ES2008007
Bayou Bonfouca
Subsegments: 040907 & 040908
Project # ES2008004
TMDL Survey Report
June 2009

Bayou Liberty, Bayou Paquet, Bayou Bonfouca, and Bayou Vincent are located in the Pontchartrain Basin. Bayou Liberty was surveyed from the headwaters near Journey Road to the confluence with Bayou Bonfouca. Bayou Paquet was surveyed from the headwaters near Park Avenue to the confluence with Bayou Liberty. Bayou Bonfouca was surveyed from the headwaters near Camelot Drive to the lower boundary site in Lake Pontchartrain. Bayou Vincent was surveyed from the headwaters near Eagle Lake Mobile Home Park to the confluence with Bayou Bonfouca. The surveys were conducted June 15 through June 19, 2009. Land use along the bayous is predominately residential and wetland.

Fourteen continuous monitors were deployed throughout the survey, five on Bayou Liberty, five on Bayou Bonfouca, three on Bayou Paquet, and one on Bayou Vincent. The continuous monitor for site 3856 (BB07) encountered problems with the LDO %sat and LDO mg/l parameters. The data has been flagged in the L'eau database. All other continuous monitors logged with no problems for the duration of the survey. Four continuous water level monitors were deployed at sites 3848(BB02), 3853(BB06), 3862(BL04), and 3864(BP02). Each water level monitor was set to log the duration of the survey, and each logged successfully.

Water quality samples were taken throughout the length of all the water bodies along with in-situ field readings. Stream discharge measurements were taken on three sites. Two were taken on the main stems, sites 3855(BB05) and 3866(BL08), and one on a tributary, site 3869(BP04). Three flow measurements were also taken. Two on a tributary, sites 3849(BV03) and 3850(BV01), and one main stem, site 3861(BL03).

Two dye studies were performed on the waterways. One study was done in the middle section of Bayou Liberty at site 3865(BL06), and one study was in the middle section of Bayou Bonfouca at site 3854(BB04). For both studies, dye concentrations were recorded in two separate runs which covered approximately 72 hours. A more detailed explanation of the dye study can be found on the Watershed Shared Network (ws_surveys) Bayou Liberty and Bonfouca under dye study log.

There were 7 dischargers sampled for this survey (AI# 19119, 19471, 19476, 33837, 19785, 19211, and 4716).

No data was collected at sites 3847(BB01), 3859(BL01), 3860(BL02), and 3863(BP01) due to a lack of water or no flow.

Included with this report are all survey data including: survey plan, maps, field notes, discharge measurements, site GPS, stream cross-sections, continuous monitor data, continuous water level monitor data, and water quality sample records. Data from the dye study, which includes site GPS, dye concentration logs, stream cross-sections, and a field log are also included. Electronic copies of this data are available on the Watershed Shared Network (ws_surveys). The Continuous Monitor printouts contained in this report are provisional data. The official versions can be found in the Leau database.

Ambient Water Quality Site Information

Project #: 2008004 Site #: 3847 AI #: _____
 Temporary Site #: BBO1 Subsegment: 040907 Date: 6-9-09 Time: 1340
 Waterbody: Bayou Bonfouca
 Tapedown: _____ Staff Gauge: _____ Gauge Height: _____
 Site Location: near Canalot Dr
 Personnel: G. LAFleur, B. ALLEN, C. CASANOVA

Weather Conditions: Temperature (°F): Wind (mph): Wind Direction:
 Clear Hot > 85° < 1 NW N NE
 Overcast Warm > 75° 1-5 SW S SE
 Drizzle/Light Rain Mild > 65° 6-10 E W
 Showers Cool > 60° 11-15 Variable
 Cold < 60° > 16

Cloud Cover:
 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream
 Flowing: Flow Direction Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream
 Waterbody Type: Lake Wind Influence: Tidally Influenced:
 Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: < 1 1-25% 26-50%
 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters

Time: _____ Temp. (°C): _____ pH: _____ SpCond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____ Secchi (in): _____
 In Situ Probe ID: _____

Continuous Monitor Deployed: Continuous Monitor ID: _____
 Continuous Monitor Retrieved: Continuous Monitor Depth (m): _____

Water Level Monitor Deployed: Instrument ID: _____

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat

Instrument ID: _____
 Velocity Monitor Deployed Instrument ID: _____

Velocity Estimated: Drogue Estimate: Dye Estimate:
 Right Descending Bank Distance (ft): _____ Time (s): _____
 Mid Stream Distance (ft): _____ Time (s): _____
 Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer
 Fathometer ID: _____

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #s: _____

Site 3847 Date: 6-9-09

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed Bouy:
 Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe: Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments: Not flowing

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft = 0.15 m	20 = 68	25 = 77
1.0 ft = 0.30 m	21 = 69.8	26 = 78.8
1.5 ft = 0.45 m	22 = 71.6	27 = 80.6
2.0 ft = 0.60 m	23 = 73.4	28 = 82.4
2.5 ft = 0.75 m	24 = 75.2	29 = 84.2

Water Quality Site Information

Project #: ES2008004 Site #: 3847 AI #: _____
 Temporary Site #: B301 Subsegment: 040907 Date: 6/15/09 Time: 0930hrs
 Waterbody: Bayou Bonfouca
 Tapedown: _____ Staff Gauge: _____ Gauge Height: _____
 Site Location: Near Camelot Dr
 Personnel: Smith, Casanova

Weather Conditions:
 Clear Overcast
 Drizzle/Light Rain Showers

Temperature (°F):
 Hot >85° Warm > 75°
 Mild > 65° Cool > 60°
 Cold < 60°

Wind (mph):
 <1 1-5
 6-10 11-15
 >16

Wind Direction:
 NW N NE
 SW S SE
 E W
 Variable

Cloud Cover:
 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream NO FLOW
 Flowing: Flow Direction Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream

Waterbody Type: Lake Wind Influence: Tidally Influenced:

Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: <1 1-25% 26-50%
 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters

Time: _____ Temp. (°C): _____ pH: _____ SpCond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____ Secchi (in): _____
 InSitu Probe ID: _____

Continuous Monitor Deployed: Continuous Monitor ID: _____
 Continuous Monitor Retrieved: Continuous Monitor Depth (m): _____

Water Level Monitor Deployed: Instrument ID: _____

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat

Instrument ID: _____
 Velocity Monitor Deployed Instrument ID: _____

Velocity Estimated: Drogue Estimate: Dye Estimate:
 Right Descending Bank Distance (ft): _____ Time (s): _____
 Mid Stream Distance (ft): _____ Time (s): _____
 Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer
 Fathometer ID: _____

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #: _____

Site 3847 Date: 6/15/09

Tapedown Established Tapedown Location: _____
 Benchmark Established Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed: Bouy:
 Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe: Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments: NO FLOW, site not sampled for survey

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≈ 0.15 m	20 ≈ 68	25 ≈ 77
1.0 ft ≈ 0.30 m	21 ≈ 69.8	26 ≈ 78.8
1.5 ft ≈ 0.45 m	22 ≈ 71.6	27 ≈ 80.6
2.0 ft ≈ 0.60 m	23 ≈ 73.4	28 ≈ 82.4
2.5 ft ≈ 0.75 m	24 ≈ 75.2	29 ≈ 84.2

Ambient Water Quality Site Information

Project #: ES2008004 Site #: 3848 AI #: 91289
 Temporary Site #: BBO2 Subsegment: 040907 Date: 6-10-09 Time: 1045
 Waterbody: Bayou Bonfouca
 Tapedown: _____ Staff Gauge: _____ Gauge Height: _____
 Site Location: top boat site; just below W. Hall Ave.
 Personnel: E. Garner, C. Casanova, G. Lafleur

Weather Conditions: Temperature (°F): Wind (mph): Wind Direction:
 Clear Hot > 85° < 1 NW N NE
 Overcast Warm > 75° 1-5 SW S SE
 Drizzle/Light Rain Mild > 65° 6-10 E W
 Showers Cool > 60° 11-15 Variable
 Cold < 60° > 16

Cloud Cover:
 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream
 Flowing: Flow Direction Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream
 Waterbody Type: Lake Wind Influence: Tidally Influenced:
 Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: < 1 1-25% 26-50%
 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters
 Time: _____ Temp. (°C): _____ pH: _____ SpCond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____ Secchi (in): _____
 In Situ Probe ID: _____

Continuous Monitor Deployed: Continuous Monitor ID: _____
 Continuous Monitor Retrieved: Continuous Monitor Depth (m): _____
 Water Level Monitor Deployed: Instrument ID: _____

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat
 Instrument ID: _____
 Velocity Monitor Deployed Instrument ID: _____

Velocity Estimated: Drogue Estimate: Dye Estimate:
 Right Descending Bank Distance (ft): _____ Time (s): _____
 Mid Stream Distance (ft): _____ Time (s): _____
 Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer
 Fathometer ID: _____

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #s: _____

Site 3848 Date: 6-10-09

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed Bouy:

Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe: Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments: Bubble meter can be attached underneath
bridge. Need eye bolt + fence post. Hang C.M.
on bridge.

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft = 0.15 m	20 = 68	25 = 77
1.0 ft = 0.30 m	21 = 69.8	26 = 78.8
1.5 ft = 0.45 m	22 = 71.6	27 = 80.6
2.0 ft = 0.60 m	23 = 73.4	28 = 82.4
2.5 ft = 0.75 m	24 = 75.2	29 = 84.2

Ambient Water Quality Site Information

Project #: ES2008004 Site #: 3848 Alt #: 91289
 Temporary Site #: B302 Subsegment: 040907 Date: 10-16-09 Time: 0930
 Waterbody: Bayou Bonfouca
 Tapedown: 11.53 Staff Gauge: _____ Gauge Height: _____
 Site Location: West Hall Ave (top boat site)
 Personnel: G. Lafleur, J. Millet

Weather Conditions:
 Clear Overcast
 Drizzle/Light Rain Showers

Temperature (°F):
 Hot > 85° Warm > 75°
 Mild > 65° Cool > 60°
 Cold < 60°

Wind (mph):
 < 1 1-5
 6-10 11-15
 > 16

Wind Direction:
 NW N NE
 SW S SE
 E W Variable

Cloud Cover:
 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream

Flowing: Flow Direction Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream

Waterbody Type: Lake Wind Influence: Tidally Influenced:
 Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: < 1 1-25% 26-50%
 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters

Time: _____ Temp. (°C): _____ pH: _____ SpCond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____ Secchi (in): _____
 In Situ Probe ID: _____

Continuous Monitor Deployed: Continuous Monitor ID: L0011
 Continuous Monitor Retrieved: Continuous Monitor Depth (m): 1.0
 Water Level Monitor Deployed: Instrument ID: Station 4 @ 1245

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat
 Instrument ID: _____
 Velocity Monitor Deployed Instrument ID: _____

Velocity Estimated: Drogue Estimate: Dye Estimate:
 Right Descending Bank Distance (ft): _____ Time (s): _____
 Mid Stream Distance (ft): _____ Time (s): _____
 Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer
 Fathometer ID: _____

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #: _____

Site 3348 Date: 10-16-09

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed Bouy:
 Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe: Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments:

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ± 0.15 m	20 ± 68	25 ± 77
1.0 ft ± 0.30 m	21 ± 69.8	26 ± 78.8
1.5 ft ± 0.45 m	22 ± 71.6	27 ± 80.6
2.0 ft ± 0.60 m	23 ± 73.4	28 ± 82.4
2.5 ft ± 0.75 m	24 ± 75.2	29 ± 84.2

Ambient Water Quality Site Information

Project #: ES2008004 Site #: 3848 AI #: 91289
 Temporary Site #: B302 Subsegment: 040907 Date: 6-17-09 Time: 0915
 Waterbody: Bayou Bonfouca
 Tapedown: 11.62 Staff Gauge: _____ Gauge Height: _____
 Site Location: West Hall Ave (top boat site)
 Personnel: G LaFleur, J. Miller

Weather Conditions:
 Clear Overcast
 Drizzle/Light Rain Showers

Temperature (°F):
 Hot > 85° Warm > 75°
 Mild > 65° Cool > 60°
 Cold < 60°

Wind (mph):
 <1 1-5
 6-10 11-15
 >16

Wind Direction:
 NW N NE
 SW S SE
 E W Variable

Cloud Cover:
 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream

Flowing: Flow Direction: Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream

Waterbody Type: Lake Wind Influence: Tidally Influenced:

Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: <1 1-25% 26-50%
 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters
 Time: 0915 Temp. (°C): 29.60 pH: 7.16 SpCond (µmhos/cm): 870.1
 D.O.: 0.76 D.O. %: 9.7 Salinity: 0.45 Depth (m): 1.0 Secchi (in): 24
 In Situ Probe ID: LD0 11-41

Continuous Monitor Deployed: Continuous Monitor ID: _____
 Continuous Monitor Retrieved: Continuous Monitor Depth (m): _____
 Water Level Monitor Deployed: Instrument ID: _____

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat
 Instrument ID: _____
 Velocity Monitor Deployed Instrument ID: _____

Velocity Estimated: Drogue Estimate: Dye Estimate:
 Right Descending Bank Distance (ft): _____ Time (s): _____
 Mid Stream Distance (ft): _____ Time (s): _____
 Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer
 Fathometer ID: _____

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #s: _____

Site 3848 Date: 6-17-09

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed Bouy

Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments: _____

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≈ 0.15 m	20 ≈ 68	25 ≈ 77
1.0 ft ≈ 0.30 m	21 ≈ 69.8	26 ≈ 78.8
1.5 ft ≈ 0.45 m	22 ≈ 71.6	27 ≈ 80.6
2.0 ft ≈ 0.60 m	23 ≈ 73.4	28 ≈ 82.4
2.5 ft ≈ 0.75 m	24 ≈ 75.2	29 ≈ 84.2

Ambient Water Quality Site Information

Project #: ES2008004 Site #: 3848 AI #: 91289
 Temporary Site #: B802 Subsegment: 040907 Date: 6-18-09 Time: 0950
 Waterbody: Bayou Bonfouca
 Tapedown: 11.34 Staff Gauge: _____ Gauge Height: _____
 Site Location: top boat site (West Hall Ave.)
 Personnel: G. Lafleur

Weather Conditions:
 Clear Overcast
 Drizzle/Light Rain Showers

Temperature (°F):
 Hot > 85° Warm > 75°
 Mild > 65° Cool > 60°
 Cold < 60°

Wind (mph):
 < 1 1-5
 6-10 11-15
 > 16

Wind Direction:
 NW N NE
 SW S SE
 E W Variable

Cloud Cover:
 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream

Flowing: Flow Direction: Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream

Waterbody Type: Lake Wind Influence: Tidally Influenced:

Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: < 1 1-25% 26-50%
 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters

Time: _____ Temp. (°C): _____ pH: _____ SpCond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____ Secchi (in): _____
 InSitu Probe ID: _____

Continuous Monitor Deployed: Continuous Monitor ID: LDO 11
 Continuous Monitor Retrieved: Continuous Monitor Depth (m): 1.0
 Water Level Monitor Deployed: Instrument ID: _____

Flow Measurement: Type of Measurement: Wading Stationary Moving Boal
 Instrument ID: _____
 Velocity Monitor Deployed Instrument ID: _____

Velocity Estimated: Drogue Estimate: Dye Estimate:
 Right Descending Bank Distance (ft): _____ Time (s): _____
 Mid Stream Distance (ft): _____ Time (s): _____
 Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer
 Fathometer ID: 32005012535

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #s: _____

Site 3848 Date: 6-18-09

Tapdown Established: Tapdown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed: Bouy:

Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe: Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments: _____

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≈ 0.15 m	20 ≈ 68	25 ≈ 77
1.0 ft ≈ 0.30 m	21 ≈ 69.8	26 ≈ 78.8
1.5 ft ≈ 0.45 m	22 ≈ 71.6	27 ≈ 80.6
2.0 ft ≈ 0.60 m	23 ≈ 73.4	28 ≈ 82.4
2.5 ft ≈ 0.75 m	24 ≈ 75.2	29 ≈ 84.2

Ambient Water Quality Site Information

Project #: ES2008004 Site #: 3848 AI #: 91289
 Temporary Site #: BBO2 Subsegment: 040907 Date: 6-19-09 Time: 0840
 Waterbody: Bayou Bonfouca
 Tapedown: _____ Staff Gauge: _____ Gauge Height: _____
 Site Location: top boat site, West Hall Ave.
 Personnel: D. Borne, B. Allerman

Weather Conditions: Temperature (°F): Wind (mph): Wind Direction:
 Clear Hot >85° <1 NW N NE
 Overcast Warm > 75° 1-5 SW S SE
 Drizzle/Light Rain Mild > 65° 6-10 E W
 Showers Cool > 60° 11-15 Variable
 Cold < 60° >16

Cloud Cover:
 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream
 Flowing: Flow Direction Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream

Waterbody Type: Lake Wind Influence: Tidally Influenced:
 Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: <1 1-25% 26-50%
 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters

Time: _____ Temp. (°C): _____ pH: _____ SpCond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____ Secchi (in): _____
 In Situ Probe ID: _____

Continuous Monitor Deployed: Continuous Monitor ID: _____

Continuous Monitor Retrieved: Continuous Monitor Depth (m): _____

Water Level Monitor Deployed: Instrument ID: Station 4 - retrieved

Flow Measurement: Type of Measurement: Wading Stationary Moving Boal

Instrument ID: _____

Velocity Monitor Deployed Instrument ID: _____

Velocity Estimated: Drogue Estimate: Dye Estimate:

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer

Fathometer ID: _____

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #s: _____

Site 3848 Date: 6-19-09

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed: Bouy:
 Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe: Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp.(°C): _____ pH: _____ Spcond(µhmos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp.(°C): _____ pH: _____ Spcond(µhmos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp.(°C): _____ pH: _____ Spcond(µhmos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments: _____

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≈ 0.15 m	20 ≈ 68	25 ≈ 77
1.0 ft ≈ 0.30 m	21 ≈ 69.8	26 ≈ 78.8
1.5 ft ≈ 0.45 m	22 ≈ 71.6	27 ≈ 80.6
2.0 ft ≈ 0.60 m	23 ≈ 73.4	28 ≈ 82.4
2.5 ft ≈ 0.75 m	24 ≈ 75.2	29 ≈ 84.2

ambient Water Quality Site Information

Project #: 2008004 Site #: 3849 AI #: 91289
 Temporary Site #: BV03 Subsegment: 040907 Date: 6-9-09 Time: 1330
 Waterbody: Bayou Vincent
 Tapedown: _____ Staff Gauge: _____ Gauge Height: _____
 Site Location: driveway to Sam's house
 Personnel: C. Casanova, B. A. Herman, G. Lafleur

Weather Conditions:
 Clear Overcast
 Drizzle/Light Rain Showers

Temperature (°F):
 Hot > 85° Warm > 75°
 Mild > 65° Cool > 60°
 Cold < 60°

Wind (mph):
 < 1 1-5
 6-10 11-15
 > 16

Wind Direction:
 NW N NE
 SW S SE
 E W Variable

Cloud Cover:
 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream
 Flowing: Flow Direction Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream
 Waterbody Type: Lake Wind Influence: Tidally Influenced:
 Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: < 1 1-25% 26-50%
 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters

Time: _____ Temp. (°C): _____ pH: _____ SpCond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____ Secchi (in): _____
 In Situ Probe ID: _____

Continuous Monitor Deployed: Continuous Monitor ID: _____
 Continuous Monitor Retrieved: Continuous Monitor Depth (m): _____

Water Level Monitor Deployed: Instrument ID: _____

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat

Instrument ID: _____
 Velocity Monitor Deployed Instrument ID: _____

Velocity Estimated: Drogue Estimate: Dye Estimate:
 Right Descending Bank Distance (ft): _____ Time (s): _____
 Mid Stream Distance (ft): _____ Time (s): _____
 Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer
 Fathometer ID: _____

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #s: _____

Site 3849 Date: 6-9-09

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Welland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed Bouy:

Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe: Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments: Homeowner's name Mr. Sam, About 1 1/2' -
wading discharge.

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft = 0.15 m	20 = 68	25 = 77
1.0 ft = 0.30 m	21 = 69.8	26 = 78.8
1.5 ft = 0.45 m	22 = 71.6	27 = 80.6
2.0 ft = 0.60 m	23 = 73.4	28 = 82.4
2.5 ft = 0.75 m	24 = 75.2	29 = 84.2

Ambient Water Quality Site Information

Project #: ES2008004 Site #: 3849 AI #: 91289
 Temporary Site #: BV03 Subsegment: 040907 Date: 6/16/09 Time: 1005 hrs
 Waterbody: Bayou Vincent
 Tapedown: 15.04ft Staff Gauge: _____ Gauge Height: _____
 Site Location: near Donya Dr.
 Personnel: Smith, Casanova

Weather Conditions:
 Clear Overcast
 Drizzle/Light Rain Showers
Temperature (°F):
 Hot >85° Warm > 75°
 Mild > 65° Cool > 60°
 Cold < 60°
Wind (mph):
 <1 1-5
 6-10 11-15
 >16
Wind Direction:
 NW N NE
 SW S SE
 E W Variable

Cloud Cover:
 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream
 Flowing: Flow Direction Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream
 Waterbody Type: Lake Wind Influence: Tidally Influenced:
 Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: <1 1-25% 26-50%
 51-75% 76-100%

Uploaded
7/10/09

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters

Time: _____ Temp. (°C): _____ pH: _____ SpCond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____ Secchi (in): _____
 InSitu Probe ID: _____

Continuous Monitor Deployed: Continuous Monitor ID: LDO23
 Continuous Monitor Retrieved: Continuous Monitor Depth (m): 0.5m

Water Level Monitor Deployed: Instrument ID: _____

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat

Instrument ID: _____

Velocity Monitor Deployed Instrument ID: _____

Velocity Estimated: Drogue Estimate: Dye Estimate:

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer

Fathometer ID: _____

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #s: _____

Site 3849 Date: 6/16/09

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed: Bouy:

Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp.(°C): _____ pH: _____ Spcond(µhmos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp.(°C): _____ pH: _____ Spcond(µhmos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp.(°C): _____ pH: _____ Spcond(µhmos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments: _____

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≈ 0.15 m	20 ≈ 68	25 ≈ 77
1.0 ft ≈ 0.30 m	21 ≈ 69.8	26 ≈ 78.8
1.5 ft ≈ 0.45 m	22 ≈ 71.6	27 ≈ 80.6
2.0 ft ≈ 0.60 m	23 ≈ 73.4	28 ≈ 82.4
2.5 ft ≈ 0.75 m	24 ≈ 75.2	29 ≈ 84.2

Ambient Water Quality Site Information

Project #: ES2008004 Site #: 3849 AI #: 91289
 Temporary Site #: BV03 Subsegment: 040907 Date: 6/17/09 Time: 1150
 Waterbody: Bayou Vincent
 Tapedown: 15.05 Staff Gauge: _____ Gauge Height: _____
 Site Location: Near Donya Dr.
 Personnel: Smith, Casanova, Earles

Weather Conditions:
 Clear Overcast
 Drizzle/Light Rain Showers

Temperature (°F):
 Hot > 85° Warm > 75°
 Mild > 65° Cool > 60°
 Cold < 60°

Wind (mph):
 < 1 1-5
 6-10 11-15
 > 16

Wind Direction:
 NW N NE
 SW S SE
 E W Variable

Cloud Cover:
 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream

Flowing: Flow Direction Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream

Waterbody Type: Lake Wind Influence: Tidally Influenced:

Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: < 1 1-25% 26-50%
 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters

Time: 1150 Temp. (°C): 27.90 pH: 7.34 SpCond (µmhos/cm): 338.3
 D.O.: 1.62 D.O. %: 20.8 Salinity: 0.17 Depth (m): 0.5 Secchi (in): 12.1A
 InSitu Probe ID: LDO 22

Continuous Monitor Deployed: Continuous Monitor ID: _____

Continuous Monitor Retrieved: Continuous Monitor Depth (m): _____

Water Level Monitor Deployed: Instrument ID: _____

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat

Instrument ID: FTA 6A

Velocity Monitor Deployed Instrument ID: _____

Velocity Estimated: Drogue Estimate: Dye Estimate:

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer

Fathometer ID: _____ FlowTracker

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #: _____

Site 3849 Date: 6/17/09

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed: Bouy:
 Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe: Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments: water flowing upstream

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≈ 0.15 m	20 ≈ 68	25 ≈ 77
1.0 ft ≈ 0.30 m	21 ≈ 69.8	26 ≈ 78.8
1.5 ft ≈ 0.45 m	22 ≈ 71.6	27 ≈ 80.6
2.0 ft ≈ 0.60 m	23 ≈ 73.4	28 ≈ 82.4
2.5 ft ≈ 0.75 m	24 ≈ 75.2	29 ≈ 84.2

Ambient Water Quality Site Information

Project #: E52008004 Site #: 3849 AI #: 91289
 Temporary Site #: BV03 Subsegment: 040907 Date: 6/18/09 Time: 1010 hrs
 Waterbody: Bayou Vincent
 Tapedown: 15.06 Staff Gauge: _____ Gauge Height: _____
 Site Location: Near Donya Dr.
 Personnel: Smith, Casanova

Weather Conditions:
 Clear Overcast
 Drizzle/Light Rain Showers

Temperature (°F):
 Hot >85° Warm > 75°
 Mild > 65° Cool > 60°
 Cold < 60°

Wind (mph):
 <1 1-5
 6-10 11-15
 >16

Wind Direction:
 NW N NE
 SW S SE
 E W Variable

Cloud Cover:
 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream
 Flowing: Flow Direction Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream
 Waterbody Type: Lake Wind Influence: Tidally Influenced:
 Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: <1 1-25% 26-50%
 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters: _____

Time: _____ Temp. (°C): _____ pH: _____ SpCond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____ Secchi (in): _____
 InSitu Probe ID: _____

Continuous Monitor Deployed: Continuous Monitor ID: LDO 23
 Continuous Monitor Retrieved: Continuous Monitor Depth (m): 0.5m
 Water Level Monitor Deployed: Instrument ID: _____

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat
 Instrument ID: _____
 Velocity Monitor Deployed Instrument ID: _____

Velocity Estimated: Drogue Estimate: Dye Estimate:
 Right Descending Bank Distance (ft): _____ Time (s): _____
 Mid Stream Distance (ft): _____ Time (s): _____
 Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer
 Fathometer ID: _____

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #s: _____

Site 3849 Date: 6/18/09

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed Bouy:

Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe: Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp.(°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp.(°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp.(°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments:

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≈ 0.15 m	20 ≈ 68	25 ≈ 77
1.0 ft ≈ 0.30 m	21 ≈ 69.8	26 ≈ 78.8
1.5 ft ≈ 0.45 m	22 ≈ 71.6	27 ≈ 80.6
2.0 ft ≈ 0.60 m	23 ≈ 73.4	28 ≈ 82.4
2.5 ft ≈ 0.75 m	24 ≈ 75.2	29 ≈ 84.2

Ambient Water Quality Site Information

Project #: ES2008004 Site #: 3850 AI #: 91289
 Temporary Site #: BV01 Subsegment: 040907 Date: 6-9-09 Time: 1430
 Waterbody: Bayou Vincent
 Tapedown: _____ Staff Gauge: _____ Gauge Height: _____
 Site Location: Above discharge from Eagle Lake Mobile Home Park
 Personnel: B. Altemair, C. Casanova, G. La Fleur

Weather Conditions: Temperature (°F): Wind (mph): Wind Direction:
 Clear Hot > 85° < 1 NW N NE
 Overcast Warm > 75° 1-5 SW S SE
 Drizzle/Light Rain Mild > 65° 6-10 E W
 Showers Cool > 60° 11-15 Variable
 Cold < 60° > 16

Cloud Cover:
 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream
 Flowing: Flow Direction Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream
 Waterbody Type: Lake Wind Influence: Tidally Influenced:
 Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: < 1 1-25% 26-50%
 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters

Time: _____ Temp. (°C): _____ pH: _____ SpCond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____ Secchi (in): _____
 In Situ Probe ID: _____

Continuous Monitor Deployed: Continuous Monitor ID: _____

Continuous Monitor Retrieved: Continuous Monitor Depth (m): _____

Water Level Monitor Deployed: Instrument ID: _____

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat

Instrument ID: _____

Velocity Monitor Deployed Instrument ID: _____

Velocity Estimated: Drogue Estimate: Dye Estimate:

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer

Fathometer ID: _____

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #s: _____

Site 3850 Date: 6-9-09

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed Bouy
 Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe: Bridge Height: _____

Profiling Measurements
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments: *Only about 3' wide + very shallow. Flowing pretty good but questionable if you could measure bk of depth.*

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft = 0.15 m	20 = 68	25 = 77
1.0 ft = 0.30 m	21 = 69.8	26 = 78.8
1.5 ft = 0.45 m	22 = 71.6	27 = 80.6
2.0 ft = 0.60 m	23 = 73.4	28 = 82.4
2.5 ft = 0.75 m	24 = 75.2	29 = 84.2

Ambient Water Quality Site Information

Project #: ES2008004 Site #: 3850 AI #: 91289
 Temporary Site #: RV01 Subsegment: 040907 Date: 6/17/09 Time: 1050
 Waterbody: Bayou Vincent
 Tapedown: _____ Staff Gauge: _____ Gauge Height: _____
 Site Location: above discharge from Eagle Lake MHP
 Personnel: Smith, Casanova, Earles

Weather Conditions:
 Clear Overcast
 Drizzle/Light Rain Showers

Temperature (°F):
 Hot >85° Warm > 75°
 Mild > 65° Cool > 60°
 Cold < 60°

Wind (mph):
 <1 1-5
 6-10 11-15
 >16

Wind Direction:
 NW N NE
 SW S SE
 E W Variable

Cloud Cover:
 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream
 Flowing: Flow Direction Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream
 Waterbody Type: Lake Wind Influence: Tidally Influenced:
 Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: <1 1-25% 26-50%
 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters

Time: 1050 Temp. (°C): 33.82 pH: 9.16 SpCond(µmhos/cm): 520.9
 D.O.: 6.53 D.O. %: 92.3 Salinity: 0.26 Depth (m): 0.05 Secchi (in): _____
 InSitu Probe ID: D022

Continuous Monitor Deployed: Continuous Monitor ID: _____

Continuous Monitor Retrieved: Continuous Monitor Depth (m): _____

Water Level Monitor Deployed: Instrument ID: _____

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat

Instrument ID: FTA 6A

Velocity Monitor Deployed Instrument ID: _____

*0.86 cfs
 width = 0.75 ft
 Depth = 0.3 ft*

Velocity Estimated: Drogue Estimate: Dye Estimate:

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer

Fathometer ID: _____ *FlowTracker*

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #s: _____

Site 3850 Date: 6/17/09

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed Bouy:

Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments: made phone to get flow w/ a width +
depth

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft = 0.15 m	20 = 68	25 = 77
1.0 ft = 0.30 m	21 = 69.8	26 = 78.8
1.5 ft = 0.45 m	22 = 71.6	27 = 80.6
2.0 ft = 0.60 m	23 = 73.4	28 = 82.4
2.5 ft = 0.75 m	24 = 75.2	29 = 84.2

Ambient Water Quality Site Information

Project #: 2008004 Site #: 3857 AI #: 91289
 Temporary Site #: BV02 Subsegment: 040907 Date: 6-9-09 Time: 1410
 Waterbody: Bayou Vincent
 Tapedown: 13.43 Staff Gauge: _____ Gauge Height: _____
 Site Location: Brown's Village Rd.
 Personnel: G. Lafleur, C. Casanova, B. Allen

Weather Conditions:
 Clear Overcast
 Drizzle/Light Rain Showers

Temperature (°F):
 Hot > 85° Warm > 75°
 Mild > 65° Cool > 60°
 Cold < 60°

Wind (mph):
 < 1 1-5
 6-10 11-15
 > 16

Wind Direction:
 NW N NE
 SW S SE
 E W Variable

Cloud Cover:
 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream

Flowing: Flow Direction Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream

Waterbody Type: Lake Wind Influence: Tidally Influenced:

Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: < 1 1-25% 26-50%
 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters

Time: _____ Temp. (°C): _____ pH: _____ SpCond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____ Secchi (in): _____
 In Situ Probe ID: _____

Continuous Monitor Deployed: Continuous Monitor ID: _____
 Continuous Monitor Retrieved: Continuous Monitor Depth (m): _____
 Water Level Monitor Deployed: Instrument ID: _____

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat
 Instrument ID: _____
 Velocity Monitor Deployed Instrument ID: _____

Velocity Estimated: Drogue Estimate: Dye Estimate:
 Right Descending Bank Distance (ft): _____ Time (s): _____
 Mid Stream Distance (ft): _____ Time (s): _____
 Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer
 Fathometer ID: _____

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #s: _____

Site 3851 Date: 6-9-09

Tapedown Established: Tapedown Location: upstream side of bridge
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Welland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed Bouy

Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe: Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp.(°C): _____ pH: _____ Spcond(µhmos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp.(°C): _____ pH: _____ Spcond(µhmos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp.(°C): _____ pH: _____ Spcond(µhmos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments: Barely flowing, probably not enough to measure.

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft = 0.15 m	20 = 68	25 = 77
1.0 ft = 0.30 m	21 = 69.8	26 = 78.8
1.5 ft = 0.45 m	22 = 71.6	27 = 80.6
2.0 ft = 0.60 m	23 = 73.4	28 = 82.4
2.5 ft = 0.75 m	24 = 75.2	29 = 84.2

Ambient Water Quality Site Information

Project #: ES2008004 Site #: 3851 AI #: 91289
 Temporary Site #: _____ Subsegment: 040907 Date: 6/17/09 Time: 1115
 Waterbody: Bayou Vincent
 Tapedown: 13.38 Staff Gauge: _____ Gauge Height: _____
 Site Location: near Brown's Village Rd.
 Personnel: Smith, Casanova, Earles

Weather Conditions:
 Clear Overcast Drizzle/Light Rain Showers
 Temperature (°F): Hot >85° Warm > 75° Mild > 65° Cool > 60° Cold < 60°
 Wind (mph): <1 1-5 6-10 11-15 >16
 Wind Direction: NW N NE SW S SE E W Variable

Cloud Cover:
 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream
 Flowing: Flow Direction Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream
 Waterbody Type: Lake Wind Influence: Tidally Influenced:
 Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: <1 1-25% 26-50% 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters

Time: 1115 Temp. (°C): 27.21 pH: 7.75 SpCond (µmhos/cm): 760.9
 D.O.: 1.25 D.O. %: 15.9 Salinity: 0.39 Depth (m): 0.15 Secchi (in): _____
 InSitu Probe ID: LDO 22

Continuous Monitor Deployed: Continuous Monitor ID: _____

Continuous Monitor Retrieved: Continuous Monitor Depth (m): _____

Water Level Monitor Deployed: Instrument ID: _____

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat

Instrument ID: _____

Velocity Monitor Deployed Instrument ID: _____

Velocity Estimated: Drogue Estimate: Dye Estimate:

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer

Fathometer ID: _____

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #: _____

Site 3851 Date: 6/17/09

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement Type of Site: Injection Collection
 Amount of Dye Injected (ml) _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed: Bouy:
 Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe: Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments: As per Doug Duerr's instructions, a
flow was not to be completed at this
site.

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≈ 0.15 m	20 ≈ 68	25 ≈ 77
1.0 ft ≈ 0.30 m	21 ≈ 69.8	26 ≈ 78.8
1.5 ft ≈ 0.45 m	22 ≈ 71.6	27 ≈ 80.6
2.0 ft ≈ 0.60 m	23 ≈ 73.4	28 ≈ 82.4
2.5 ft ≈ 0.75 m	24 ≈ 75.2	29 ≈ 84.2

Ambient Water Quality Site Information

Project #: ESQMS.com Site #: 3852 AI #: 91290
 Temporary Site #: BBO3 Subsegment: 040908 Date: 6-16-09 Time: 1035
 Waterbody: Bayou Bonfouca
 Tapedown: _____ Staff Gauge: _____ Gauge Height: _____
 Site Location: Estuary
 Personnel: G. LaFleur, J. Millet

Weather Conditions:
 Clear Overcast
 Drizzle/Light Rain Showers

Temperature (°F):
 Hot > 85° Warm > 75°
 Mild > 65° Cool > 60°
 Cold < 60°

Wind (mph):
 < 1 1-5
 6-10 11-15
 > 16

Wind Direction:
 NW N NE
 SW S SE
 E W Variable

Cloud Cover:
 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream
 Flowing: Flow Direction: Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream
 Waterbody Type: Lake Wind Influence: Tidally Influenced:
 Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: < 1 1-25% 26-50%
 51-75% 76-100%

Hydro
 8-5-09
 Jm

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters

Time: _____ Temp. (°C): _____ pH: _____ SpCond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____ Secchi (in): _____
 In Situ Probe ID: _____

Continuous Monitor Deployed: Continuous Monitor ID: LD00 11-35
 Continuous Monitor Retrieved: Continuous Monitor Depth (m): 1.0
 Water Level Monitor Deployed: Instrument ID: _____

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat

Instrument ID: _____
 Velocity Monitor Deployed Instrument ID: _____

Velocity Estimated: Drogue Estimate: Dye Estimate:
 Right Descending Bank Distance (ft): _____ Time (s): _____
 Mid Stream Distance (ft): _____ Time (s): _____
 Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer
 Fathometer ID: _____

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #s: _____

Site 3852 Date: 6-16-09

Tapdown Established: Tapdown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed: Bouy:
 Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe: Bridge Height: _____

Profiling Measurements.
 Time: _____ Temp.(°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp.(°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp.(°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments:

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft = 0.15 m	20 = 68	25 = 77
1.0 ft = 0.30 m	21 = 69.8	26 = 78.8
1.5 ft = 0.45 m	22 = 71.6	27 = 80.6
2.0 ft = 0.60 m	23 = 73.4	28 = 82.4
2.5 ft = 0.75 m	24 = 75.2	29 = 84.2

Ambient Water Quality Site Information

Project #: ES20080014 Site #: 3852 AI #: 91290
 Temporary Site #: B303 Subsegment: 040908 Date: 6-17-09 Time: 1100
 Waterbody: Bayou Bonfouca
 Tapedown: _____ Staff Gauge: _____ Gauge Height: _____
 Site Location: Estuary
 Personnel: G. Lafleur, J. Millet

Weather Conditions:
 Clear Overcast
 Drizzle/Light Rain Showers
Temperature (°F):
 Hot >85° Warm > 75°
 Mild > 65° Cool > 60°
 Cold < 60°

Wind (mph):
 <1 1-5
 6-10 11-15
 >16

Wind Direction:
 NW N NE
 SW S SE
 E W Variable

Cloud Cover:
 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream
 Flowing: Flow Direction Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream
 Waterbody Type: Lake Wind Influence: Tidally Influenced:
 Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: <1 1-25% 26-50%
 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters

Time: 1100 Temp. (°C): 31.54 pH: 7.26 SpCond (µmhos/cm): 4888
 D.O.: 4.21 D.O. %: 58.0 Salinity: 2.68 Depth (m): 1.0 Secchi (in): 42
 InSitu Probe ID: 100 11-41

Continuous Monitor Deployed: Continuous Monitor ID: _____

Continuous Monitor Retrieved: Continuous Monitor Depth (m): _____

Water Level Monitor Deployed: Instrument ID: _____

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat

Instrument ID: _____

Velocity Monitor Deployed Instrument ID: _____

Velocity Estimated: Drogue Estimate: Dye Estimate:

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer

Fathometer ID: _____

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #s: _____

Site 3950 Date: 6-17-11

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed Bouy

Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments: _____

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≈ 0.15 m	20 ≈ 68	25 ≈ 77
1.0 ft ≈ 0.30 m	21 ≈ 69.8	26 ≈ 78.8
1.5 ft ≈ 0.45 m	22 ≈ 71.6	27 ≈ 80.6
2.0 ft ≈ 0.60 m	23 ≈ 73.4	28 ≈ 82.4
2.5 ft ≈ 0.75 m	24 ≈ 75.2	29 ≈ 84.2

Ambient Water Quality Site Information

Project #: ES2008004 Site #: 3852 AI #: 91290
 Temporary Site #: BBO3 Subsegment: 040908 Date: 6-18-09 Time: 1050
 Waterbody: Bayou Bonfouca
 Tapedown: _____ Staff Gauge: _____ Gauge Height: _____
 Site Location: Estuary
 Personnel: G. LAFleur, C. CASANOVA

Weather Conditions: Temperature (°F): Wind (mph): Wind Direction:
 Clear Hot >85° <1 NW N NE
 Overcast Warm > 75° 1-5 SW S SE
 Drizzle/Light Rain Mild > 65° 6-10 E W
 Showers Cool > 60° 11-15 Variable
 Cold < 60° >16

Cloud Cover:
 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream
 Flowing: Flow Direction Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream
 Waterbody Type: Lake Wind Influence: Tidally Influenced:
 Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: <1 1-25% 26-50%
 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters

Time: _____ Temp. (°C): _____ pH: _____ SpCond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____ Secchi (in): _____
 InSitu Probe ID: _____

Continuous Monitor Deployed: Continuous Monitor ID: LD0 11-35
 Continuous Monitor Retrieved: Continuous Monitor Depth (m): 1.0
 Water Level Monitor Deployed: Instrument ID: _____

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat

Instrument ID: _____

Velocity Monitor Deployed Instrument ID: _____

Velocity Estimated: Drogue Estimate: Dye Estimate:

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer

Fathometer ID: 32005012555

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #s: _____

Site 3852 Date: 6-18-09

Tapdown Established: Tapdown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed: Bouy:

Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe: Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µhmos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µhmos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µhmos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments:

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft = 0.15 m	20 = 68	25 = 77
1.0 ft = 0.30 m	21 = 69.8	26 = 78.8
1.5 ft = 0.45 m	22 = 71.6	27 = 80.6
2.0 ft = 0.60 m	23 = 73.4	28 = 82.4
2.5 ft = 0.75 m	24 = 75.2	29 = 84.2

Ambient Water Quality Site Information

Project #: ES2003004 Site #: 3853 AI #: 91290
 Temporary Site #: bb06 Subsegment: 040908 Date: 6-15-09 Time: 1220
 Waterbody: Bayou Bonfouca
 Tapedown: _____ Staff Gauge: _____ Gauge Height: _____
 Site Location: Bonfouca bottom site
 Personnel: D. Boyne, T. Yocis, B. Allen, C. Keith

Weather Conditions:
 Clear Overcast
 Drizzle/Light Rain Showers

Temperature (°F):
 Hot > 85° Warm > 75°
 Mild > 65° Cool > 60°
 Cold < 60°

Wind (mph):
 < 1 1-5
 6-10 11-15
 > 15

Wind Direction:
 NW N NE
 SW S SE
 E W Variable

Cloud Cover:
 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream
 Flowing: Flow Direction Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream
 Waterbody Type: Lake Wind Influence: Tidally Influenced:
 Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: < 1 1-25% 26-50%
 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters

Time: _____ Temp. (°C): _____ pH: _____ SpCond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____ Secchi (in): _____
 InSitu Probe ID: _____

Continuous Monitor Deployed: Continuous Monitor ID: _____

Continuous Monitor Retrieved: Continuous Monitor Depth (m): _____

Water Level Monitor Deployed: Instrument ID: Station 2

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat

Instrument ID: _____

Velocity Monitor Deployed Instrument ID: _____

Velocity Estimated: Drogue Estimate: Dye Estimate:

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer

Fathometer ID: _____

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #: _____

Site 3853 Date: 6-15-09

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed Bouy

Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe: Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µhmos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µhmos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µhmos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments:

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≅ 0.15 m	20 ≅ 68	25 ≅ 77
1.0 ft ≅ 0.30 m	21 ≅ 69.8	26 ≅ 78.8
1.5 ft ≅ 0.45 m	22 ≅ 71.6	27 ≅ 80.6
2.0 ft ≅ 0.60 m	23 ≅ 73.4	28 ≅ 82.4
2.5 ft ≅ 0.75 m	24 ≅ 75.2	29 ≅ 84.2

upstream 014107

Ambient Water Quality Site Information

Project #: ES2008004 Site #: 3853 AI #: 91290
 Temporary Site #: B06 Subsegment: 040908 Date: 6/16/09 Time: 0930 hrs
 Waterbody: Bayou Bonfouca
 Tapedown: _____ Staff Gauge: _____ Gauge Height: _____
 Site Location: Bottom site - Upstream Lake Pontchartrain
 Personnel: Jones, Beard

Weather Conditions:
 Clear Overcast
 Drizzle/Light Rain Showers

Temperature (°F):
 Hot > 85° Warm > 75°
 Mild > 65° Cool > 60° Cold < 60°

Wind (mph):
 < 1 1-5
 6-10 11-15 > 16

Wind Direction:
 NW N NE
 SW S SE
 E W Variable

Cloud Cover:
 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream
 Flowing: Flow Direction Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream
 Waterbody Type: Lake Wind Influence: Tidally Influenced:
 Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: < 1 1-25% 26-50%
 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters

Time: _____ Temp. (°C): _____ pH: _____ SpCond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____ Secchi (in): _____
 In Situ Probe ID: _____

Continuous Monitor Deployed: Continuous Monitor ID: LDO 11-34
 Continuous Monitor Retrieved: Continuous Monitor Depth (m): 1m

Water Level Monitor Deployed: Instrument ID: _____

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat

Instrument ID: _____

Velocity Monitor Deployed Instrument ID: _____

Velocity Estimated: Drogue Estimate: Dye Estimate:

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer

Fathometer ID: 11950

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #s: _____

Site 3853 Date: 4/14/09

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed: Bouy:
 Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe: Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments: _____

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≈ 0.15 m	20 ≈ 68	25 ≈ 77
1.0 ft ≈ 0.30 m	21 ≈ 69.8	26 ≈ 78.8
1.5 ft ≈ 0.45 m	22 ≈ 71.6	27 ≈ 80.6
2.0 ft ≈ 0.60 m	23 ≈ 73.4	28 ≈ 82.4
2.5 ft ≈ 0.75 m	24 ≈ 75.2	29 ≈ 84.2

Ambient Water Quality Site Information

Project #: ES2008004 Site #: 3853 AI #: 91290
 Temporary Site #: BBO6 Subsegment: 040908 Date: 6/17/09 Time: 0740hrs
 Waterbody: Bayou Bonfouca
 Tapedown: _____ Staff Gauge: _____ Gauge Height: _____
 Site Location: Bottoms site - upstream Lake Fontchartrain
 Personnel: Jones, Beard

Weather Conditions:
 Clear Overcast
 Drizzle/Light Rain Showers

Temperature (°F):
 Hot > 85° Warm > 75°
 Mild > 65° Cool > 60°
 Cold < 60°

Wind (mph):
 <1 1-5
 6-10 11-15
 >16

Wind Direction:
 NW N NE
 SW S SE
 E W Variable

Cloud Cover:
 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream
 Flowing: Flow Direction Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream
 Waterbody Type: Lake Wind Influence: Tidally Influenced:
 Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: <1 1-25% 26-50%
 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters

Time: 0740 Temp. (°C): 30.22 pH: 7.55 SpCond (µmhos/cm): 1325
 D.O.: 6.53 D.O. %: 88.7 Salinity: 4.08 Depth (m): 1m Secchi (in): 18in
 InSitu Probe ID: Lp011-37

Continuous Monitor Deployed: Continuous Monitor ID: _____

Continuous Monitor Retrieved: Continuous Monitor Depth (m): _____

Water Level Monitor Deployed: Instrument ID: _____

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat

Instrument ID: _____

Velocity Monitor Deployed Instrument ID: _____

Velocity Estimated: Drogue Estimate: Dye Estimate:

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer

Fathometer ID: _____

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #s: _____

Site 3853 Date: 6/17/09

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed Bouy
 Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe: Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments: _____

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≈ 0.15 m	20 ≈ 68	25 ≈ 77
1.0 ft ≈ 0.30 m	21 ≈ 69.8	26 ≈ 78.8
1.5 ft ≈ 0.45 m	22 ≈ 71.6	27 ≈ 80.6
2.0 ft ≈ 0.60 m	23 ≈ 73.4	28 ≈ 82.4
2.5 ft ≈ 0.75 m	24 ≈ 75.2	29 ≈ 84.2

Ambient Water Quality Site Information

Project #: E52008004 Site #: 3853 AI #: 91290
 Temporary Site #: B306 Subsegment: 040908 Date: 6/18/09 Time: 0905
 Waterbody: Bayou Bonfouca
 Tapedown: _____ Staff Gauge: _____ Gauge Height: _____
 Site Location: Just Upstream LAKE
 Personnel: Jones, Beard

Weather Conditions:
 Clear Overcast
 Drizzle/Light Rain Showers

Temperature (°F):
 Hot > 85° Warm > 75°
 Mild > 65° Cool > 60° Cold < 60°

Wind (mph):
 < 1 1-5
 6-10 11-15 > 16

Wind Direction:
 NW N NE
 SW S SE
 E W Variable

Cloud Cover:
 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream
 Flowing: Flow Direction Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream

Waterbody Type: Lake Wind Influence: Tidally Influenced:
 Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: < 1 1-25% 26-50%
 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters

Time: _____ Temp. (°C): _____ pH: _____ SpCond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____ Secchi (in): _____
 InSitu Probe ID: _____

Continuous Monitor Deployed: Continuous Monitor ID: LDO 11-34
 Continuous Monitor Retrieved: Continuous Monitor Depth (m): 1m

Water Level Monitor Deployed: Instrument ID: _____

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat

Instrument ID: _____

Velocity Monitor Deployed Instrument ID: _____

Velocity Estimated: Drogue Estimate: Dye Estimate:

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer

Fathometer ID: _____

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #s: _____

Site 3853 Date: 6/18/09

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed Bouy
 Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments:

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≈ 0.15 m	20 ≈ 68	25 ≈ 77
1.0 ft ≈ 0.30 m	21 ≈ 69.8	26 ≈ 78.8
1.5 ft ≈ 0.45 m	22 ≈ 71.6	27 ≈ 80.6
2.0 ft ≈ 0.60 m	23 ≈ 73.4	28 ≈ 82.4
2.5 ft ≈ 0.75 m	24 ≈ 75.2	29 ≈ 84.2

Site Info
 Revision 6.0
 Revised 04/21/2009

Ambient Water Quality Site Information

Project #: ES2008004 Site #: 3853 AI #: 91290
 Temporary Site #: BBOG Subsegment: 040908 Date: 6-19-09 Time: 83A
 Waterbody: Bayou Bonfouca
 Tapedown: / Staff Gauge: _____ Gauge Height: _____
 Site Location: bottom site
 Personnel: Ty Yoes, Chad Keith

Weather Conditions:
 Clear Overcast
 Drizzle/Light Rain Showers

Temperature (°F):
 Hot > 85° Warm > 75°
 Mild > 65° Cool > 60°
 Cold < 60°

Wind (mph):
 < 1 1-5
 6-10 11-15
 > 16

Wind Direction:
 NW N NE
 SW S SE
 E W Variable

Cloud Cover:
 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream
 Flowing: Flow Direction Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream
 Waterbody Type: Lake Wind Influence: Tidally Influenced:
 Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: < 1% 1-25% 26-50%
 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters

Time: _____ Temp. (°C): _____ pH: _____ SpCond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____ Secchi (in): _____
 In Situ Probe ID: _____

Continuous Monitor Deployed: Continuous Monitor ID: _____
 Continuous Monitor Retrieved: Continuous Monitor Depth (m): _____
 Water Level Monitor Deployed: Instrument ID: Z

Flow Measurement: Type of Measurement: Wading Stationary Moving Boal
 Instrument ID: _____
 Velocity Monitor Deployed Instrument ID: _____

Velocity Estimated: Drogue Estimate: Dye Estimate:
 Right Descending Bank Distance (ft): _____ Time (s): _____
 Mid Stream Distance (ft): _____ Time (s): _____
 Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer
 Fathometer ID: _____

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #s: _____

Site 3853 Date: 6/19/09

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed Bouy:

Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe: Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments:
Water level m picked up. station 2

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≈ 0.15 m	20 ≈ 68	25 ≈ 77
1.0 ft ≈ 0.30 m	21 ≈ 69.8	26 ≈ 78.8
1.5 ft ≈ 0.45 m	22 ≈ 71.6	27 ≈ 80.6
2.0 ft ≈ 0.60 m	23 ≈ 73.4	28 ≈ 82.4
2.5 ft ≈ 0.75 m	24 ≈ 75.2	29 ≈ 84.2

Ambient Water Quality Site Information

Project #: ES2008004 Site #: 3855 At #: 91211
 Temporary Site #: B305 Subsegment: 040908 Date: 6-16-09 Time: 1100
 Waterbody: Bayou Bonfouca
 Tapedown: _____ Staff Gauge: _____ Gauge Height: _____
 Site Location: Estuary
 Personnel: G LaFleur, J Millet

Weather Conditions:
 Clear Overcast
 Drizzle/Light Rain Showers

Temperature (°F):
 Hot > 85° Warm > 75°
 Mild > 65° Cool > 60°
 Cold < 60°

Wind (mph):
 < 1 1-5
 6-10 11-15
 > 16

Wind Direction:
 NW N NE
 SW S SE
 E W Variable

Cloud Cover:
 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream
 Flowing: Flow Direction: Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream

Waterbody Type: Lake Wind Influence: Tidally Influenced:
 Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation: % Surface Coverage: < 1 1-25% 26-50%
 51-75% 76-100%

Up knee in
 S. Sec
 Jlu

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters

Time: _____ Temp. (°C): _____ pH: _____ SpCond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____ Secchi (in): _____
 In Situ Probe ID: _____

Continuous Monitor Deployed: Continuous Monitor ID: L008
 Continuous Monitor Retrieved: Continuous Monitor Depth (m): 1.0

Water Level Monitor Deployed: Instrument ID: _____

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat
 Instrument ID: _____
 Velocity Monitor Deployed Instrument ID: _____

Velocity Estimated: Drogue Estimate: Dye Estimate:
 Right Descending Bank Distance (ft): _____ Time (s): _____
 Mid Stream Distance (ft): _____ Time (s): _____
 Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer
 Fathometer ID: _____

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #s: _____

Site 3855 Date: 6-16-09

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed Bouy
 Boat Accessible: Nearest Launch: _____
 Bridge Bridge Sale: Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µhmos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µhmos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µhmos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments:

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≈ 0.15 m	20 ≈ 68	25 ≈ 77
1.0 ft ≈ 0.30 m	21 ≈ 69.8	26 ≈ 78.8
1.5 ft ≈ 0.45 m	22 ≈ 71.6	27 ≈ 80.6
2.0 ft ≈ 0.60 m	23 ≈ 73.4	28 ≈ 82.4
2.5 ft ≈ 0.75 m	24 ≈ 75.2	29 ≈ 84.2

Ambient Water Quality Site Information

Project #: ES2008004 Site #: 3855 AI #: 91290
 Temporary Site #: B805 Subsegment: 040908 Date: 10/17/11 Time: 0915
 Waterbody: Bayou Bonfouca
 Tapedown: _____ Staff Gauge: _____ Gauge Height: _____
 Site Location: B805
 Personnel: Jones, Beard

Weather Conditions:
 Clear Overcast
 Drizzle/Light Rain Showers

Temperature (°F):
 Hot > 85° Warm > 75°
 Mild > 65° Cool > 60°
 Cold < 60°

Wind (mph):
 <1 1-5
 6-10 11-15
 >16

Wind Direction:
 NW N NE
 SW S SE
 E W Variable

Cloud Cover:
 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream
 Flowing: Flow Direction Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream

Waterbody Type: Lake Wind Influence: Tidally Influenced:
 Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: <1 1-25% 26-50%
 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters

Time: _____ Temp. (°C): _____ pH: _____ SpCond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____ Secchi (in): _____
 InSitu Probe ID: _____

Continuous Monitor Deployed: Continuous Monitor ID: _____
 Continuous Monitor Retrieved: Continuous Monitor Depth (m): _____
 Water Level Monitor Deployed: Instrument ID: _____

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat
 Instrument ID: RC30A - DSS7
 Velocity Monitor Deployed Instrument ID: _____

Velocity Estimated: Drogue Estimate: Dye Estimate:
 Right Descending Bank Distance (ft): _____ Time (s): _____
 Mid Stream Distance (ft): _____ Time (s): _____
 Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer
 Fathometer ID: _____

X Flow is Representative X-sect

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #s: _____

Site 3855 Date: 6/17/09

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed Bouy
 Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe: Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp.(°C): _____ pH: _____ Spcond(µhmos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp.(°C): _____ pH: _____ Spcond(µhmos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp.(°C): _____ pH: _____ Spcond(µhmos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments:

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft = 0.15 m	20 = 68	25 = 77
1.0 ft = 0.30 m	21 = 69.8	26 = 78.8
1.5 ft = 0.45 m	22 = 71.6	27 = 80.6
2.0 ft = 0.60 m	23 = 73.4	28 = 82.4
2.5 ft = 0.75 m	24 = 75.2	29 = 84.2

Ambient Water Quality Site Information

Project #: ES0005004 Site #: 3855 AI #: 91290
 Temporary Site #: BB05 Subsegment: 040908 Date: 6-17-09 Time: 1145
 Waterbody: Bayou Bonfouca
 Tapedown: _____ Staff Gauge: _____ Gauge Height: _____
 Site Location: Estuary
 Personnel: G. Lafleur, J. Millet

Weather Conditions:
 Clear Overcast
 Drizzle/Light Rain Showers

Temperature (°F):
 Hot > 85° Warm > 75°
 Mild > 65° Cool > 60° Cold < 60°

Wind (mph):
 <1 1-5 6-10
 11-15 >16

Wind Direction:
 NW N NE
 SW S SE
 E W Variable

Cloud Cover:
 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream

Flowing: Flow Direction: Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream

Waterbody Type: Lake Wind Influence: Tidally Influenced:

Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: <1 1-25% 26-50%
 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters

Time: 1145 Temp. (°C): 31.29 pH: 7.55 SpCond (µmhos/cm): 6530
 D.O.: 6.01 D.O. %: 83.5 Salinity: 3.62 Depth (m): 1.0 Secchi (in): 33
 In Situ Probe ID: LDO 11-41

Continuous Monitor Deployed: Continuous Monitor ID: _____

Continuous Monitor Retrieved: Continuous Monitor Depth (m): _____

Water Level Monitor Deployed: Instrument ID: _____

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat

Instrument ID: _____

Velocity Monitor Deployed Instrument ID: _____

Velocity Estimated: Drogue Estimate: Dye Estimate:

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer

Fathometer ID: _____

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #s: _____

Site 2855 Date 6-17-09

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed Bouy:

Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe: Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp.(°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp.(°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp.(°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments:

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft = 0.15 m	20 = 68	25 = 77
1.0 ft = 0.30 m	21 = 69.8	26 = 78.8
1.5 ft = 0.45 m	22 = 71.6	27 = 80.6
2.0 ft = 0.60 m	23 = 73.4	28 = 82.4
2.5 ft = 0.75 m	24 = 75.2	29 = 84.2

Ambient Water Quality Site Information

Project #: ES2008004 Site #: 3855 AI #: 91290
 Temporary Site #: BBO5 Subsegment: 040908 Date: 6-18-09 Time: 1100
 Waterbody: Bayou Bonfouca
 Tapedown: _____ Staff Gauge: _____ Gauge Height: _____
 Site Location: ESTUARY
 Personnel: C. CASANOVA G. LAFleur

Weather Conditions: Clear Overcast Drizzle/Light Rain Showers
 Temperature (°F): Hot >85° Warm > 75° Mild > 65° Cool > 60° Cold < 60°
 Wind (mph): <1 1-5 6-10 11-15 >16
 Wind Direction: NW N NE SW S SE E W Variable

Cloud Cover: 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream
 Flowing: Flow Direction Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream
 Waterbody Type: Lake Wind Influence: Tidally Influenced:
 Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: <1 1-25% 26-50% 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters

Time: _____ Temp. (°C): _____ pH: _____ SpCond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____ Secchi (in): _____
 In Situ Probe ID: _____

Continuous Monitor Deployed: Continuous Monitor ID: LDO8
 Continuous Monitor Retrieved: Continuous Monitor Depth (m): 1.0
 Water Level Monitor Deployed: Instrument ID: _____

Flow Measurement: Type of Measurement: Wading Stationary Moving Boal

Instrument ID: _____
 Velocity Monitor Deployed Instrument ID: _____

Velocity Estimated: Drogue Estimate: Dye Estimate:
 Right Descending Bank Distance (ft): _____ Time (s): _____
 Mid Stream Distance (ft): _____ Time (s): _____
 Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer
 Fathometer ID: 320050 2555

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #s: _____

Site 3855 Date: 6-18-09

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed Bouy:
 Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp.(°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp.(°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp.(°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments:

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≈ 0.15 m	20 ≈ 68	25 ≈ 77
1.0 ft ≈ 0.30 m	21 ≈ 69.8	26 ≈ 78.8
1.5 ft ≈ 0.45 m	22 ≈ 71.6	27 ≈ 80.6
2.0 ft ≈ 0.60 m	23 ≈ 73.4	28 ≈ 82.4
2.5 ft ≈ 0.75 m	24 ≈ 75.2	29 ≈ 84.2

uploaded 8/4/09

Ambient Water Quality Site Information

Project #: ES2008004 Site #: 3856 AI #: 91290
 Temporary Site #: BR07 Subsegment: 040908 Date: 6/16/09 Time: 0920 hrs
 Waterbody: Bayou Bonfouca
 Tapedown: _____ Staff Gauge: _____ Gauge Height: _____
 Site Location: Lower Boundary - DS B. Bonfouca in Lake Pontchartrain
 Personnel: Jones, Beard

Weather Conditions:
 Clear Overcast
 Drizzle/Light Rain Showers

Temperature (°F):
 Hot > 85° Warm > 75°
 Mild > 65° Cool > 60°
 Cold < 60°

Wind (mph):
 < 1 1-5
 6-10 11-15
 > 16

Wind Direction:
 NW N NE
 SW S SE
 E W Variable

Cloud Cover:
 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream
 Flowing: Flow Direction Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream
 Waterbody Type: Lake Wind Influence: Tidally Influenced:
 Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: < 1 1-25% 26-50%
 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters

Time: _____ Temp. (°C): _____ pH: _____ SpCond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____ Secchi (in): _____
 In Situ Probe ID: _____

Continuous Monitor Deployed: Continuous Monitor ID: LDO 11-38
 Continuous Monitor Retrieved: Continuous Monitor Depth (m): 1m

Water Level Monitor Deployed: Instrument ID: _____

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat

Instrument ID: _____

Velocity Monitor Deployed Instrument ID: _____

Velocity Estimated: Drogue Estimate: Dye Estimate:
 Right Descending Bank Distance (ft): _____ Time (s): _____
 Mid Stream Distance (ft): _____ Time (s): _____
 Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer

Fathometer ID: _____

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #s: _____

Site 3856 Date: 6/16/07

Tapdown Established: Tapdown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Dam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed Bouy

Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe: Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments:

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≈ 0.15 m	20 ≈ 68	25 ≈ 77
1.0 ft ≈ 0.30 m	21 ≈ 69.8	26 ≈ 78.8
1.5 ft ≈ 0.45 m	22 ≈ 71.6	27 ≈ 80.6
2.0 ft ≈ 0.60 m	23 ≈ 73.4	28 ≈ 82.4
2.5 ft ≈ 0.75 m	24 ≈ 75.2	29 ≈ 84.2

Ambient Water Quality Site Information

Project #: ES 2008004 Site #: 3856 AI #: 91290
 Temporary Site #: BB07 Subsegment: 040908 Date: 6/17/09 Time: 0715
 Waterbody: Bayou Bonfouca
 Tapedown: _____ Staff Gauge: _____ Gauge Height: _____
 Site Location: Lower Boundary - DS Bonfouca in Lake Pontchartrain
 Personnel: Jones, Beard

Weather Conditions:
 Clear Overcast
 Drizzle/Light Rain Showers

Temperature (°F):
 Hot > 85° Warm > 75°
 Mild > 65° Cool > 60°
 Cold < 60°

Wind (mph):
 <1 1-5
 6-10 11-15
 >16

Wind Direction:
 NW N NE
 SW S SE
 E W Variable

Cloud Cover:
 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream
 Flowing: Flow Direction Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream
 Waterbody Type: Lake Wind Influence: Tidally Influenced:
 Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: <1 1-25% 26-50%
 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters

Time: 0720 Temp. (°C): 29.98 pH: 7.56 SpCond (µmhos/cm): 7096
 D.O.: 6.80 D.O. %: 91.9 Salinity: 3.94 Depth (m): 1m Secchi (in): 18in
 In Situ Probe ID: LD0 11-37

Continuous Monitor Deployed: Continuous Monitor ID: _____

Continuous Monitor Retrieved: Continuous Monitor Depth (m): _____

Water Level Monitor Deployed: Instrument ID: _____

Flow Measurement: Type of Measurement: Wading Stationary Moving Boal

Instrument ID: _____

Velocity Monitor Deployed Instrument ID: _____

Velocity Estimated: Drogue Estimate: Dye Estimate:

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer

Fathometer ID: _____

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #s: _____

Site 3856 Date: 6/17/09

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed: Bouy:
 Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe: Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp.(°C): _____ pH: _____ Spcond(µhmos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp.(°C): _____ pH: _____ Spcond(µhmos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp.(°C): _____ pH: _____ Spcond(µhmos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments:

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft = 0.15 m	20 = 68	25 = 77
1.0 ft = 0.30 m	21 = 69.8	26 = 78.8
1.5 ft = 0.45 m	22 = 71.6	27 = 80.6
2.0 ft = 0.60 m	23 = 73.4	28 = 82.4
2.5 ft = 0.75 m	24 = 75.2	29 = 84.2

Ambient Water Quality Site Information

Project #: 38 F52008004 Site #: 3856 AI #: 91290
 Temporary Site #: B807 Subsegment: 040908 Date: 6/18/09 Time: 0900
 Waterbody: Lake Pontchartrain
 Tapedown: _____ Staff Gauge: _____ Gauge Height: _____
 Site Location: Just Below Bayou Bonfouca - Lower Boundary Site
 Personnel: Jones, Beard

Weather Conditions:
 Clear Overcast
 Drizzle/Light Rain Showers

Temperature (°F):
 Hot > 85° Warm > 75°
 Mild > 65° Cool > 60°
 Cold < 60°

Wind (mph):
 < 1 1-5
 6-10 11-15
 > 16

Wind Direction:
 NW N NE
 SW S SE
 E W Variable

Cloud Cover:
 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream
 Flowing: Flow Direction Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream
 Waterbody Type: Lake Wind Influence: Tidally Influenced:
 Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: <1 1-25% 26-50%
 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters

Time: _____ Temp. (°C): _____ pH: _____ SpCond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____ Secchi (in): _____
 InSitu Probe ID: _____

Continuous Monitor Deployed: Continuous Monitor ID: LDD 11-38
 Continuous Monitor Retrieved: Continuous Monitor Depth (m): 1m

Water Level Monitor Deployed: Instrument ID: _____

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat

Instrument ID: _____

Velocity Monitor Deployed Instrument ID: _____

Velocity Estimated: Drogue Estimate: Dye Estimate:

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer

Fathometer ID: _____

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #: _____

Site 3856 Date: 6/18/09

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed Bouy:

Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe: Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp.(°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp.(°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp.(°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments: _____

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≈ 0.15 m	20 ≈ 68	25 ≈ 77
1.0 ft ≈ 0.30 m	21 ≈ 69.8	26 ≈ 78.8
1.5 ft ≈ 0.45 m	22 ≈ 71.6	27 ≈ 80.6
2.0 ft ≈ 0.60 m	23 ≈ 73.4	28 ≈ 82.4
2.5 ft ≈ 0.75 m	24 ≈ 75.2	29 ≈ 84.2

Ambient Water Quality Site Information

Project #: ES2008007 Site #: 3859 AI #: 91287
 Temporary Site #: BLO1 Subsegment: 040905 Date: 6/15/09 Time: 0830 hrs
 Waterbody: Bayou Liberty
 Tapedown: _____ Staff Gauge: _____ Gauge Height: _____
 Site Location: Near Journey Rd
 Personnel: Smith, Casanova

Weather Conditions:
 Clear Overcast
 Drizzle/Light Rain Showers

Temperature (°F):
 Hot > 85° Warm > 75°
 Mild > 65° Cool > 60°
 Cold < 60°

Wind (mph):
 <1 1-5
 6-10 11-15
 >16

Wind Direction:
 NW N NE
 SW S SE
 E W Variable

Cloud Cover:
 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream NO FLOW
 Flowing: Flow Direction Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream

Waterbody Type: Lake Wind Influence: Tidally Influenced:
 Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: <1 1-25% 26-50%
 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters

Time: _____ Temp. (°C): _____ pH: _____ SpCond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____ Secchi (in): _____
 InSitu Probe ID: _____

Continuous Monitor Deployed: Continuous Monitor ID: _____

Continuous Monitor Retrieved: Continuous Monitor Depth (m): _____

Water Level Monitor Deployed: Instrument ID: _____

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat

Instrument ID: _____

Velocity Monitor Deployed Instrument ID: _____

Velocity Estimated: Drogue Estimate: Dye Estimate:

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer

Fathometer ID: _____

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #s: _____

Site 3859 Date: 6/15/09

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed Bouy
 Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe: Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments: NO FLOW, Site not sampled for survey

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft = 0.15 m	20 = 68	25 = 77
1.0 ft = 0.30 m	21 = 69.8	26 = 78.8
1.5 ft = 0.45 m	22 = 71.6	27 = 80.6
2.0 ft = 0.60 m	23 = 73.4	28 = 82.4
2.5 ft = 0.75 m	24 = 75.2	29 = 84.2

Ambient Water Quality Site Information

Project #: 2008007 Site #: 3860 AI #: 91287
 Temporary Site #: BLO2 Subsegment: 040905 Date: 6-9-09 Time: 1015
 Waterbody: Bayou Liberty
 Tapedown: 14.12 Staff Gauge: _____ Gauge Height: _____
 Site Location: Royal 18th Dr.
 Personnel: C. Casanova, B. Allemen, G. LaFleur

Weather Conditions:
 Clear Overcast Drizzle/Light Rain Showers
Temperature (°F):
 Hot > 85° Warm > 75° Mild > 65° Cool > 60° Cold < 60°
Wind (mph):
 <1 1-5 6-10 11-15 >16
Wind Direction:
 NW N NE
 SW S SE
 E W Variable

Cloud Cover:
 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream
 Flowing: Flow Direction Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream
 Waterbody Type: Lake Wind Influence: Tidally Influenced:
 Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: <1 1-25% 26-50%
 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters

Time: _____ Temp. (°C): _____ pH: _____ SpCond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____ Secchi (in): _____
 InSitu Probe ID: _____

Continuous Monitor Deployed: Continuous Monitor ID: _____
 Continuous Monitor Retrieved: Continuous Monitor Depth (m): _____

Water Level Monitor Deployed: Instrument ID: _____

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat

Instrument ID: _____

Velocity Monitor Deployed Instrument ID: _____

Velocity Estimated: Drogue Estimate: Dye Estimate:

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer

Fathometer ID: _____

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #s: _____

Site 3860 Date: 6-9-09

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed Bouy
 Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe: Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp.(°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp.(°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp.(°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments: Barely flowing, difficult to measure flow today

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≈ 0.15 m	20 ≈ 68	25 ≈ 77
1.0 ft ≈ 0.30 m	21 ≈ 69.8	26 ≈ 78.8
1.5 ft ≈ 0.45 m	22 ≈ 71.6	27 ≈ 80.6
2.0 ft ≈ 0.60 m	23 ≈ 73.4	28 ≈ 82.4
2.5 ft ≈ 0.75 m	24 ≈ 75.2	29 ≈ 84.2

Ambient Water Quality Site Information

Project #: ES2008007 Site #: 3860 AI #: 91287
 Temporary Site #: BLO2 Subsegment: 040905 Date: 6/15/09 Time: 0845hrs
 Waterbody: Bayou Liberty
 Tapedown: _____ Staff Gauge: _____ Gauge Height: _____
 Site Location: near Royal 18th Dr.
 Personnel: Smith, Casanova

Weather Conditions:
 Clear Overcast
 Drizzle/Light Rain Showers

Temperature (°F):
 Hot >85° Warm > 75°
 Mild > 65° Cool > 60°
 Cold < 60°

Wind (mph):
 <1 1-5
 6-10 11-15
 >16

Wind Direction:
 NW N NE
 SW S SE
 E W Variable

Cloud Cover:
 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream NO FLOW
 Flowing: Flow Direction Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream

Waterbody Type: Lake Wind Influence: Tidally Influenced:
 Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: <1 1-25% 26-50%
 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters

Time: _____ Temp. (°C): _____ pH: _____ SpCond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____ Secchi (in): _____
 InSitu Probe ID: _____

Continuous Monitor Deployed: Continuous Monitor ID: _____
 Continuous Monitor Retrieved: Continuous Monitor Depth (m): _____

Water Level Monitor Deployed: Instrument ID: _____

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat

Instrument ID: _____

Velocity Monitor Deployed Instrument ID: _____

Velocity Estimated: Drogue Estimate: Dye Estimate:

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer

Fathometer ID: _____

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #s: _____

Site 3860 Date 6/15/09

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed Bouy:

Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe: Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp.(°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp.(°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp.(°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments: NO FLOW, site not sampled for survey

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≈ 0.15 m	20 ≈ 68	25 ≈ 77
1.0 ft ≈ 0.30 m	21 ≈ 69.8	26 ≈ 78.8
1.5 ft ≈ 0.45 m	22 ≈ 71.6	27 ≈ 80.6
2.0 ft ≈ 0.60 m	23 ≈ 73.4	28 ≈ 82.4
2.5 ft ≈ 0.75 m	24 ≈ 75.2	29 ≈ 84.2

Ambient Water Quality Site Information

Project #: 2008007 Site #: 3861 AI #: 91287
 Temporary Site #: B203 Subsegment: 040905 Date: 6-9-09 Time: 0945
 Waterbody: Bayou Liberty
 Tapedown: 19.46 Staff Gauge: _____ Gauge Height: _____
 Site Location: At I-12
 Personnel: G. LaFleur, C. Casanova, B. Alaman

Weather Conditions:
 Clear Overcast Drizzle/Light Rain Showers
 Temperature (°F): Hot >85° Warm > 75° Mild > 65° Cool > 60° Cold < 60°
 Wind (mph): <1 1-5 6-10 11-15 >16
 Wind Direction: NW N NE SW S SE E W Variable

Cloud Cover: 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream
 Flowing: Flow Direction Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream
 Waterbody Type: Lake Wind Influence: Tidally Influenced:
 Algae Present Sedimentation/Turbidity Present in Water Column:
 Floating/Aquatic Vegetation % Surface Coverage: <1 1-25% 26-50% 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters
 Time: _____ Temp. (°C): _____ pH: _____ SpCond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____ Secchi (in): _____
 In Situ Probe ID: _____

Continuous Monitor Deployed: Continuous Monitor ID: _____
 Continuous Monitor Retrieved: Continuous Monitor Depth (m): _____
 Water Level Monitor Deployed: Instrument ID: _____

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat
 Instrument ID: _____
 Velocity Monitor Deployed Instrument ID: _____

Velocity Estimated: Drogue Estimate: Dye Estimate:
 Right Descending Bank Distance (ft): _____ Time (s): _____
 Mid Stream Distance (ft): _____ Time (s): _____
 Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer
 Fathometer ID: _____

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #s: _____

Site 3861 Date: 6-9-09

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed Bouy
 Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe: Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments: Depth ranges from 2' - 3.5'. Possibly need small boat if flowing. Interstate dangerous.

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft = 0.15 m	20 = 68	25 = 77
1.0 ft = 0.30 m	21 = 69.8	26 = 78.8
1.5 ft = 0.45 m	22 = 71.6	27 = 80.6
2.0 ft = 0.60 m	23 = 73.4	28 = 82.4
2.5 ft = 0.75 m	24 = 75.2	29 = 84.2

ambient Water Quality Site Information

Project #: ES2008007 Site #: 3861 AI #: 91287
 Temporary Site #: BLO3 Subsegment: 040905 Date: 6/16/09 Time: 0905hrs.
 Waterbody: Bayou Liberty
 Tapedown: _____ Staff Gauge: _____ Gauge Height: _____
 Site Location: near I-12
 Personnel: Smith, Casanova

Weather Conditions:
 Clear Overcast
 Drizzle/Light Rain Showers

Temperature (°F):
 Hot >85° Warm > 75°
 Mild > 65° Cool > 60°
 Cold < 60°

Wind (mph):
 <1 1-5
 6-10 11-15
 >16

Wind Direction:
 NW N NE
 SW S SE
 E W Variable

Cloud Cover:
 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream

Flowing: Flow Direction Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream

Waterbody Type: Lake Wind Influence: Tidally Influenced:

Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: <1 1-25% 26-50%
 51-75% 76-100%

Uploaded
7/1/09

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters

Time: _____ Temp. (°C): _____ pH: _____ SpCond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____ Secchi (in): _____
 InSitu Probe ID: _____

Continuous Monitor Deployed: Continuous Monitor ID: LDO 11-39
 Continuous Monitor Retrieved: Continuous Monitor Depth (m): 0.5m

Water Level Monitor Deployed: Instrument ID: _____

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat

Instrument ID: _____
 Velocity Monitor Deployed Instrument ID: _____

Velocity Estimated: Drogue Estimate: Dye Estimate:

Right Descending Bank Distance (ft): _____ Time (s): _____
 Mid Stream Distance (ft): _____ Time (s): _____
 Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer

Fathometer ID: _____

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #s: _____

Site 3861 Date: 6/16/09

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed Bouy
 Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe: Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments:

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≈ 0.15 m	20 ≈ 68	25 ≈ 77
1.0 ft ≈ 0.30 m	21 ≈ 69.8	26 ≈ 78.8
1.5 ft ≈ 0.45 m	22 ≈ 71.6	27 ≈ 80.6
2.0 ft ≈ 0.60 m	23 ≈ 73.4	28 ≈ 82.4
2.5 ft ≈ 0.75 m	24 ≈ 75.2	29 ≈ 84.2

Ambient Water Quality Site Information

Project #: ES2008007 Site #: 3861 AI #: 91287
 Temporary Site #: BLO3 Subsegment: 040905 Date: 6/17/09 Time: 0835
 Waterbody: Bayou Liberty
 Tapedown: 20.89 Staff Gauge: _____ Gauge Height: _____
 Site Location: near I-12
 Personnel: Smith, Casanova, Earles

Weather Conditions:
 Clear Overcast
 Drizzle/Light Rain Showers

Temperature (°F):
 Hot >85° Warm > 75°
 Mild > 65° Cool > 60°
 Cold < 60°

Wind (mph):
 <1 1-5
 6-10 11-15
 >16

Wind Direction:
 NW N NE
 SW S SE
 E W Variable

Cloud Cover:
 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream
 Flowing: Flow Direction Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream
 Waterbody Type: Lake Wind Influence: Tidally Influenced:
 Algae Present Sedimentation/Turbidity Present in Water Column:
 Floating/Aquatic Vegetation % Surface Coverage: <1 1-25% 26-50%
 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters

Time: 0835 Temp. (°C): 29.33 pH: 7.65 SpCond (µmhos/cm): 975.5
 D.O.: 1.33 D.O. %: 17.5 Salinity: 0.48 Depth (m): 0.5m Secchi (in): 11.0in
 In Situ Probe ID: LDO 22

Continuous Monitor Deployed: Continuous Monitor ID: _____

Continuous Monitor Retrieved: Continuous Monitor Depth (m): _____

Water Level Monitor Deployed: Instrument ID: _____

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat

Instrument ID: FTA 6A

Velocity Monitor Deployed Instrument ID: _____

Velocity Estimated: Drogue Estimate: Dye Estimate:

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer

Fathometer ID: _____ Flow tracker

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #: _____

Site 3861 Date: 6/17/09

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed Bouy:

Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe: Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp.(°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp.(°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp.(°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments:

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≈ 0.15 m	20 ≈ 68	25 ≈ 77
1.0 ft ≈ 0.30 m	21 ≈ 69.8	26 ≈ 78.8
1.5 ft ≈ 0.45 m	22 ≈ 71.6	27 ≈ 80.6
2.0 ft ≈ 0.60 m	23 ≈ 73.4	28 ≈ 82.4
2.5 ft ≈ 0.75 m	24 ≈ 75.2	29 ≈ 84.2

ambient Water Quality Site Information

Project #: ES2008007 Site #: 3861 AI #: 91287
 Temporary Site #: B203 Subsegment: 040905 Date: 6/18/09 Time: 0926 hrs
 Waterbody: Bayou Liberty
 Tapedown: 19.67 Staff Gauge: _____ Gauge Height: _____
 Site Location: near I-12
 Personnel: Smith, Casanova

Weather Conditions:
 Clear Overcast
 Drizzle/Light Rain Showers

Temperature (°F):
 Hot > 85° Warm > 75°
 Mild > 65° Cool > 60°
 Cold < 60°

Wind (mph):
 <1 1-5
 6-10 11-15
 >16

Wind Direction:
 NW N NE
 SW S SE
 E W Variable

Cloud Cover:
 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream slight
 Flowing: Flow Direction Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream
 Waterbody Type: Lake Wind Influence: Tidally Influenced:
 Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: <1 1-25% 26-50%
 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters

Time: _____ Temp. (°C): _____ pH: _____ SpCond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____ Secchi (in): _____
 InSitu Probe ID: _____

Continuous Monitor Deployed: Continuous Monitor ID: LDO 11-39
 Continuous Monitor Retrieved: Continuous Monitor Depth (m): 0.5m
 Water Level Monitor Deployed: Instrument ID: _____

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat
 Instrument ID: _____
 Velocity Monitor Deployed Instrument ID: _____

Velocity Estimated: Drogue Estimate: Dye Estimate:
 Right Descending Bank Distance (ft): _____ Time (s): _____
 Mid Stream Distance (ft): _____ Time (s): _____
 Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer
 Fathometer ID: _____

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #s: _____

Site 3861 Date: 6/18/09

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed Bouy

Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe: Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments:

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≈ 0.15 m	20 ≈ 68	25 ≈ 77
1.0 ft ≈ 0.30 m	21 ≈ 69.8	26 ≈ 78.8
1.5 ft ≈ 0.45 m	22 ≈ 71.6	27 ≈ 80.6
2.0 ft ≈ 0.60 m	23 ≈ 73.4	28 ≈ 82.4
2.5 ft ≈ 0.75 m	24 ≈ 75.2	29 ≈ 84.2

Uploaded
8/13

Ambient Water Quality Site Information

Project #: ES2008007 Site #: 3802 Alt #: 91287
 Temporary Site #: BL04 Subsegment: 040905 Date: 6-15-09 Time: 0930
 Waterbody: Bayou Liberty
 Tapedown: 13.25 Staff Gauge: _____ Gauge Height: _____
 Site Location: @ bike path
 Personnel: D. Buene, Ty Yoel, C. Keith, B. Aleman

Weather Conditions:
 Clear Overcast
 Drizzle/Light Rain Showers

Temperature (°F):
 Hot > 85° Warm > 75°
 Mild > 65° Cool > 60°
 Cold < 60°

Wind (mph):
 < 1 1-5
 6-10 11-15
 > 16

Wind Direction:
 NW N NE
 SW S SE
 E W
 Variable

Cloud Cover:
 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream
 Flowing: Flow Direction Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream
 Waterbody Type: Lake Wind Influence: Tidally Influenced:
 Algae Present Sedimentation/Turbidity Present in Water/Column
 Floating/Aquatic Vegetation % Surface Coverage: < 1 1-25% 26-50%
 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters

Time: _____ Temp. (°C): _____ pH: _____ SpCond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____ Secchi (in): _____
 In Situ Probe ID: _____

Continuous Monitor Deployed: Continuous Monitor ID: _____

Continuous Monitor Retrieved: Continuous Monitor Depth (m): _____

Water Level Monitor Deployed: Instrument ID: Station 1

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat

Instrument ID: _____

Velocity Monitor Deployed Instrument ID: _____

Velocity Estimated: Drogue Estimate: Dye Estimate:

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer

Fathometer ID: _____

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #s: _____

Site 3862 Date: 6-15-09

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed: Bouy:
 Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe: Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments:

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≈ 0.15 m	20 ≈ 68	25 ≈ 77
1.0 ft ≈ 0.30 m	21 ≈ 69.8	26 ≈ 78.8
1.5 ft ≈ 0.45 m	22 ≈ 71.6	27 ≈ 80.6
2.0 ft ≈ 0.60 m	23 ≈ 73.4	28 ≈ 82.4
2.5 ft ≈ 0.75 m	24 ≈ 75.2	29 ≈ 84.2

Ambient Water Quality Site Information

Project #: E52008007 Site #: 3862 AI #: 91287
 Temporary Site #: R204 Subsegment: 040905 Date: 6-16-09 Time: 0930
 Waterbody: Bayou Liberty
 Tapedown: 13.15 Staff Gauge: _____ Gauge Height: _____
 Site Location: @ bike bridge
 Personnel: D. Berne C Keith

Weather Conditions:
 Clear Overcast
 Drizzle/Light Rain Showers

Temperature (°F):
 Hot > 85° Warm > 75°
 Mild > 65° Cool > 60°
 Cold < 60°

Wind (mph):
 <1 1-5
 6-10 11-15
 >16

Wind Direction:
 NW N NE
 SW S SE
 E W Variable

Cloud Cover:
 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream
 Flowing: Flow Direction Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream
 Waterbody Type: Lake Wind Influence: Tidally Influenced:
 Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: <1 1-25% 26-50%
 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters

Time: _____ Temp. (°C): _____ pH: _____ SpCond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____ Secchi (in): _____

InSitu Probe ID: _____

Continuous Monitor Deployed: Continuous Monitor ID: LDO 2

Continuous Monitor Retrieved: Continuous Monitor Depth (m): 1 m

Water Level Monitor Deployed: Instrument ID: _____

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat

Instrument ID: _____

Velocity Monitor Deployed Instrument ID: _____

Velocity Estimated: Drogue Estimate: Dye Estimate:

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer

Fathometer ID: 32005012555

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #: _____

Site 3862 Date: 6-16-09

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed: Bouy:
 Boat Accessible Nearest Launch: _____
 Bridge Bridge Safe Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments:

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft = 0.15 m	20 = 68	25 = 77
1.0 ft = 0.30 m	21 = 69.8	26 = 78.8
1.5 ft = 0.45 m	22 = 71.6	27 = 80.6
2.0 ft = 0.60 m	23 = 73.4	28 = 82.4
2.5 ft = 0.75 m	24 = 75.2	29 = 84.2

Ambient Water Quality Site Information

Project #: ES2008007 Site #: 3862 AI #: 91287
 Temporary Site #: BLO4 Subsegment: 040905 Date: 6-17-09 Time: 915
 Waterbody: Bayou Liberty
 Tapedown: 13.3 Staff Gauge: _____ Gauge Height: _____
 Site Location: @ bike bridge
 Personnel: D. Berne C. Keith

Weather Conditions:
 Clear Overcast
 Drizzle/Light Rain Showers

Temperature (°F):
 Hot > 85° Warm > 75°
 Mild > 65° Cool > 60°
 Cold < 60°

Wind (mph):
 < 1 1-5
 6-10 11-15
 > 16

Wind Direction:
 NW N NE
 SW S SE
 E W Variable

Cloud Cover:
 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream

Flowing: Flow Direction Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream

Waterbody Type: Lake Wind Influence: Tidally Influenced:
 Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: < 1 1-25% 26-50%
 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters

Time: 915 Temp. (°C): 29.52 pH: 7.88 SpCond (µmhos/cm): 1042
 D.O.: 1.64 D.O. %: 211 Salinity: 0.54 Depth (m): 1m Secchi (in): 35 in
 In Situ Probe ID: L100 16

Continuous Monitor Deployed: Continuous Monitor ID: _____

Continuous Monitor Retrieved: Continuous Monitor Depth (m): _____

Water Level Monitor Deployed: Instrument ID: _____

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat

Instrument ID: _____

Velocity Monitor Deployed Instrument ID: _____

Velocity Estimated: Drogue Estimate: Dye Estimate:

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer

Fathometer ID: _____

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #s: _____

Site 3862 Date: 6-17-09

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed: Bouy:

Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe: Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp.(°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp.(°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp.(°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments:

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≈ 0.15 m	20 ≈ 68	25 ≈ 77
1.0 ft ≈ 0.30 m	21 ≈ 69.8	26 ≈ 78.8
1.5 ft ≈ 0.45 m	22 ≈ 71.6	27 ≈ 80.6
2.0 ft ≈ 0.60 m	23 ≈ 73.4	28 ≈ 82.4
2.5 ft ≈ 0.75 m	24 ≈ 75.2	29 ≈ 84.2

ambient Water Quality Site Information

Project #: ES2008007 Site #: 3862 AI #: 91287
 Temporary Site #: BLO4 Subsegment: 040905 Date: 6-18-09 Time: 0935
 Waterbody: Bayou Liberty
 Tapedown: 13.04 Staff Gauge: _____ Gauge Height: _____
 Site Location: @ bike path bridge
 Personnel: D. Byrne, Keith

Weather Conditions:
 Clear Overcast
 Drizzle/Light Rain Showers

Temperature (°F):
 Hot > 85° Warm > 75°
 Mild > 65° Cool > 60°
 Cold < 60°

Wind (mph):
 <1 1-5
 6-10 11-15
 >16

Wind Direction:
 NW N NE
 SW S SE
 E W
 Variable

Cloud Cover:
 0-10% 11-40%
 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream
 Flowing: Flow Direction Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream
 Waterbody Type: Lake Wind Influence: Tidally Influenced:
 Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: <1 1-25%
 26-50% 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters

Time: _____ Temp. (°C): _____ pH: _____ SpCond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____ Secchi (in): _____
 In Situ Probe ID: _____

Continuous Monitor Deployed: Continuous Monitor ID: LDO 2
 Continuous Monitor Retrieved: Continuous Monitor Depth (m): 1m

Water Level Monitor Deployed: Instrument ID: _____

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat

Instrument ID: _____

Velocity Monitor Deployed Instrument ID: _____

Velocity Estimated: Drogue Estimate: Dye Estimate:
 Right Descending Bank Distance (ft): _____ Time (s): _____
 Mid Stream Distance (ft): _____ Time (s): _____
 Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer

Fathometer ID: _____

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #: _____

Site 3862 Date: 6-18-09

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:

Discharge Measurement: Wading Boat Stream Depth (ft): _____

Continuous Monitor Deployment: Fixed Bouy:

Boat Accessible: Nearest Launch: _____

Bridge Bridge Safe: Bridge Height: _____

Profiling Measurements:

Time: _____	Temp. (°C): _____	pH: _____	Spcond (µmhos/cm): _____
D.O.: _____	D.O. %: _____	Salinity: _____	Depth (m): _____
Time: _____	Temp. (°C): _____	pH: _____	Spcond (µmhos/cm): _____
D.O.: _____	D.O. %: _____	Salinity: _____	Depth (m): _____
Time: _____	Temp. (°C): _____	pH: _____	Spcond (µmhos/cm): _____
D.O.: _____	D.O. %: _____	Salinity: _____	Depth (m): _____

Comments:

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≅ 0.15 m	20 ≅ 68	25 ≅ 77
1.0 ft ≅ 0.30 m	21 ≅ 69.8	26 ≅ 78.8
1.5 ft ≅ 0.45 m	22 ≅ 71.6	27 ≅ 80.6
2.0 ft ≅ 0.60 m	23 ≅ 73.4	28 ≅ 82.4
2.5 ft ≅ 0.75 m	24 ≅ 75.2	29 ≅ 84.2

Ambient Water Quality Site Information

Project #: E52008007 Site #: 3862 AI #: 91287
 Temporary Site #: BLO4 Subsegment: 040905 Date: 6-19-09 Time: 0820
 Waterbody: Bayou Liberty
 Tapedown: 13.09 Staff Gauge: _____ Gauge Height: _____
 Site Location: @ bike path bridge
 Personnel: D. Borne, A. Atteman

Weather Conditions:
 Clear Overcast
 Drizzle/Light Rain Showers

Temperature (°F):
 Hot > 85° Warm > 75°
 Mild > 65° Cool > 60°
 Cold < 60°

Wind (mph):
 < 1 1-5
 6-10 11-15
 > 16

Wind Direction:
 NW N NE
 SW S SE
 E W Variable

Cloud Cover:
 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream
 Flowing: Flow Direction Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream
 Waterbody Type: Lake Wind Influence: Tidally Influenced:
 Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: < 1 1-25% 26-50%
 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters

Time: _____ Temp. (°C): _____ pH: _____ SpCond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____ Secchi (in): _____
 In Situ Probe ID: _____

Continuous Monitor Deployed: Continuous Monitor ID: _____

Continuous Monitor Retrieved: Continuous Monitor Depth (m): _____

Water Level Monitor Deployed: Instrument ID: Station 1 - retrieved

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat

Instrument ID: _____

Velocity Monitor Deployed Instrument ID: _____

Velocity Estimated: Drogue Estimate: Dye Estimate:

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer

Fathometer ID: _____

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #s: _____

Site 3862 Date: 6/9/09

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed: Bouy

Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe: Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp.(°C): _____ pH: _____ Spcond(µhmos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp.(°C): _____ pH: _____ Spcond(µhmos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp.(°C): _____ pH: _____ Spcond(µhmos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments:

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≈ 0.15 m	20 ≈ 68	25 ≈ 77
1.0 ft ≈ 0.30 m	21 ≈ 69.8	26 ≈ 78.8
1.5 ft ≈ 0.45 m	22 ≈ 71.6	27 ≈ 80.6
2.0 ft ≈ 0.60 m	23 ≈ 73.4	28 ≈ 82.4
2.5 ft ≈ 0.75 m	24 ≈ 75.2	29 ≈ 84.2

Ambient Water Quality Site Information

Project #: ES2008007 Site #: 3863 AI #: 91288
 Temporary Site #: BFO1 Subsegment: 040906 Date: 6/16/09 Time: 1100hrs.
 Waterbody: Bayou Paquet
 Tapedown: _____ Staff Gauge: _____ Gauge Height: _____
 Site Location: Near Park Ave.
 Personnel: Smith, Casanova

Weather Conditions:
 Clear Overcast Drizzle/Light Rain Showers
 Temperature (°F): Hot >85° Warm > 75° Mild > 65° Cool > 60° Cold < 60°
 Wind (mph): <1 1-5 6-10 11-15 >16
 Wind Direction: NW N NE SW S SE E W Variable

Cloud Cover: 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream NO WATER
 Flowing: Flow Direction Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream

Waterbody Type: Lake Wind Influence: Tidally Influenced:
 Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: <1 1-25% 26-50% 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters

Time: _____ Temp. (°C): _____ pH: _____ SpCond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____ Secchi (in): _____
 InSitu Probe ID: _____

Continuous Monitor Deployed: Continuous Monitor ID: _____
 Continuous Monitor Retrieved: Continuous Monitor Depth (m): _____
 Water Level Monitor Deployed: Instrument ID: _____

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat
 Instrument ID: _____
 Velocity Monitor Deployed Instrument ID: _____

Velocity Estimated: Drogue Estimate: Dye Estimate:
 Right Descending Bank Distance (ft): _____ Time (s): _____
 Mid Stream Distance (ft): _____ Time (s): _____
 Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer
 Fathometer ID: _____

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #s: _____

Site 3863 Date: 6/16/09

Tapedown Established Tapedown Location _____
 Benchmark Established Benchmark Location: _____
 Survey Equipment Used

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed Bouy

Boat Accessible Nearest Launch: _____
 Bridge Bridge Safe Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments: NO WATER, site not sampled

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≈ 0.15 m	20 ≈ 68	25 ≈ 77
1.0 ft ≈ 0.30 m	21 ≈ 69.8	26 ≈ 78.8
1.5 ft ≈ 0.45 m	22 ≈ 71.6	27 ≈ 80.6
2.0 ft ≈ 0.60 m	23 ≈ 73.4	28 ≈ 82.4
2.5 ft ≈ 0.75 m	24 ≈ 75.2	29 ≈ 84.2

Ambient Water Quality Site Information

Project #: ES2008007 Site #: 3864 AI #: 91288
 Temporary Site #: B002 Subsegment: 040906 Date: 6-15-09 Time: 1305
 Waterbody: Bayou Paquet
 Tapedown: _____ Staff Gauge: _____ Gauge Height: _____
 Site Location: @ above Bayou Paquet Rd. > 200 yds
 Personnel: D. Borne, T. Yee, C. Keith, B. Allmon

Weather Conditions:
 Clear Overcast
 Drizzle/Light Rain Showers

Temperature (°F):
 Hot > 85° Warm > 75°
 Mild > 65° Cool > 60°
 Cold < 60°

Wind (mph):
 < 1 1-5
 6-10 11-15
 > 16

Wind Direction:
 NW N NE
 SW S SE
 E W Variable

Cloud Cover:
 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream

Flowing: Flow Direction Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream

Waterbody Type: Lake Wind Influence: Tidally Influenced:

Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: < 1 1-25% 26-50%
 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters

Time: _____ Temp. (°C): _____ pH: _____ SpCond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____ Secchi (in): _____
 InSitu Probe ID: _____

Continuous Monitor Deployed: Continuous Monitor ID: _____
 Continuous Monitor Retrieved: Continuous Monitor Depth (m): _____
 Water Level Monitor Deployed: Instrument ID: Station 3

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat
 Instrument ID: _____
 Velocity Monitor Deployed Instrument ID: _____

Velocity Estimated: Drogue Estimate: Dye Estimate:
 Right Descending Bank Distance (ft): _____ Time (s): _____
 Mid Stream Distance (ft): _____ Time (s): _____
 Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer
 Fathometer ID: _____

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #s: _____

Site 3864 Date: 6-18-09

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed: Bouy:

Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe: Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments:

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≈ 0.15 m	20 ≈ 68	25 ≈ 77
1.0 ft ≈ 0.30 m	21 ≈ 69.8	26 ≈ 78.8
1.5 ft ≈ 0.45 m	22 ≈ 71.6	27 ≈ 80.6
2.0 ft ≈ 0.60 m	23 ≈ 73.4	28 ≈ 82.4
2.5 ft ≈ 0.75 m	24 ≈ 75.2	29 ≈ 84.2

Ambient Water Quality Site Information

Project #: E52008007 Site #: 3864 AI #: 91288
 Temporary Site #: BPO2 Subsegment: 040906 Date: 5-16-09 Time: :004
 Waterbody: Bayou Fauvet
 Tapedown: _____ Staff Gauge: _____ Gauge Height: _____
 Site Location: top boat site
 Personnel: Ty Yoss, Bryan Allen

Weather Conditions:
 Clear Overcast Drizzle/Light Rain Showers
Temperature (°F):
 Hot >85° Warm > 75° Mild > 65° Cool > 60° Cold < 60°
Wind (mph):
 <1 1-5 6-10 11-15 >16
Wind Direction:
 NW N NE SW S SE E W Variable

Cloud Cover:
 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream
 Flowing: Flow Direction Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream
 Waterbody Type: Lake Wind Influence: Tidally Influenced:
 Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: <1 1-25% 26-50% 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters

Time: _____ Temp. (°C): _____ pH: _____ SpCond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____ Secchi (in): _____
 InSitu Probe ID: _____

Continuous Monitor Deployed: Continuous Monitor ID: 17
 Continuous Monitor Retrieved: Continuous Monitor Depth (m): 1m

Water Level Monitor Deployed: Instrument ID: _____

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat

Instrument ID: _____
 Velocity Monitor Deployed Instrument ID: _____

Velocity Estimated: Drogue Estimate: Dye Estimate:
 Right Descending Bank Distance (ft): _____ Time (s): _____
 Mid Stream Distance (ft): _____ Time (s): _____
 Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer
 Fathometer ID: _____

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #s: _____

Site 3064 Date: 6-16-09

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed: Bouy:

Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe: Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp.(°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp.(°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp.(°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments:

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft = 0.15 m	20 = 68	25 = 77
1.0 ft = 0.30 m	21 = 69.8	26 = 78.8
1.5 ft = 0.45 m	22 = 71.6	27 = 80.6
2.0 ft = 0.60 m	23 = 73.4	28 = 82.4
2.5 ft = 0.75 m	24 = 75.2	29 = 84.2

Ambient Water Quality Site Information

Project #: CS2008007 Site #: 3864 AI #: 91288
 Temporary Site #: BPO2 Subsegment: 040906 Date: 6-17-09 Time: 1030
 Waterbody: Bayou Paquet
 Tapedown: _____ Staff Gauge: _____ Gauge Height: _____
 Site Location: top boat site
 Personnel: Ty Goes, B Alleman

Weather Conditions:
 Clear Overcast
 Drizzle/Light Rain Showers

Temperature (°F):
 Hot > 85° Warm > 75°
 Mild > 65° Cool > 60°
 Cold < 60°

Wind (mph):
 < 1 1-5
 6-10 11-15
 > 16

Wind Direction:
 NW N NE
 SW S SE
 E W Variable

Cloud Cover:
 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream

Flowing: Flow Direction Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream

Waterbody Type: Lake Wind Influence: Tidally Influenced:

Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: < 1 1-25% 26-50%
 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters

Time: 1030 Temp. (°C): 32.08 ~~31.98~~ pH: 7.05 SpCond (µmhos/cm): 5780
 D.O.: ~~30.205~~ D.O. %: 36.1 Salinity: 3.17 Depth (m): 1m Secchi (in): 24.1
 In Situ Probe ID: 2-16 24

Continuous Monitor Deployed: Continuous Monitor ID: _____

Continuous Monitor Retrieved: Continuous Monitor Depth (m): _____

Water Level Monitor Deployed: Instrument ID: _____

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat

Instrument ID: _____

Velocity Monitor Deployed Instrument ID: _____

Velocity Estimated: Drogue Estimate: Dye Estimate:

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer

Fathometer ID: 11950

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #s: _____

Site 3264 Date: 6-17-09

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed: Bouy:

Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe: Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments:

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≈ 0.15 m	20 ≈ 68	25 ≈ 77
1.0 ft ≈ 0.30 m	21 ≈ 69.8	26 ≈ 78.8
1.5 ft ≈ 0.45 m	22 ≈ 71.6	27 ≈ 80.6
2.0 ft ≈ 0.60 m	23 ≈ 73.4	28 ≈ 82.4
2.5 ft ≈ 0.75 m	24 ≈ 75.2	29 ≈ 84.2

Ambient Water Quality Site Information

Project #: ES2008007 Site #: 386A AI #: 91288
 Temporary Site #: BPOZ Subsegment: 040906 Date: 6-18-09 Time: 1003
 Waterbody: Bayou Paquet
 Tapedown: _____ Staff Gauge: _____ Gauge Height: _____
 Site Location: top boat site
 Personnel: T. Yoes, B. Alleman

Weather Conditions: Temperature (°F): Wind (mph): Wind Direction:
 Clear Hot > 85° < 1 NW N NE
 Overcast Warm > 75° 1-5 SW S SE
 Drizzle/Light Rain Mild > 65° 6-10 E W
 Showers Cool > 60° 11-15 Variable
 Cold < 60° > 16

Cloud Cover: 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream
 Flowing: Flow Direction: Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream

Waterbody Type: Lake Wind Influence: Tidally Influenced:
 Algae Present Sedimentation/Turbidity Present in Water Column:
 Floating/Aquatic Vegetation % Surface Coverage: < 1 1-25% 26-50%
 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters
 Time: _____ Temp. (°C): _____ pH: _____ SpCond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____ Secchi (in): _____
 In Situ Probe ID: _____

Continuous Monitor Deployed: Continuous Monitor ID: 17
 Continuous Monitor Retrieved: Continuous Monitor Depth (m): 1m
 Water Level Monitor Deployed: Instrument ID: _____

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat
 Instrument ID: _____
 Velocity Monitor Deployed Instrument ID: _____

Velocity Estimated: Drogue Estimate: Dye Estimate:
 Right Descending Bank Distance (ft): _____ Time (s): _____
 Mid Stream Distance (ft): _____ Time (s): _____
 Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer
 Fathometer ID: _____

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #: _____

Site 3864 Date: 6-19-09

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Welland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed Bouy:

Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe: Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µhmos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µhmos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µhmos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments:

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≈ 0.15 m	20 ≈ 68	25 ≈ 77
1.0 ft ≈ 0.30 m	21 ≈ 69.8	26 ≈ 78.8
1.5 ft ≈ 0.45 m	22 ≈ 71.6	27 ≈ 80.6
2.0 ft ≈ 0.60 m	23 ≈ 73.4	28 ≈ 82.4
2.5 ft ≈ 0.75 m	24 ≈ 75.2	29 ≈ 84.2

(Ambient Water Quality Site Information)

Project #: CS2008007 Site #: 3864 AI #: 91288
 Temporary Site #: BPO2 Subsegment: 040906 Date: 6-19-09 Time: 900
 Waterbody: Bayou Paquet
 Tapedown: / Staff Gauge: _____ Gauge Height: _____
 Site Location: top best site
 Personnel: Ty Yoes, Chad Keith

Weather Conditions:
 Clear Overcast
 Drizzle/Light Rain Showers

Temperature (°F):
 Hot > 85° Warm > 75°
 Mild > 65° Cool > 60°
 Cold < 60°

Wind (mph):
 < 1 1-5
 6-10 11-15
 > 16

Wind Direction:
 NW N NE
 SW S SE
 E W Variable

Cloud Cover:
 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream
 Flowing: Flow Direction Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream
 Waterbody Type: Lake Wind Influence: Tidally Influenced:
 Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: < 1% 1-25% 26-50%
 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters

Time: _____ Temp. (°C): _____ pH: _____ SpCond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____ Secchi (in): _____
 In Situ Probe ID: _____

Continuous Monitor Deployed: Continuous Monitor ID: _____
 Continuous Monitor Retrieved: Continuous Monitor Depth (m): _____
 Water Level Monitor Deployed: Instrument ID: Station 3 picked up

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat
 Instrument ID: _____
 Velocity Monitor Deployed Instrument ID: _____

Velocity Estimated: Drogue Estimate: Dye Estimate:
 Right Descending Bank Distance (ft): _____ Time (s): _____
 Mid Stream Distance (ft): _____ Time (s): _____
 Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer
 Fathometer ID: 11950

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #: _____

Site 3064 Date: 6-19-09

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed Bouy

Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe: Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments: water level m picked up station 3

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ± 0.15 m	20 ± 68	75 ± 77
1.0 ft ± 0.30 m	21 ± 69.8	26 ± 78.8
1.5 ft ± 0.45 m	22 ± 71.6	27 ± 80.6
2.0 ft ± 0.60 m	23 ± 73.4	28 ± 82.4
2.5 ft ± 0.75 m	24 ± 75.2	29 ± 84.2

Ambient Water Quality Site Information

ungraded 8/17/09

Project #: ES2008007 Site #: 3866 AI #: 9/288
 Temporary Site #: BLOS Subsegment: 040906 Date: 6/16/09 Time: 0905
 Waterbody: Bayou Liberty
 Tapedown: _____ Staff Gauge: _____ Gauge Height: _____
 Site Location: Bottom site - upstream confluence w/ B Bonfouca
 Personnel: Jones, Beard

Weather Conditions:
 Clear Overcast
 Drizzle/Light Rain Showers

Temperature (°F):
 Hot > 85° Warm > 75°
 Mild > 65° Cool > 60° Cold < 60°

Wind (mph):
 < 1 1-5
 6-10 11-15 > 16

Wind Direction:
 NW N NE
 SW S SE
 E W Variable

Cloud Cover:
 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream
 Flowing: Flow Direction Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream

Waterbody Type: Lake Wind Influence: Tidally Influenced:
 Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: < 1 1-25% 26-50%
 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters

Time: _____ Temp. (°C): _____ pH: _____ SpCond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____ Secchi (in): _____
 InSitu Probe ID: _____

Continuous Monitor Deployed: Continuous Monitor ID: LDO 11-42
 Continuous Monitor Retrieved: Continuous Monitor Depth (m): 1 m

Water Level Monitor Deployed: Instrument ID: _____

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat

Instrument ID: _____

Velocity Monitor Deployed Instrument ID: _____

Velocity Estimated: Drogue Estimate: Dye Estimate:
 Right Descending Bank Distance (ft): _____ Time (s): _____
 Mid Stream Distance (ft): _____ Time (s): _____
 Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer

Fathometer ID: _____

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #s: _____

Site 3866 Date: 6/16/09

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed Bouy
 Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe: Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments:

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≅ 0.15 m	20 ≅ 68	25 ≅ 77
1.0 ft ≅ 0.30 m	21 ≅ 69.8	26 ≅ 78.8
1.5 ft ≅ 0.45 m	22 ≅ 71.6	27 ≅ 80.6
2.0 ft ≅ 0.60 m	23 ≅ 73.4	28 ≅ 82.4
2.5 ft ≅ 0.75 m	24 ≅ 75.2	29 ≅ 84.2

ambient Water Quality Site Information

Project #: ES2008007 Site #: 3866 AI #: 91288
 Temporary Site #: BLO8 Subsegment: 040906 Date: 6/17/09 Time: 0755hrs
 Waterbody: Bayou Liberty
 Tapedown: _____ Staff Gauge: _____ Gauge Height: _____
 Site Location: Bottom Site - Upstream confluence w/ B. Bonfouca
 Personnel: Jones, Beard

Weather Conditions:
 Clear Overcast
 Drizzle/Light Rain Showers

Temperature (°F):
 Hot > 85° Warm > 75°
 Mild > 65° Cool > 60°
 Cold < 60°

Wind (mph):
 < 1 1-5
 6-10 11-15
 > 16

Wind Direction:
 NW N NE
 SW S SE
 E W
 Variable

Cloud Cover:
 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream
 Flowing: Flow Direction Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream
 Waterbody Type: Lake Wind Influence: Tidally Influenced:
 Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: <1 1-25% 26-50%
 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters

Time: 0755 Temp. (°C): 30.44 pH: 7.54 SpCond (µmhos/cm): 7468
 D.O.: 6.16 D.O. %: 83.9 Salinity: 4.16 Depth (m): 1m Secchi (in): 18in
 InSitu Probe ID: L00 11-37

Continuous Monitor Deployed: Continuous Monitor ID: _____

Continuous Monitor Retrieved: Continuous Monitor Depth (m): _____

Water Level Monitor Deployed: Instrument ID: _____

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat

Instrument ID: RC-0557

Velocity Monitor Deployed Instrument ID: _____

Velocity Estimated: Drogue Estimate: Dye Estimate:

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer

Fathometer ID: _____ Flow is representative X-sect

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #: _____

Site 3866 Date: 6/17/09

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed: Bouy:

Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe: Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments:

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≈ 0.15 m	20 ≈ 68	25 ≈ 77
1.0 ft ≈ 0.30 m	21 ≈ 69.8	26 ≈ 78.8
1.5 ft ≈ 0.45 m	22 ≈ 71.6	27 ≈ 80.6
2.0 ft ≈ 0.60 m	23 ≈ 73.4	28 ≈ 82.4
2.5 ft ≈ 0.75 m	24 ≈ 75.2	29 ≈ 84.2

Water Quality Site Information

Project #: ES2008007 Site #: 3866 AI #: 91288
 Temporary Site #: B208 Subsegment: 040906 Date: 6/18/09 Time: 0910 hrs
 Waterbody: Bayou Liberty
 Tapedown: _____ Staff Gauge: _____ Gauge Height: _____
 Site Location: Bottom - upstream confluence w/ B. Bonfouca
 Personnel: Jones, Beard

Weather Conditions:
 Clear Overcast
 Drizzle/Light Rain Showers

Temperature (°F):
 Hot > 85° Warm > 75°
 Mild > 65° Cool > 60°
 Cold < 60°

Wind (mph):
 < 1 1-5
 6-10 11-15
 > 15

Wind Direction:
 NW N NE
 SW S SE
 E W Variable

Cloud Cover:
 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream
 Flowing: Flow Direction: Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream

Waterbody Type: Lake Wind Influence: Tidally Influenced:
 Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: < 1 1-25% 26-50%
 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters

Time: _____ Temp. (°C): _____ pH: _____ SpCond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____ Secchi (in): _____
 InSitu Probe ID: _____

Continuous Monitor Deployed: Continuous Monitor ID: LDO 11-42
 Continuous Monitor Retrieved: Continuous Monitor Depth (m): 1m

Water Level Monitor Deployed: Instrument ID: _____

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat

Instrument ID: _____

Velocity Monitor Deployed Instrument ID: _____

Velocity Estimated: Drogue Estimate: Dye Estimate:

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer

Fathometer ID: _____

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #: _____

Site 3866 Date: 6/18/09

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed Bouy
 Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe: Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µhmos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µhmos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µhmos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments:

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≅ 0.15 m	20 ≅ 68	25 ≅ 77
1.0 ft ≅ 0.30 m	21 ≅ 69.8	26 ≅ 78.8
1.5 ft ≅ 0.45 m	22 ≅ 71.6	27 ≅ 80.6
2.0 ft ≅ 0.60 m	23 ≅ 73.4	28 ≅ 82.4
2.5 ft ≅ 0.75 m	24 ≅ 75.2	29 ≅ 84.2

Upload to 813

Water Quality Site Information

Project #: ES2008007 Site #: 3867 AI #: 91287
 Temporary Site # BLO7 Subsegment: 040905 Date: 6-16-07 Time: 1040
 Waterbody: Bayou Liberty
 Tapedown: _____ Staff Gauge: _____ Gauge Height: _____
 Site Location: estuary site
 Personnel: D. Boyne C. Keith

Weather Conditions:
 Clear Overcast
 Drizzle/Light Rain Showers

Temperature (°F):
 Hot >85° Warm > 75°
 Mild > 65° Cool > 60°
 Cold < 60°

Wind (mph):
 <1 1-5
 6-10 11-15
 >16

Wind Direction:
 NW N NE
 SW S SE
 E W Variable

Cloud Cover:
 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream

Flowing: Flow Direction Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream

Waterbody Type: Lake Wind Influence: Tidally Influenced:

Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: <1 1-25% 26-50%
 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters

Time: _____ Temp. (°C): _____ pH: _____ SpCond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____ Secchi (in): _____
 InSitu Probe ID: _____

Continuous Monitor Deployed: Continuous Monitor ID: CDO 11-43
 Continuous Monitor Retrieved: Continuous Monitor Depth (m): 1m
 Water Level Monitor Deployed: Instrument ID: _____

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat
 Instrument ID: _____
 Velocity Monitor Deployed Instrument ID: _____

Velocity Estimated: Drogue Estimate: Dye Estimate:
 Right Descending Bank Distance (ft): _____ Time (s): _____
 Mid Stream Distance (ft): _____ Time (s): _____
 Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer
 Fathometer ID: _____

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #s: _____

Site 386a7 Date: 6-16-09

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed Bouy
 Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe: Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments:

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≈ 0.15 m	20 ≈ 68	25 ≈ 77
1.0 ft ≈ 0.30 m	21 ≈ 69.8	26 ≈ 78.8
1.5 ft ≈ 0.45 m	22 ≈ 71.6	27 ≈ 80.6
2.0 ft ≈ 0.60 m	23 ≈ 73.4	28 ≈ 82.4
2.5 ft ≈ 0.75 m	24 ≈ 75.2	29 ≈ 84.2

ambient Water Quality Site Information

Project #: ES2008007 Site #: 38167 AI #: 91287
 Temporary Site #: BLO7 Subsegment: 040905 Date: 06-17-09 Time: 1210hrs
 Waterbody: Bayou Liberty
 Tapedown: _____ Staff Gauge: _____ Gauge Height: _____
 Site Location: Estuary Site just north of Jefferson Boat Launch
 Personnel: Chad Keith, Derek Borne

Weather Conditions:
 Clear Overcast
 Drizzle/Light Rain Showers

Temperature (°F):
 Hot > 85° Warm > 75°
 Mild > 65° Cool > 60°
 Cold < 60°

Wind (mph):
 <1 1-5
 6-10 11-15
 >16

Wind Direction:
 NW N NE
 SW S SE
 E W Variable

Cloud Cover:
 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream
 Flowing: Flow Direction Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream
 Waterbody Type: Lake Wind Influence: Tidally Influenced:
 Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: <1 1-25% 26-50%
 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters

Time: 1210 Temp. (°C): 31.99 pH: 7.44 SpCond (µmhos/cm): 3906
 D.O.: 3.75 D.O. %: 52.0 Salinity: 2.12 Depth (m): 1m Secchi (in): 24"
 InSitu Probe ID: LDO # 16

Continuous Monitor Deployed: Continuous Monitor ID: _____

Continuous Monitor Retrieved: Continuous Monitor Depth (m): _____

Water Level Monitor Deployed: Instrument ID: _____

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat

Instrument ID: _____

Velocity Monitor Deployed Instrument ID: _____

Velocity Estimated: Drogue Estimate: Dye Estimate:

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer

Fathometer ID: _____

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #s: _____

Site 3867 Date: 6-17-09

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed: Bouy:

Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe: Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments:

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≈ 0.15 m	20 ≈ 68	25 ≈ 77
1.0 ft ≈ 0.30 m	21 ≈ 69.8	26 ≈ 78.8
1.5 ft ≈ 0.45 m	22 ≈ 71.6	27 ≈ 80.6
2.0 ft ≈ 0.60 m	23 ≈ 73.4	28 ≈ 82.4
2.5 ft ≈ 0.75 m	24 ≈ 75.2	29 ≈ 84.2

ambient Water Quality Site Information

Project #: ES2008007 Site #: 3867 AI #: 91287
 Temporary Site #: P207 Subsegment: 040905 Date: 6-18-09 Time: 1025
 Waterbody: Bayou Liberty
 Tapedown: _____ Staff Gauge: _____ Gauge Height: _____
 Site Location: estuary site
 Personnel: D. Bone, C. Keith

Weather Conditions:
 Clear Overcast
 Drizzle/Light Rain Showers

Temperature (°F):
 Hot >85° Warm > 75°
 Mild > 65° Cool > 60°
 Cold < 60°

Wind (mph):
 <1 1-5
 6-10 11-15
 >16

Wind Direction:
 NW N NE
 SW S SE
 E W Variable

Cloud Cover:
 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream

Flowing: Flow Direction: Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream

Waterbody Type: Lake Wind Influence: Tidally Influenced:
 Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: <1 1-25% 26-50%
 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters

Time: _____ Temp. (°C): _____ pH: _____ SpCond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____ Secchi (in): _____

In Situ Probe ID: _____

Continuous Monitor Deployed: Continuous Monitor ID: LDO 11-43

Continuous Monitor Retrieved: Continuous Monitor Depth (m): 1m

Water Level Monitor Deployed: Instrument ID: _____

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat

Instrument ID: _____

Velocity Monitor Deployed Instrument ID: _____

Velocity Estimated: Drogue Estimate: Dye Estimate:

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer

Fathometer ID: _____

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #s: _____

Site 3867 Date: 6-18-09

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed: Bouy:
 Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe: Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments: _____

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≈ 0.15 m	20 ≈ 68	25 ≈ 77
1.0 ft ≈ 0.30 m	21 ≈ 69.8	26 ≈ 78.8
1.5 ft ≈ 0.45 m	22 ≈ 71.6	27 ≈ 80.6
2.0 ft ≈ 0.60 m	23 ≈ 73.4	28 ≈ 82.4
2.5 ft ≈ 0.75 m	24 ≈ 75.2	29 ≈ 84.2

Water Quality Site Information

Handwritten: 9/28/11
813

Project #: ES200800 Site #: 3868 At #: 91287
 Temporary Site #: BL05 Subsegment: 040905 Date: 6-16-09 Time: 1030
 Waterbody: Bayou Liberty
 Tapedown: _____ Staff Gauge: _____ Gauge Height: _____
 Site Location: estuary site
 Personnel: D. Barne, C. Keith

Weather Conditions:
 Clear Overcast
 Drizzle/Light Rain Showers

Temperature (°F):
 Hot >85° Warm > 75°
 Mild > 65° Cool > 60°
 Cold < 60°

Wind (mph):
 <1 1-5
 6-10 11-15
 >16

Wind Direction:
 NW N NE
 SW S SE
 E W Variable

Cloud Cover:
 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream
 Flowing: Flow Direction Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream
 Waterbody Type: Lake Wind Influence: Tidally Influenced:
 Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: <1 1-25% 26-50%
 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters

Time: _____ Temp. (°C): _____ pH: _____ SpCond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____ Secchi (in): _____
 In Situ Probe ID: _____

Continuous Monitor Deployed: Continuous Monitor ID: 450 28
 Continuous Monitor Retrieved: Continuous Monitor Depth (m): 2m

Water Level Monitor Deployed: Instrument ID: _____

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat

Instrument ID: _____

Velocity Monitor Deployed Instrument ID: _____

Velocity Estimated: Drogue Estimate: Dye Estimate:

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer

Fathometer ID: _____

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #s: _____

Site 386B Date: 6-16-09

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed: Bouy:
 Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe: Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments:

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≈ 0.15 m	20 ≈ 68	25 ≈ 77
1.0 ft ≈ 0.30 m	21 ≈ 69.8	26 ≈ 78.8
1.5 ft ≈ 0.45 m	22 ≈ 71.6	27 ≈ 80.6
2.0 ft ≈ 0.60 m	23 ≈ 73.4	28 ≈ 82.4
2.5 ft ≈ 0.75 m	24 ≈ 75.2	29 ≈ 84.2

Bayou Liberty Survey

ambient Water Quality Site Information

Project #: <u>ES2008007</u>	Site #: <u>3868</u>	Alt #: <u>91287</u>
Temporary Site #: <u>BLO5</u>	Subsegment: <u>040905</u>	Date: <u>6-17-09</u> Time: <u>1110 hrs</u>
Waterbody: <u>Bayou Liberty</u>		
Tapedown: _____	Staff Gauge: _____	Gauge Height: _____
Site Location: <u>estuary site</u>		
Personnel: <u>DeBorne, C. Keith</u>		
Weather Conditions:	Temperature (°F):	Wind (mph):
Clear <input checked="" type="checkbox"/>	Hot > 85° <input checked="" type="checkbox"/>	< 1 <input checked="" type="checkbox"/>
Overcast <input type="checkbox"/>	Warm > 75° <input type="checkbox"/>	1-5 <input type="checkbox"/>
Drizzle/Light Rain <input type="checkbox"/>	Mild > 65° <input type="checkbox"/>	6-10 <input type="checkbox"/>
Showers <input type="checkbox"/>	Cool > 60° <input type="checkbox"/>	11-15 <input type="checkbox"/>
	Cold < 60° <input type="checkbox"/>	> 16 <input type="checkbox"/>
		Wind Direction:
		NW <input type="checkbox"/> N <input type="checkbox"/> NE <input type="checkbox"/>
		SW <input type="checkbox"/> S <input type="checkbox"/> SE <input type="checkbox"/>
		E <input type="checkbox"/> W <input type="checkbox"/>
		Variable <input checked="" type="checkbox"/>
Cloud Cover:		
0-10% <input type="checkbox"/>	11-40% <input checked="" type="checkbox"/>	41-70% <input type="checkbox"/>
		71-100% <input type="checkbox"/>
Waterbody Characteristics:		
Waterbody Type: Stream <input checked="" type="checkbox"/>		
Flowing: <input type="checkbox"/>	Flow Direction Upstream <input type="checkbox"/> Downstream <input type="checkbox"/>	Tidally Influenced: <input checked="" type="checkbox"/>
Wind Influence: <input type="checkbox"/>	Wind Influence Direction: Upstream <input type="checkbox"/> Downstream <input type="checkbox"/>	
Waterbody Type: Lake <input type="checkbox"/>	Wind Influence: <input type="checkbox"/>	Tidally Influenced: <input type="checkbox"/>
Algae Present <input type="checkbox"/>	Sedimentation/Turbidity Present in Water Column <input type="checkbox"/>	
Floating/Aquatic Vegetation % Surface Coverage: < 1 <input checked="" type="checkbox"/> 1-25% <input type="checkbox"/> 26-50% <input type="checkbox"/>		
	51-75% <input type="checkbox"/> 76-100% <input type="checkbox"/>	

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters

Time: 1110hrs Temp. (°C): 31.31 pH: 7.16 SpCond (µmhos/cm): 5583
 D.O.: 3.64 D.O. %: 49.9 Salinity: 3.09 Depth (m): 1m Secchi (in): 30"
 InSitu Probe ID: L1016

Continuous Monitor Deployed: Continuous Monitor ID: _____

Continuous Monitor Retrieved: Continuous Monitor Depth (m): _____

Water Level Monitor Deployed: Instrument ID: _____

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat

Instrument ID: _____

Velocity Monitor Deployed Instrument ID: _____

Velocity Estimated: Drogue Estimate: Dye Estimate:

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer

Fathometer ID: _____

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #s: _____

Site 3868 Date: 06-17-09

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed: Bouy:
 Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe: Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments:

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ± 0.15 m	20 ± 68	25 ± 77
1.0 ft ± 0.30 m	21 ± 69.8	26 ± 78.8
1.5 ft ± 0.45 m	22 ± 71.6	27 ± 80.6
2.0 ft ± 0.60 m	23 ± 73.4	28 ± 82.4
2.5 ft ± 0.75 m	24 ± 75.2	29 ± 84.2

ambient Water Quality Site Information

Project #: EJ2008007 Site #: 3008 AI #: 91287
 Temporary Site #: BLOS Subsegment: 040905 Date: 6-18-09 Time: 1015
 Waterbody: Bayou Liberty
 Tapedown: _____ Staff Gauge: _____ Gauge Height: _____
 Site Location: estuary site - North of Jefferson Hwy bridge
 Personnel: D. Borne, C. Keith

Weather Conditions:
 Clear Overcast
 Drizzle/Light Rain Showers

Temperature (°F):
 Hot > 85° Warm > 75°
 Mild > 65° Cool > 60°
 Cold < 60°

Wind (mph):
 < 1 1-5
 6-10 11-15
 > 16

Wind Direction:
 NW N NE
 SW S SE
 E W Variable

Cloud Cover:
 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream
 Flowing: Flow Direction: Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream
 Waterbody Type: Lake Wind Influence: Tidally Influenced:
 Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: < 1% 1-25% 26-50%
 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters

Time: _____ Temp. (°C): _____ pH: _____ SpCond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____ Secchi (in): _____
 InSitu Probe ID: _____

Continuous Monitor Deployed: Continuous Monitor ID: LD028
 Continuous Monitor Retrieved: Continuous Monitor Depth (m): 1m

Water Level Monitor Deployed: Instrument ID: _____

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat

Instrument ID: _____

Velocity Monitor Deployed Instrument ID: _____

Velocity Estimated: Drogue Estimate: Dye Estimate:

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer

Fathometer ID: _____

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #: _____

Site 3868 Date: 6-18-09

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed: Bouy:
 Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments:

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft = 0.15 m	20 = 68	25 = 77
1.0 ft = 0.30 m	21 = 69.8	26 = 78.8
1.5 ft = 0.45 m	22 = 71.6	27 = 80.6
2.0 ft = 0.60 m	23 = 73.4	28 = 82.4
2.5 ft = 0.75 m	24 = 75.2	29 = 84.2

ambient Water Quality Site Information

Project #: CS2008007 Site #: 3869 AI #: 91288
 Temporary Site #: 2P04 Subsegment: 040906 Date: 6-16-09 Time: 934
 Waterbody: Bayou Paquet
 Tapedown: N/A Staff Gauge: _____ Gauge Height: _____
 Site Location: Bottom Site
 Personnel: Ty Yoes Bryan Alleman

Weather Conditions:
 Clear Overcast
 Drizzle/Light Rain Showers

Temperature (°F):
 Hot >85° Warm > 75°
 Mild > 65° Cool > 60°
 Cold < 60°

Wind (mph):
 <1 1-5
 6-10 11-15
 >16

Wind Direction:
 NW N NE
 SW S SE
 E W Variable

Cloud Cover:
 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream
 Flowing: Flow Direction Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream
 Waterbody Type: Lake Wind Influence: Tidally Influenced:
 Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: <1 1-25% 26-50%
 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters

Time: _____ Temp.(°C): _____ pH: _____ SpCond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____ Secchi (in): _____
 InSitu Probe ID: _____

Continuous Monitor Deployed: Continuous Monitor ID: 11-33
 Continuous Monitor Retrieved: Continuous Monitor Depth (m): 0.75m

Water Level Monitor Deployed: Instrument ID: _____

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat

Instrument ID: _____

Velocity Monitor Deployed Instrument ID: _____

Velocity Estimated: Drogue Estimate: Dye Estimate:

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer

Fathometer ID: _____

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #s: _____

Site 3069 Date: 6-16-09

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed Bouy

Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe: Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments: _____

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≈ 0.15 m	20 ≈ 68	25 ≈ 77
1.0 ft ≈ 0.30 m	21 ≈ 69.8	26 ≈ 78.8
1.5 ft ≈ 0.45 m	22 ≈ 71.6	27 ≈ 80.6
2.0 ft ≈ 0.60 m	23 ≈ 73.4	28 ≈ 82.4
2.5 ft ≈ 0.75 m	24 ≈ 75.2	29 ≈ 84.2

Water Quality Site Information

Project #: ES2008007 Site #: 3869 AI #: 91288
 Temporary Site #: BPO4 Subsegment: 040806 Date: 6-17-09 Time: 1200
 Waterbody: Bayou Paquet
 Tapedown: Staff Gauge: _____ Gauge Height: _____
 Site Location: bottom site
 Personnel: Ty Yoes, Br. Alleman

Weather Conditions:
 Clear Overcast Drizzle/Light Rain Showers
Temperature (°F):
 Hot >85° Warm > 75° Mild > 65° Cool > 60° Cold < 60°
Wind (mph):
 <1 1-5 6-10 11-15 >16
Wind Direction:
 NW N NE SW S SE E W Variable

Cloud Cover:
 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream
 Flowing Flow Direction Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream
 Waterbody Type: Lake Wind Influence: Tidally Influenced:
 Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: <1% 1-25% 26-50% 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters

Time: 1200 Temp. (°C): 32.72 pH: 7.62 SpCond (µmhos/cm): 7093
 D.O.: 7.03 D.O. %: 100.9 Salinity: 3.94 Depth (m): 1m Secchi (in): 12in
 InSitu Probe ID: 24

Continuous Monitor Deployed: Continuous Monitor ID: _____

Continuous Monitor Retrieved: Continuous Monitor Depth (m): _____

Water Level Monitor Deployed: Instrument ID: _____

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat

Instrument ID: RL30a-0557

Velocity Monitor Deployed Instrument ID: _____

Velocity Estimated: Drogue Estimate: Dye Estimate:

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer

Fathometer ID: _____ *Flow measurement representative X-section*

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #: _____

Site 3869 Date: 6-17-09

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed: Bouy:

Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe: Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments: Flow is a representative cross-section.

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≈ 0.15 m	20 ≈ 68	25 ≈ 77
1.0 ft ≈ 0.30 m	21 ≈ 69.8	26 ≈ 78.8
1.5 ft ≈ 0.45 m	22 ≈ 71.6	27 ≈ 80.6
2.0 ft ≈ 0.60 m	23 ≈ 73.4	28 ≈ 82.4
2.5 ft ≈ 0.75 m	24 ≈ 75.2	29 ≈ 84.2

Watershed Water Quality Site Information

Project #: E52008007 Site #: 3869 AI #: 91288
 Temporary Site #: BPO4 Subsegment: 040906 Date: 6-19-09 Time: 940
 Waterbody: Bayou Paquet
 Tapedown: _____ Staff Gauge: _____ Gauge Height: _____
 Site Location: Bottom site
 Personnel: T. Yoes B. Alleman

Weather Conditions: Clear Overcast
 Drizzle/Light Rain Showers
Temperature (°F): Hot > 85° Warm > 75°
 Mild > 65° Cool > 60° Cold < 60°
Wind (mph): < 1 1-5
 6-10 11-15 > 16
Wind Direction: NW N NE
 SW S SE
 E W Variable

Cloud Cover: 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream
 Flowing Flow Direction Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream
 Waterbody Type: Lake Wind Influence: Tidally Influenced:
 Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: < 1 1-25% 26-50%
 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:
 Water Quality Field Parameters
 Time: _____ Temp. (°C): _____ pH: _____ SpCond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____ Secchi (in): _____
 In Situ Probe ID: _____

Continuous Monitor Deployed: Continuous Monitor ID: 11-33
 Continuous Monitor Retrieved: Continuous Monitor Depth (m): .75
 Water Level Monitor Deployed: Instrument ID: _____

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat
 Instrument ID: _____
 Velocity Monitor Deployed Instrument ID: _____

Velocity Estimated: Drogue Estimate: Dye Estimate:
 Right Descending Bank Distance (ft): _____ Time (s): _____
 Mid Stream Distance (ft): _____ Time (s): _____
 Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer
 Fathometer ID: _____

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #s: _____

Site 3869 Date: 6-18-09

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed Bouy:

Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe: Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments:

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft = 0.15 m	70 = 68	25 = 77
1.0 ft = 0.30 m	21 = 69.8	26 = 78.8
1.5 ft = 0.45 m	22 = 71.6	27 = 80.6
2.0 ft = 0.60 m	23 = 73.4	28 = 82.4
2.5 ft = 0.75 m	24 = 75.2	29 = 84.2

ambient Water Quality Site Information

Project #: ES 2009 007 Site #: 3870 AI #: 91288
 Temporary Site #: BP03 Subsegment: 040906 Date: 6-16-09 Time: 948
 Waterbody: Bayou Paquet
 Tapedown: _____ Staff Gauge: _____ Gauge Height: _____
 Site Location: estuary site
 Personnel: Ty Yoes, Bryan Alleman

Weather Conditions:
 Clear Overcast
 Drizzle/Light Rain Showers

Temperature (°F):
 Hot > 85° Warm > 75°
 Mild > 65° Cool > 60°
 Cold < 60°

Wind (mph):
 <1 1-5
 6-10 11-15
 >16

Wind Direction:
 NW N NE
 SW S SE
 E W Variable

Cloud Cover:
 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream

Flowing: Flow Direction Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream

Waterbody Type: Lake Wind Influence: Tidally Influenced:

Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: <1 1-25% 26-50%
 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters

Time: _____ Temp. (°C): _____ pH: _____ SpCond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____ Secchi (in): _____
 InSitu Probe ID: _____

Continuous Monitor Deployed: Continuous Monitor ID: LD026
 Continuous Monitor Retrieved: Continuous Monitor Depth (m): 1m

Water Level Monitor Deployed: Instrument ID: _____

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat

Instrument ID: _____

Velocity Monitor Deployed Instrument ID: _____

Velocity Estimated: Drogue Estimate: Dye Estimate:

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer

Fathometer ID: _____

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #: _____

Site 3870 Date 6-16-09

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed: Bouy:

Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe: Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments: CM set on tree below trib

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≈ 0.15 m	20 ≈ 68	25 ≈ 77
1.0 ft ≈ 0.30 m	21 ≈ 69.8	26 ≈ 78.8
1.5 ft ≈ 0.45 m	22 ≈ 71.6	27 ≈ 80.6
2.0 ft ≈ 0.60 m	23 ≈ 73.4	28 ≈ 82.4
2.5 ft ≈ 0.75 m	24 ≈ 75.2	29 ≈ 84.2

Ambient Water Quality Site Information

Project #: ES2008007 Site #: 3870 AI #: 91288
 Temporary Site #: BPO3 Subsegment: 040906 Date: 6-17-09 Time: 1115
 Waterbody: Bayou Paquet
 Tapedown: _____ Staff Gauge: _____ Gauge Height: _____
 Site Location: Estuary site
 Personnel: Ty Yoes, Bryan Alleman

Weather Conditions:
 Clear Overcast Drizzle/Light Rain Showers
Temperature (°F):
 Hot >85° Warm > 75° Mild > 65° Cool > 60° Cold < 60°
Wind (mph):
 <1 1-5 6-10 11-15 >16
Wind Direction:
 NW N NE SW S SE E W Variable

Cloud Cover:
 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream
 Flowing: Flow Direction Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream
 Waterbody Type: Lake Wind Influence: Tidally Influenced:
 Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: <1 1-25% 26-50% 51-75% 76-100%

Water Quality Samples Taken: Sample Depth (m): _____ Water Depth (m): _____

Water Quality Field Parameters: Profiling:

Time: 1115 Temp.(°C): 32.07 pH: 7.33 SpCond(µmhos/cm): 6238
 D.O.: 4.48 D.O. %: 66.7 Salinity: 3.47 Depth (m): 4.5 Secchi (in): 18
 InSitu Probe ID: 24

Continuous Monitor Deployed: Continuous Monitor ID: _____

Continuous Monitor Retrieved: Continuous Monitor Depth (m): _____

Water Level Monitor Deployed: Instrument ID: _____

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat

Instrument ID: _____

Velocity Monitor Deployed Instrument ID: _____

Velocity Estimated: Drogue Estimate: Dye Estimate:

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer 10:06

Fathometer ID: 11950

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #s: _____

Site 3070 Date: 6/17/09

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed: Bouy:

Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe: Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments: moved to just under trib where BP07 is located

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≈ 0.15 m	20 ≈ 68	25 ≈ 77
1.0 ft ≈ 0.30 m	21 ≈ 69.8	26 ≈ 78.8
1.5 ft ≈ 0.45 m	22 ≈ 71.6	27 ≈ 80.6
2.0 ft ≈ 0.60 m	23 ≈ 73.4	28 ≈ 82.4
2.5 ft ≈ 0.75 m	24 ≈ 75.2	29 ≈ 84.2

Water Quality Site Information

Project #: CS2008007 Site #: 3810 AI #: 91288
 Temporary Site #: BPO3 Subsegment: 040906 Date: 6-18-09 Time: 950hrs
 Waterbody: Bayou Paquet
 Tapedown: _____ Staff Gauge: _____ Gauge Height: _____
 Site Location: estuary site
 Personnel: Ty Yoes, Bryan Alleman

Weather Conditions: Temperature (°F): Wind (mph): Wind Direction:
 Clear Hot > 85° < 1 NW N NE
 Overcast Warm > 75° 1-5 SW S SE
 Drizzle/Light Rain Mild > 65° 6-10 E W
 Showers Cool > 60° 11-15 Variable
 Cold < 60° > 16

Cloud Cover:
 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream
 Flowing: Flow Direction Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream
 Waterbody Type: Lake Wind Influence: Tidally Influenced:
 Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: < 1 1-25% 26-50%
 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters

Time: _____ Temp. (°C): _____ pH: _____ SpCond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____ Secchi (in): _____
 InSitu Probe ID: _____

Continuous Monitor Deployed: Continuous Monitor ID: 26
 Continuous Monitor Retrieved: Continuous Monitor Depth (m): 1m
 Water Level Monitor Deployed: Instrument ID: _____

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat

Instrument ID: _____
 Velocity Monitor Deployed Instrument ID: _____

Velocity Estimated: Drogue Estimate: Dye Estimate:
 Right Descending Bank Distance (ft): _____ Time (s): _____
 Mid Stream Distance (ft): _____ Time (s): _____
 Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer
 Fathometer ID: _____

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #s: _____

Site 3870 Date: 6/18/09

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed Bouy:

Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe: Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments:

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft = 0.15 m	20 = 68	25 = 77
1.0 ft = 0.30 m	21 = 69.8	26 = 78.8
1.5 ft = 0.45 m	22 = 71.6	27 = 80.6
2.0 ft = 0.60 m	23 = 73.4	28 = 82.4
2.5 ft = 0.75 m	24 = 75.2	29 = 84.2

ambient Water Quality Site Information

Project #: ES2008007 Site #: 3871 AI #: 91288
 Temporary Site #: BPO8 Subsegment: 040906 Date: 6-17-09 Time: 943
 Waterbody: Bayou Paquet
 Tapedown: Staff Gauge: Gauge Height:
 Site Location: cross section site
 Personnel: Ty Yoos, B. Alleman

Weather Conditions:
 Clear Overcast
 Drizzle/Light Rain Showers

Temperature (°F):
 Hot >85° Warm > 75°
 Mild > 65° Cool > 60°
 Cold < 60°

Wind (mph):
 <1 1-5
 6-10 11-15
 >16

Wind Direction:
 NW N NE
 SW S SE
 E W Variable

Cloud Cover:
 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream

Flowing: Flow Direction Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream

Waterbody Type: Lake Wind Influence: Tidally Influenced:
 Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: <1% 1-25% 26-50%
 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters

Time: Temp.(°C): pH: SpCond(µmhos/cm):
 D.O.: D.O. %: Salinity: Depth (m): Secchi (in):

InSitu Probe ID:

Continuous Monitor Deployed: Continuous Monitor ID:

Continuous Monitor Retrieved: Continuous Monitor Depth (m):

Water Level Monitor Deployed: Instrument ID:

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat

Instrument ID:

Velocity Monitor Deployed Instrument ID:

Velocity Estimated: Drogue Estimate: Dye Estimate:

Right Descending Bank Distance (ft): Time (s):

Mid Stream Distance (ft): Time (s):

Left Descending Bank Distance (ft): Time (s):

Cross Section Measurement: Type of Measurement Manual: Fathometer

Fathometer ID: 11950

GPS Measurement: GPS Data ID: Site GPS: Cross Section GPS:

Photos Taken: Picture File #s:

Site 3871 Date: 6-17-09

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed: Bouy:

Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe: Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments:

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft = 0.15 m	20 = 68	25 = 77
1.0 ft = 0.30 m	21 = 69.8	26 = 78.8
1.5 ft = 0.45 m	22 = 71.6	27 = 80.6
2.0 ft = 0.60 m	23 = 73.4	28 = 82.4
2.5 ft = 0.75 m	24 = 75.2	29 = 84.2

...nblent Water Quality Site Information

Project #: E52008007 Site #: 3872 AI #: 91288
 Temporary Site #: BPO9 Subsegment: _____ Date: 6-17-09 Time: 950
 Waterbody: Bayou Paquet
 Tapedown: _____ Staff Gauge: _____ Gauge Height: _____
 Site Location: cross section site
 Personnel: Ty Yoes, B. Alleman

Weather Conditions:
 Clear Overcast Drizzle/Light Rain Showers
 Temperature (°F): Hot >85° Warm > 75° Mild > 65° Cool > 60° Cold < 60°
 Wind (mph): <1 1-5 6-10 11-15 >16
 Wind Direction: NW N NE SW S SE E W Variable

Cloud Cover: 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream
 Flowing: Flow Direction Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream
 Waterbody Type: Lake Wind Influence: Tidally Influenced:
 Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: <1 1-25% 26-50% 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters

Time: _____ Temp. (°C): _____ pH: _____ SpCond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____ Secchi (in): _____
 InSitu Probe ID: _____

Continuous Monitor Deployed: Continuous Monitor ID: _____

Continuous Monitor Retrieved: Continuous Monitor Depth (m): _____

Water Level Monitor Deployed: Instrument ID: _____

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat

Instrument ID: _____

Velocity Monitor Deployed Instrument ID: _____

Velocity Estimated: Drogue Estimate: Dye Estimate:

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer

Fathometer ID: 1050

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #s: _____

Site 3972 Date: 6-17-09

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed Bouy:

Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe: Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments: _____

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≈ 0.15 m	20 ≈ 68	25 ≈ 77
1.0 ft ≈ 0.30 m	21 ≈ 69.8	26 ≈ 78.8
1.5 ft ≈ 0.45 m	22 ≈ 71.6	27 ≈ 80.6
2.0 ft ≈ 0.60 m	23 ≈ 73.4	28 ≈ 82.4
2.5 ft ≈ 0.75 m	24 ≈ 75.2	29 ≈ 84.2

...Ambient Water Quality Site Information

Project #: 652008007 Site #: 3873 AI #: 91288
 Temporary Site #: EP07 Subsegment: 040906 Date: 6-17-09 Time: 1000
 Waterbody: Bayou Paquet
 Tapedown: _____ Staff Gauge: _____ Gauge Height: _____
 Site Location: cross-section site
 Personnel: Ty Yoes, B Alleman

Weather Conditions:
 Clear Overcast
 Drizzle/Light Rain Showers

Temperature (°F):
 Hot >85° Warm > 75°
 Mild > 65° Cool > 60°
 Cold < 60°

Wind (mph):
 <1 1-5
 6-10 11-15
 >16

Wind Direction:
 NW N NE
 SW S SE
 E W Variable

Cloud Cover:
 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream

Flowing: Flow Direction Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream

Waterbody Type: Lake Wind Influence: Tidally Influenced:

Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: <1 1-25% 26-50%
 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters

Time: _____ Temp. (°C): _____ pH: _____ SpCond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____ Secchi (in): _____
 InSitu Probe ID: _____

Continuous Monitor Deployed: Continuous Monitor ID: _____

Continuous Monitor Retrieved: Continuous Monitor Depth (m): _____

Water Level Monitor Deployed: Instrument ID: _____

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat

Instrument ID: _____

Velocity Monitor Deployed Instrument ID: _____

Velocity Estimated: Drogue Estimate: Dye Estimate:

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer

Fathometer ID: 11950

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #: _____

Site 3273 Date: 6-17-09

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed Bouy:

Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp.(°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp.(°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp.(°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments:

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≈ 0.15 m	20 ≈ 68	25 ≈ 77
1.0 ft ≈ 0.30 m	21 ≈ 69.8	26 ≈ 78.8
1.5 ft ≈ 0.45 m	22 ≈ 71.6	27 ≈ 80.6
2.0 ft ≈ 0.60 m	23 ≈ 73.4	28 ≈ 82.4
2.5 ft ≈ 0.75 m	24 ≈ 75.2	29 ≈ 84.2

Ambient Water Quality Site Information

Project #: ES2008007 Site #: 3874 AI #: 91288
 Temporary Site #: BPOS Subsegment: 040906 Date: 6-17-09 Time: 1015
 Waterbody: Bayou Paquet
 Tapedown: Staff Gauge: Gauge Height:
 Site Location: cross section site
 Personnel: Ty Yoes, Bryan Alleman

Weather Conditions:
 Clear Overcast Drizzle/Light Rain Showers
Temperature (°F):
 Hot >85° Warm > 75° Mild > 65° Cool > 60° Cold < 60°
Wind (mph):
 <1 1-5 6-10 11-15 >16
Wind Direction:
 NW N NE SW S SE E W Variable

Cloud Cover:
 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream
 Flowing Flow Direction Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream
 Waterbody Type: Lake Wind Influence: Tidally Influenced:
 Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: <1 1-25% 26-50% 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters

Time: Temp. (°C): pH: SpCond (µmhos/cm):
 D.O.: D.O. %: Salinity: Depth (m): Secchi (in):
 InSitu Probe ID:

Continuous Monitor Deployed: Continuous Monitor ID:
 Continuous Monitor Retrieved: Continuous Monitor Depth (m):
 Water Level Monitor Deployed: Instrument ID:

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat
 Instrument ID:
 Velocity Monitor Deployed Instrument ID:

Velocity Estimated: Drogue Estimate: Dye Estimate:
 Right Descending Bank Distance (ft): Time (s):
 Mid Stream Distance (ft): Time (s):
 Left Descending Bank Distance (ft): Time (s):

Cross Section Measurement: Type of Measurement Manual: Fathometer
 Fathometer ID: 11950

GPS Measurement: GPS Data ID: Site GPS: Cross Section GPS:

Photos Taken: Picture File #:

Site 3874 Date: 6-17-09

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed Bouy

Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe: Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments:

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ± 0.15 m	20 ± 68	25 ± 77
1.0 ft ± 0.30 m	21 ± 69.8	26 ± 78.8
1.5 ft ± 0.45 m	22 ± 71.6	27 ± 80.6
2.0 ft ± 0.60 m	23 ± 73.4	28 ± 82.4
2.5 ft ± 0.75 m	24 ± 75.2	29 ± 84.2

ambient Water Quality Site Information

Project #: CS2008007 Site #: 3875 AI #: 91288
 Temporary Site #: BFO6 Subsegment: 040906 Date: 6-17-09 Time: 1020
 Waterbody: Bayou Paquet
 Tapedown: _____ Staff Gauge: _____ Gauge Height: _____
 Site Location: cross section site
 Personnel: Ty Voes, B. Alleman

Weather Conditions:
 Clear Overcast Drizzle/Light Rain Showers
Temperature (°F):
 Hot >85° Warm >75° Mild >65° Cool >60° Cold <60°
Wind (mph):
 <1 1-5 6-10 11-15 >16
Wind Direction:
 NW N NE SW S SE E W Variable

Cloud Cover:
 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream
 Flowing: Flow Direction Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream
 Waterbody Type: Lake Wind Influence: Tidally Influenced:
 Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: <1 1-25% 26-50% 51-75% 76-100%

2

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters

Time: _____ Temp. (°C): _____ pH: _____ SpCond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____ Secchi (in): _____
 InSitu Probe ID: _____

Continuous Monitor Deployed: Continuous Monitor ID: _____

Continuous Monitor Retrieved: Continuous Monitor Depth (m): _____

Water Level Monitor Deployed: Instrument ID: _____

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat

Instrument ID: _____

Velocity Monitor Deployed Instrument ID: _____

Velocity Estimated: Drogue Estimate: Dye Estimate:

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer

Fathometer ID: 11950

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #: _____

Site 3875 Date: 6-17-09

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed: Bouy:

Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe: Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µmos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µmos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µmos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments:

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≅ 0.15 m	20 ≅ 68	25 ≅ 77
1.0 ft ≅ 0.30 m	21 ≅ 69.8	26 ≅ 78.8
1.5 ft ≅ 0.45 m	22 ≅ 71.6	27 ≅ 80.6
2.0 ft ≅ 0.60 m	23 ≅ 73.4	28 ≅ 82.4
2.5 ft ≅ 0.75 m	24 ≅ 75.2	29 ≅ 84.2

ambient Water Quality Site Information

Project #: ES2006007 Site #: 3876 AI #: 91287
 Temporary Site #: BLO9 Subsegment: 040905 Date: 6-16-09 Time: 1210
 Waterbody: Bayou Liberty
 Tapedown: _____ Staff Gauge: _____ Gauge Height: _____
 Site Location: @ estuary site in loop
 Personnel: D. Borne, C. Keith

Weather Conditions:
 Clear Overcast
 Drizzle/Light Rain Showers

Temperature (°F):
 Hot > 85° Warm > 75°
 Mild > 65° Cool > 60°
 Cold < 60°

Wind (mph):
 < 1 1-5
 6-10 11-15
 > 16

Wind Direction:
 NW N NE
 SW S SE
 E W Variable

Cloud Cover:
 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream
 Flowing: Flow Direction: Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream
 Waterbody Type: Lake Wind Influence: Tidally Influenced:
 Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: <1 1-25% 26-50%
 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters

Time: _____ Temp. (°C): _____ pH: _____ SpCond (µmhos/cm): _____

D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____ Secchi (in): _____

InSitu Probe ID: _____

Continuous Monitor Deployed: Continuous Monitor ID: _____

Continuous Monitor Retrieved: Continuous Monitor Depth (m): _____

Water Level Monitor Deployed: Instrument ID: _____

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat

Instrument ID: _____

Velocity Monitor Deployed Instrument ID: _____

Velocity Estimated: Drogue Estimate: Dye Estimate:

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer

Fathometer ID: 32005612555

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #s: _____

Site 3876 Date: 6-16-09

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed Bouy

Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe: Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments:

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≈ 0.15 m	20 ≈ 68	25 ≈ 77
1.0 ft ≈ 0.30 m	21 ≈ 69.8	26 ≈ 78.8
1.5 ft ≈ 0.45 m	22 ≈ 71.6	27 ≈ 80.6
2.0 ft ≈ 0.60 m	23 ≈ 73.4	28 ≈ 82.4
2.5 ft ≈ 0.75 m	24 ≈ 75.2	29 ≈ 84.2

ambient Water Quality Site Information

Project #: ES2008007 Site #: 3877 AI #: 91287
 Temporary Site #: B110 Subsegment: 040905 Date: 6-10-05 Time: 1225
 Waterbody: Bayou Liberty
 Tapedown: _____ Staff Gauge: _____ Gauge Height: _____
 Site Location: Estuary site - in loop
 Personnel: D. Boorne, C. Keith

Weather Conditions:
 Clear Overcast
 Drizzle/Light Rain Showers

Temperature (°F):
 Hot > 85° Warm > 75°
 Mild > 65° Cool > 60°
 Cold < 60°

Wind (mph):
 < 1 1-5
 6-10 11-15
 > 16

Wind Direction:
 NW N NE
 SW S SE
 E W
 Variable

Cloud Cover:
 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream
 Flowing: Flow Direction Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream

Waterbody Type: Lake Wind Influence: Tidally Influenced:
 Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: < 1 1-25% 26-50%
 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters

Time: _____ Temp. (°C): _____ pH: _____ SpCond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____ Secchi (in): _____
 InSitu Probe ID: _____

Continuous Monitor Deployed: Continuous Monitor ID: _____
 Continuous Monitor Retrieved: Continuous Monitor Depth (m): _____

Water Level Monitor Deployed: Instrument ID: _____

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat

Instrument ID: _____

Velocity Monitor Deployed Instrument ID: _____

Velocity Estimated: Drogue Estimate: Dye Estimate:

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer

Fathometer ID: 32005012555

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #: _____

Site 3877 Date: 6-16-09

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed Bouy

Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe: Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments: _____

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft = 0.15 m	20 = 68	25 = 77
1.0 ft = 0.30 m	21 = 69.8	26 = 78.8
1.5 ft = 0.45 m	22 = 71.6	27 = 80.6
2.0 ft = 0.60 m	23 = 73.4	28 = 82.4
2.5 ft = 0.75 m	24 = 75.2	29 = 84.2

Water Quality Site Information

Project #: ES2008007 Site #: 3878 AI #: 19119
 Temporary Site #: TMSUB Subsegment: 040905 Date: 6/23/09 Time: 1515hrs
 Waterbody: Liberty/Paquet
 Tapedown: _____ Staff Gauge: _____ Gauge Height: _____
 Site Location: The Meadows Subdivision STP
 Personnel: Garner, Tieben

Weather Conditions:
 Clear Overcast
 Drizzle/Light Rain Showers

Temperature (°F):
 Hot > 85° Warm > 75°
 Mild > 65° Cool > 60°
 Cold < 60°

Wind (mph):
 < 1 1-5
 6-10 11-15
 > 16

Wind Direction:
 NW N NE
 SW S SE
 E W Variable

Cloud Cover:
 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream STP
 Flowing: Flow Direction Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream

Waterbody Type: Lake Wind Influence: Tidally Influenced:
 Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: <1 1-25% 26-50%
 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters

Time: 1515hrs Temp. (°C): 31.29 pH: 7.37 SpCond (µmhos/cm): 1053.0
 D.O.: 4.97 D.O. %: 67.5 Salinity: .55 Depth (m): N/A Secchi (in): N/A
 In Situ Probe ID: L0012 : 42510

Continuous Monitor Deployed: Continuous Monitor ID: _____
 Continuous Monitor Retrieved: Continuous Monitor Depth (m): _____
 Water Level Monitor Deployed: Instrument ID: _____

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat
 Instrument ID: _____
 Velocity Monitor Deployed Instrument ID: _____

Estimated
 Flow:
 3 in. of V
 flume

Velocity Estimated: Drogue Estimate: Dye Estimate:
 Right Descending Bank Distance (ft): _____ Time (s): _____
 Mid Stream Distance (ft): _____ Time (s): _____
 Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer
 Fathometer ID: _____

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #: _____

Site A1, Date: 9/23/09
 Site # 3874
 AI # 19119

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed: Bouy:
 Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe: Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp.(°C): _____ pH: _____ Spcond(µhmos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp.(°C): _____ pH: _____ Spcond(µhmos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp.(°C): _____ pH: _____ Spcond(µhmos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments: _____

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≈ 0.15 m	20 ≈ 68	25 ≈ 77
1.0 ft ≈ 0.30 m	21 ≈ 69.8	26 ≈ 78.8
1.5 ft ≈ 0.45 m	22 ≈ 71.6	27 ≈ 80.6
2.0 ft ≈ 0.60 m	23 ≈ 73.4	28 ≈ 82.4
2.5 ft ≈ 0.75 m	24 ≈ 75.2	29 ≈ 84.2

ambient Water Quality Site Information

Project #: 2008007 Site #: 3879 AI #: 19471
 Temporary Site #: DMSUR Subsegment: 040905 Date: 6/23/09 Time: 1400hrs
 Waterbody: Liberty/Paquet
 Tapedown: _____ Staff Gauge: _____ Gauge Height: _____
 Site Location: Oakmont Subdivision STP
 Personnel: Garner, Tieber

Weather Conditions:
 Clear Overcast
 Drizzle/Light Rain Showers

Temperature (°F):
 Hot > 85° Warm > 75°
 Mild > 65° Cool > 60°
 Cold < 60°

Wind (mph):
 < 1 1-5
 6-10 11-15
 > 16

Wind Direction:
 NW N NE
 SW S SE
 E W Variable

Cloud Cover:
 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream STP
 Flowing: Flow Direction Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream
 Waterbody Type: Lake Wind Influence: Tidally Influenced:
 Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: <1 1-25% 26-50%
 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:
 Water Quality Field Parameters

Post Chlorination

Time: 1400hrs Temp. (°C): 31.64 pH: 7.86 SpCond (µmhos/cm): 619.5
 D.O.: 7.36 D.O. %: 100.2 Salinity: .32 Depth (m): N/A Secchi (in): N/A
 InSitu Probe ID: LAO 12 42510

Continuous Monitor Deployed: Continuous Monitor ID: ~~2008007~~
 Continuous Monitor Retrieved: Continuous Monitor Depth (m): _____
 Water Level Monitor Deployed: Instrument ID: _____

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat
 Instrument ID: _____ Velocity Monitor Deployed Instrument ID: _____
 Flow: From facility meter

4.25 inches

Velocity Estimated: Drogue Estimate: Dye Estimate:
 Right Descending Bank Distance (ft): _____ Time (s): _____
 Mid Stream Distance (ft): _____ Time (s): _____
 Left Descending Bank Distance (ft): _____ Time (s): _____

on gauge

Cross Section Measurement: Type of Measurement Manual: Fathometer
 Fathometer ID: _____

See Contact for Calc

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #s: _____

Site 19471 Date: 6/23/09
 Site # 3879

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed: Bouy:
 Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe: Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp.(°C): _____ pH: _____ Spcond(µhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp.(°C): _____ pH: _____ Spcond(µhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp.(°C): _____ pH: _____ Spcond(µhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments:

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft = 0.15 m	20 = 68	25 = 77
1.0 ft = 0.30 m	21 = 69.8	26 = 78.8
1.5 ft = 0.45 m	22 = 71.6	27 = 80.6
2.0 ft = 0.60 m	23 = 73.4	28 = 82.4
2.5 ft = 0.75 m	24 = 75.2	29 = 84.2

Ambient Water Quality Site Information

Project #: 2008007 Site #: 3880 AI #: 19476
 Temporary Site #: HWV Subsegment: 040905 Date: 6/23/09 Time: 1330hrs
 Waterbody: Liberty/Paquet
 Tapedown: _____ Staff Gauge: _____ Gauge Height: _____
 Site Location: Huntwyck Village Subdivision STP
 Personnel: Garner, Tieben

Weather Conditions:
 Clear Overcast
 Drizzle/Light Rain Showers

Temperature (°F):
 Hot > 85° Warm > 75°
 Mild > 65° Cool > 60°
 Cold < 60°

Wind (mph):
 < 1 1-5
 6-10 11-15
 > 16

Wind Direction:
 NW N NE
 SW S SE
 E W Variable

Cloud Cover:
 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream Outfall
 Flowing: Flow Direction Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream

Waterbody Type: Lake Wind Influence: Tidally Influenced:
 Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: <1 1-25% 26-50%
 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters

Time: 1330hrs Temp. (°C): 32.84 pH: 7.80 SpCond (µmhos/cm): 582.3
 D.O.: 7.11 D.O. %: 98.9 Salinity: .30 Depth (m): N/A Secchi (in): N/A
 In Situ Probe ID: L0012 : 42510

Continuous Monitor Deployed: Continuous Monitor ID: _____

Continuous Monitor Retrieved: Continuous Monitor Depth (m): _____

Water Level Monitor Deployed: Instrument ID: _____

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat

Instrument ID: _____ ~~Stationary~~ Flow: _____

Velocity Monitor Deployed Instrument ID: from Facility meter: _____

Velocity Estimated: Drogue Estimate: Dye Estimate:

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer

Fathometer ID: _____

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #: _____

Avg.
 6/22 - .1524 MGD
 6/23 - .066 MGD

AI#
 Site 19476 Date: 6/23/09
 site 3880

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed Bouy

Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe: Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments:

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≅ 0.15 m	20 ≅ 68	25 ≅ 77
1.0 ft ≅ 0.30 m	21 ≅ 69.8	26 ≅ 78.8
1.5 ft ≅ 0.45 m	22 ≅ 71.6	27 ≅ 80.6
2.0 ft ≅ 0.60 m	23 ≅ 73.4	28 ≅ 82.4
2.5 ft ≅ 0.75 m	24 ≅ 75.2	29 ≅ 84.2

Water Quality Site Information

Project #: ES 2008007 Site #: 3881 AI #: 33837
 Temporary Site #: TRSUB Subsegment: 040905 Date: 6/23/09 Time: 12:10 hrs
 Waterbody: P Liberty / Paquet ?
 Tapedown: — Staff Gauge: — Gauge Height: —
 Site Location: Timber Ridge Subdivision STP
 Personnel: Garner, Tieben

Weather Conditions:
 Clear Overcast
 Drizzle/Light Rain Showers

Temperature (°F):
 Hot > 85° Warm > 75°
 Mild > 65° Cool > 60°
 Cold < 60°

Wind (mph):
 <1 1-5
 6-10 11-15
 >16

Wind Direction:
 NW N NE
 SW S SE
 E W
 Variable

Cloud Cover:
 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream
 Flowing: Flow Direction Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream
 Waterbody Type: Lake Wind Influence: Tidally Influenced:
 Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: <1 1-25% 26-50%
 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters

Time: 12:10 hrs Temp. (°C): 32.75 pH: 7.68 SpCond (µmhos/cm): 864.7
 D.O.: 4.98 D.O. %: 69.3 Salinity: 0.45 Depth (m): NA Secchi (in): N/A
 InSitu Probe ID: L0012 - 42.510

Continuous Monitor Deployed: Continuous Monitor ID: _____

Continuous Monitor Retrieved: Continuous Monitor Depth (m): _____

Water Level Monitor Deployed: Instrument ID: _____

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat

Instrument ID: _____

Velocity Monitor Deployed: Instrument ID: _____

Used bucket fill method 1 gal in 21.3 sec

Velocity Estimated: Drogue Estimate: Dye Estimate:

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer

Fathometer ID: _____

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #s: _____

AI#
 Site 33837 Date: 6/23/09
 Site 3881

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed Bouy

Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe Bridge Height: _____

Profiling Measurements:

Time: _____	Temp. (°C): _____	pH: _____	Spcond(µmhos/cm): _____
D.O.: _____	D.O. %: _____	Salinity: _____	Depth (m): _____
Time: _____	Temp. (°C): _____	pH: _____	Spcond(µmhos/cm): _____
D.O.: _____	D.O. %: _____	Salinity: _____	Depth (m): _____
Time: _____	Temp. (°C): _____	pH: _____	Spcond(µmhos/cm): _____
D.O.: _____	D.O. %: _____	Salinity: _____	Depth (m): _____

Comments:

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft = 0.15 m	20 = 68	25 = 77
1.0 ft = 0.30 m	21 = 69.8	26 = 78.8
1.5 ft = 0.45 m	22 = 71.6	27 = 80.6
2.0 ft = 0.60 m	23 = 73.4	28 = 82.4
2.5 ft = 0.75 m	24 = 75.2	29 = 84.2

Ambient Water Quality Site Information

Project #: ES2008004 Site #: 3857 AI #: 19785
 Temporary Site #: ELMHP Subsegment: 040907 Date: 6/23/09 Time: 1230
 Waterbody: Bayou Vincent
 Tapedown: _____ Staff Gauge: _____ Gauge Height: _____
 Site Location: Eagle Lake Mobile Home Park - 1210 Eagle Lake Dr.
 Personnel: Jones, Beard

Weather Conditions:
 Clear Overcast
 Drizzle/Light Rain Showers
Temperature (°F):
 Hot > 85° Warm > 75°
 Mild > 65° Cool > 60°
 Cold < 60°
Wind (mph):
 <1 1-5
 6-10 11-15
 >16
Wind Direction:
 NW N NE
 SW S SE
 E W Variable

Cloud Cover:
 0-10% 11-40%
 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream
 Flowing: Flow Direction Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream

Waterbody Type: Lake Wind Influence: Tidally Influenced:
 Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: <1 1-25%
 26-50% 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters

Time: 1230 Temp.(°C): 31.28 pH: 7.79 SpCond(µhos/cm): 774.0
 D.O.: 6.43 D.O. %: 97.0 Salinity: .40 Depth (m): _____ Secchi (in): _____
 InSitu Probe ID: LDO 11-34

Continuous Monitor Deployed: Continuous Monitor ID: _____

Continuous Monitor Retrieved: Continuous Monitor Depth (m): _____

Water Level Monitor Deployed: Instrument ID: _____

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat

Instrument ID: _____

Velocity Monitor Deployed Instrument ID: _____

20 gal/min

Velocity Estimated: Drogue Estimate: Dye Estimate:

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer

Fathometer ID: _____

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #s: _____

AI #
 Site 19785 Date: 6/23/09
 site 3857

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed: Buoy:

Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe: Bridge Height: _____

Profiling Measurements:

Time: _____	Temp. (°C): _____	pH: _____	Spcond (µmhos/cm): _____
D.O.: _____	D.O. %: _____	Salinity: _____	Depth (m): _____
Time: _____	Temp. (°C): _____	pH: _____	Spcond (µmhos/cm): _____
D.O.: _____	D.O. %: _____	Salinity: _____	Depth (m): _____
Time: _____	Temp. (°C): _____	pH: _____	Spcond (µmhos/cm): _____
D.O.: _____	D.O. %: _____	Salinity: _____	Depth (m): _____

Comments:

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft = 0.15 m	20 = 68	25 = 77
1.0 ft = 0.30 m	21 = 69.8	26 = 78.8
1.5 ft = 0.45 m	22 = 71.6	27 = 80.6
2.0 ft = 0.60 m	23 = 73.4	28 = 82.4
2.5 ft = 0.75 m	24 = 75.2	29 = 84.2

Ambient Water Quality Site Information

Project #: ES2008004 Site #: 3858 AI #: 19211
 Temporary Site #: DL54B Subsegment: 040908 Date: 6/23/09 Time: 1120
 Waterbody: Bayou Bonfouca
 Tapedown: _____ Staff Gauge: _____ Gauge Height: _____
 Site Location: Coin de Lestin - Legendre Dr.
 Personnel: KM Jones, S. Beard

Weather Conditions:
 Clear Overcast
 Drizzle/Light Rain Showers

Temperature (°F):
 Hot > 85° Warm > 75°
 Mild > 65° Cool > 60°
 Cold < 60°

Wind (mph):
 < 1 1-5
 6-10 11-15
 > 16

Wind Direction:
 NW N NE
 SW S SE
 E W
 Variable

Cloud Cover:
 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream
 Flowing: Flow Direction Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream

Waterbody Type: Lake Wind Influence: Tidally Influenced:
 Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: < 1 1-25% 26-50%
 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters

Time: 1120 Temp. (°C): 31.19 pH: 7.65 SpCond (µmhos/cm): 628.1
 D.O.: 3.64 D.O. %: 49.3 Salinity: 0.32 Depth (m): _____ Secchi (in): _____
 InSitu Probe ID: LDO 11-34

Continuous Monitor Deployed: Continuous Monitor ID: _____

Continuous Monitor Retrieved: Continuous Monitor Depth (m): _____

Water Level Monitor Deployed: Instrument ID: _____

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat

Instrument ID: _____ .5 gal/min

Velocity Monitor Deployed Instrument ID: _____

Velocity Estimated: Drogue Estimate: Dye Estimate:

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer

Fathometer ID: _____

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #: _____

AI#
 Site 19211 Date: 6/23/09
 Site 3858

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sandy Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed Bouy
 Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond(µhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments:

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft = 0.15 m	20 = 68	25 = 77
1.0 ft = 0.30 m	21 = 69.8	26 = 78.8
1.5 ft = 0.45 m	22 = 71.6	27 = 80.6
2.0 ft = 0.60 m	23 = 73.4	28 = 82.4
2.5 ft = 0.75 m	24 = 75.2	29 = 84.2

Ambient Water Quality Site Information

Project #: ES2008004 Site #: 3921 AI #: 4716
 Temporary Site #: BBSFS Subsegment: 040907 Date: 6/23/09 Time: 1005
 Waterbody: Bayou Bonfouca
 Tapedown: _____ Staff Gauge: _____ Gauge Height: _____
 Site Location: W. Hall Rd - Superfund site
 Personnel: K.M. Jones, S. Beard

Weather Conditions:
 Clear Overcast
 Drizzle/Light Rain Showers

Temperature (°F):
 Hot > 85° Warm > 75°
 Mild > 65° Cool > 60°
 Cold < 60°

Wind (mph):
 <1 1-5
 6-10 11-15
 >16

Wind Direction:
 NW N NE
 SW S SE
 E W Variable

Cloud Cover:
 0-10% 11-40% 41-70% 71-100%

Waterbody Characteristics:
 Waterbody Type: Stream

Flowing: Flow Direction Upstream Downstream Tidally Influenced:
 Wind Influence: Wind Influence Direction: Upstream Downstream

Waterbody Type: Lake Wind Influence: Tidally Influenced:
 Algae Present Sedimentation/Turbidity Present in Water Column
 Floating/Aquatic Vegetation % Surface Coverage: <1 1-25% 26-50%
 51-75% 76-100%

Water Quality Samples Taken: Water Quality Field Parameters: Profiling:

Water Quality Field Parameters

Time: 1005 Temp. (°C): 32.94 pH: 8.52 SpCond (µmhos/cm): 437.3
 D.O.: 7.11 D.O. %: 98.9 Salinity: 0.22 Depth (m): _____ Secchi (in): _____
 In Situ Probe ID: L00 11-34

Continuous Monitor Deployed: Continuous Monitor ID: _____

Continuous Monitor Retrieved: Continuous Monitor Depth (m): _____

Water Level Monitor Deployed: Instrument ID: _____

Flow Measurement: Type of Measurement: Wading Stationary Moving Boat

Instrument ID: _____

Velocity Monitor Deployed Instrument ID: _____

10 gal / min.

Velocity Estimated: Drogue Estimate: Dye Estimate:

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: Type of Measurement Manual: Fathometer

Fathometer ID: _____

GPS Measurement: GPS Data ID: _____ Site GPS: Cross Section GPS:

Photos Taken: Picture File #s: _____

Site 4716 Date: 10/23/09
 Site 3921

Tapedown Established: Tapedown Location: _____
 Benchmark Established: Benchmark Location: _____
 Survey Equipment Used:

Time of Travel Measurement: Type of Site: Injection Collection
 Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: Man Altered Waterbody:
 Man-Made Waterbody:
 Waterbody Dry/Intermittent:
 Waterbody Bottom: Sand Clay Gravel Hard Clay Soft Silt
 Sand/Silt Rock/Gravel/Silt Concrete
 Control Structure Present: Location: _____
 Type: Man Made Dam Flow Regulation Device Beaver Dam Log Jam
 Land Use: Agriculture Forestry Municipal Industrial Field/Pasture Wetland
 Percent Tree Canopy Cover 0-25% 26-50% 51-75% 76-100%

Recon Information:
 Discharge Measurement: Wading Boat Stream Depth (ft): _____
 Continuous Monitor Deployment: Fixed: Bouy:
 Boat Accessible: Nearest Launch: _____
 Bridge Bridge Safe: Bridge Height: _____

Profiling Measurements:
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____
 Time: _____ Temp. (°C): _____ pH: _____ Spcond (µmhos/cm): _____
 D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments:

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≈ 0.15 m	20 ≈ 68	25 ≈ 77
1.0 ft ≈ 0.30 m	21 ≈ 69.8	26 ≈ 78.8
1.5 ft ≈ 0.45 m	22 ≈ 71.6	27 ≈ 80.6
2.0 ft ≈ 0.60 m	23 ≈ 73.4	28 ≈ 82.4
2.5 ft ≈ 0.75 m	24 ≈ 75.2	29 ≈ 84.2

Appendix F4 – Continuous Monitor

Bayou Liberty 040905 - Continuous Monitor Data Summary

Survey Site #	LEAU Site #	River Kilometers		Temp (C)	pH (units)	SpCond (umhos/cm)	DO % Sat	DO (mg/L)	Salinity (ppt)
BL03	3861	12.6	Average	30.52	7.56	909.81	47.51	3.52	0.48
			Minimum	29.34	7.44	896.00	9.60	0.73	0.47
			Maximum	32.27	7.75	920.00	116.70	8.51	0.48
BL04	3862	10.0	Average	31.48	7.17	5697.31	55.31	4.00	3.14
			Minimum	30.68	7.03	5401.00	30.50	2.23	2.97
			Maximum	33.15	7.37	6229.00	86.40	6.08	3.45
BL05	3868	6.9	Average	29.91	7.27	1063.91	31.76	2.40	0.56
			Minimum	29.05	7.18	909.00	14.50	1.10	0.47
			Maximum	30.58	7.43	1254.00	65.50	4.92	0.66
BL07	3867	3.3	Average	32.62	7.94	3888.06	78.57	5.60	2.12
			Minimum	31.51	7.61	3585.00	49.10	3.55	1.95
			Maximum	33.89	8.55	4244.00	134.90	9.50	2.32

Bayou Liberty 040906 - Continuous Monitor Data Summary

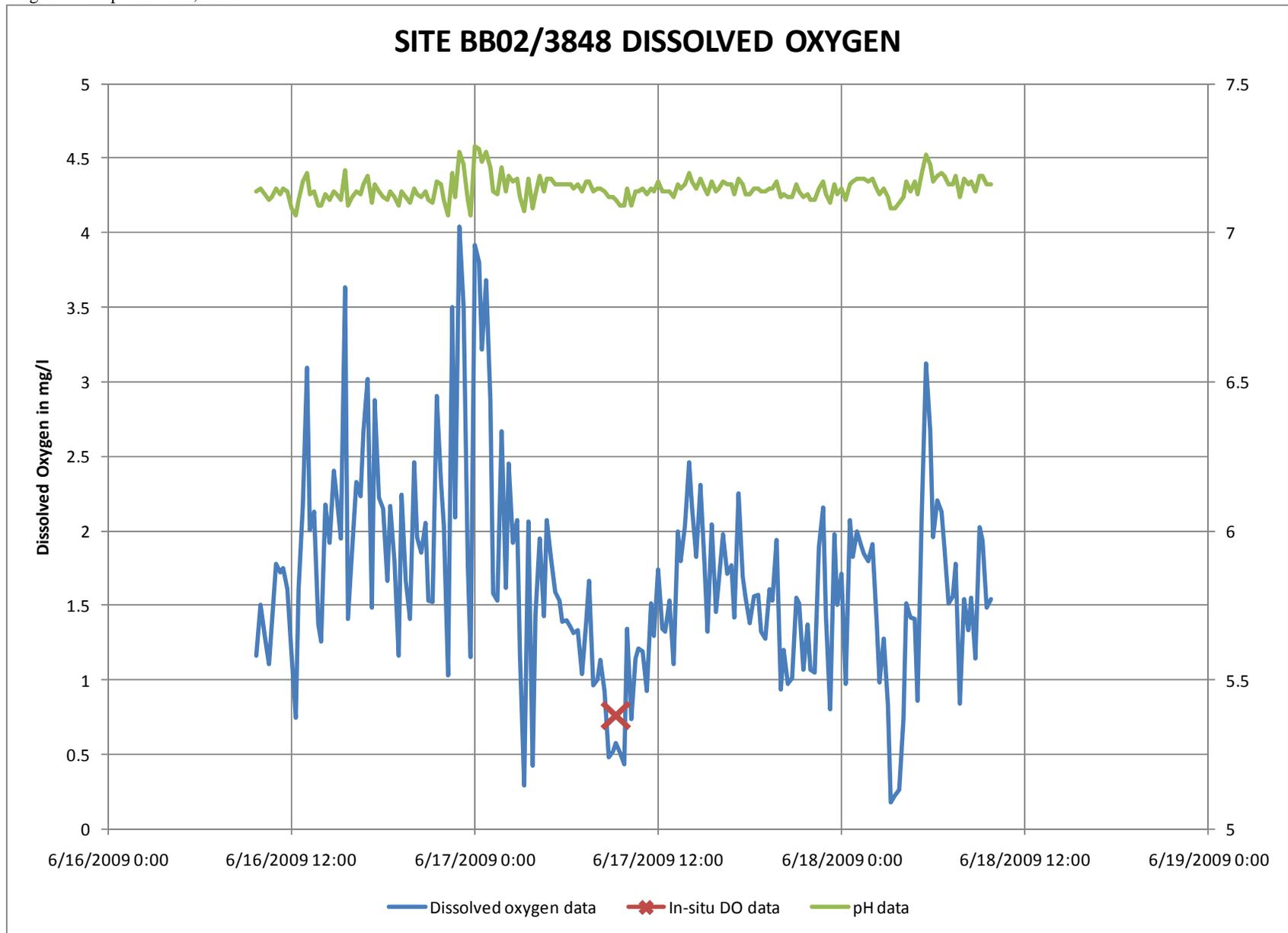
Site	LEAU Site #	River Kilometers		Temp (C)	pH (units)	SpCond (umhos/cm)	DO % Sat	DO (mg/L)	Salinity (ppt)
BL08	3866	0.4	Average	31.18	7.74	7189.99	94.17	6.82	4.00
			Minimum	29.93	7.41	6864.00	73.90	5.44	3.81
			Maximum	32.68	8.39	7462.00	126.80	8.96	4.16
BP02	3864	2.4	Average	32.99	7.35	5587.06	51.04	3.59	3.08
			Minimum	31.55	7.17	5306.00	17.40	1.25	2.92
			Maximum	34.94	7.67	5845.00	103.40	7.09	3.23
BP03	3870	1.6	Average	32.07	7.36	6148.77	49.57	3.54	3.40
			Minimum	30.87	7.25	5989.00	31.90	2.33	3.31
			Maximum	33.74	7.65	6351.00	82.40	5.79	3.52
BP04	3869	0.2	Average	32.88	7.70	7040.04	97.34	6.81	3.92
			Minimum	30.85	7.29	6072.00	56.00	4.07	3.36
			Maximum	36.52	8.26	7260.00	145.30	9.73	4.04

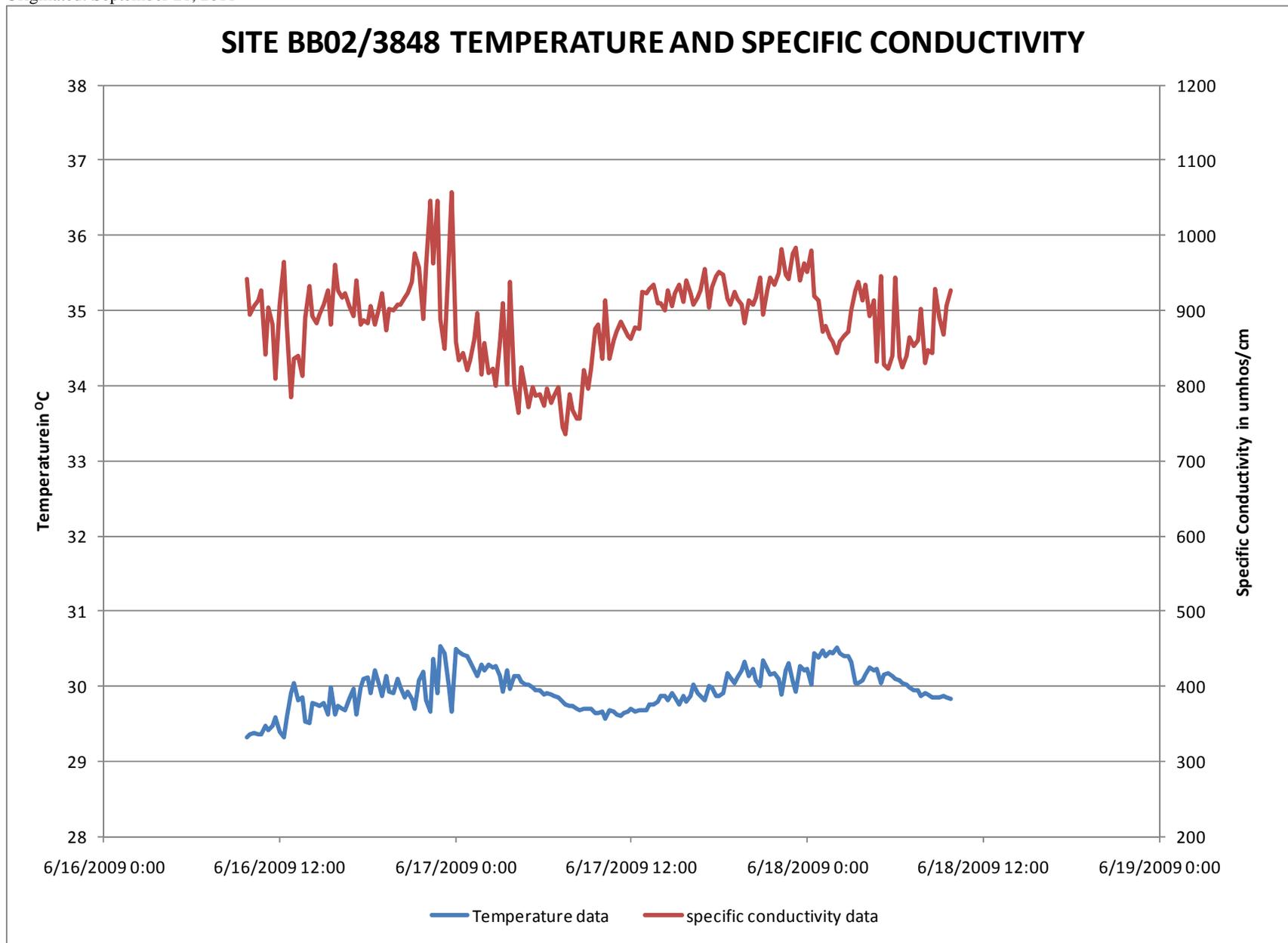
Bayou Bonfouca 040907 - Continuous Monitor Data Summary

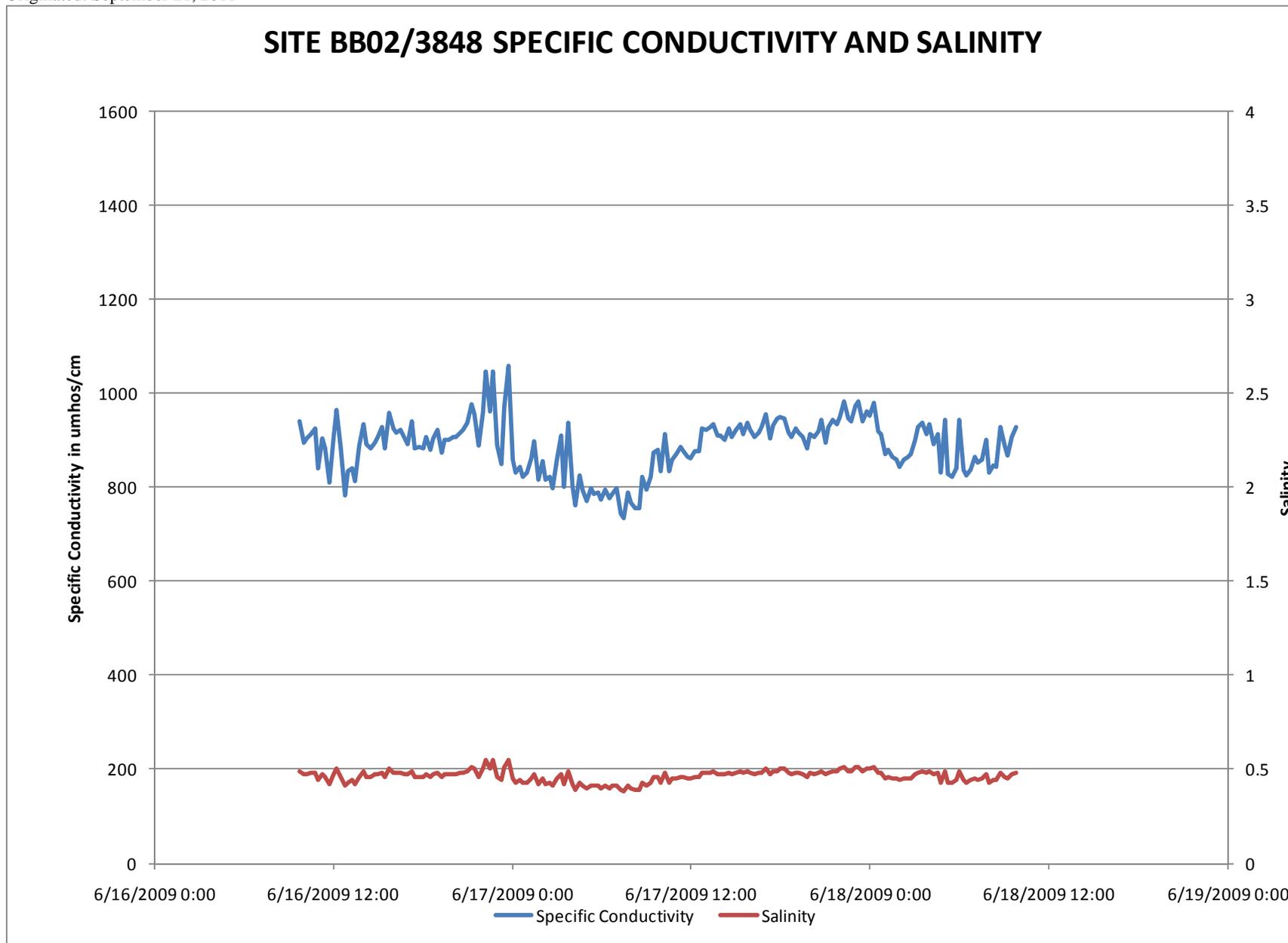
Site	LEAU Site #	River Kilometers		Temp (C)	pH (units)	SpCond (umhos/cm)	DO % Sat	DO (mg/L)	Salinity (ppt)
BB02	3848	13.3	Average	29.96	7.15	885.00	22.24	1.68	0.46
			Minimum	29.32	7.06	736.00	2.40	0.18	0.38
			Maximum	30.54	7.29	1058.00	54.10	4.04	0.55
BV03	3849	14.9	Average	29.37	7.30	326.35	39.63	2.98	0.16
			Minimum	27.24	7.17	313.00	1.30	0.10	0.15
			Maximum	31.23	7.47	338.00	88.10	6.55	0.17

Bayou Bonfouca 040908 - Continuous Monitor Data Summary

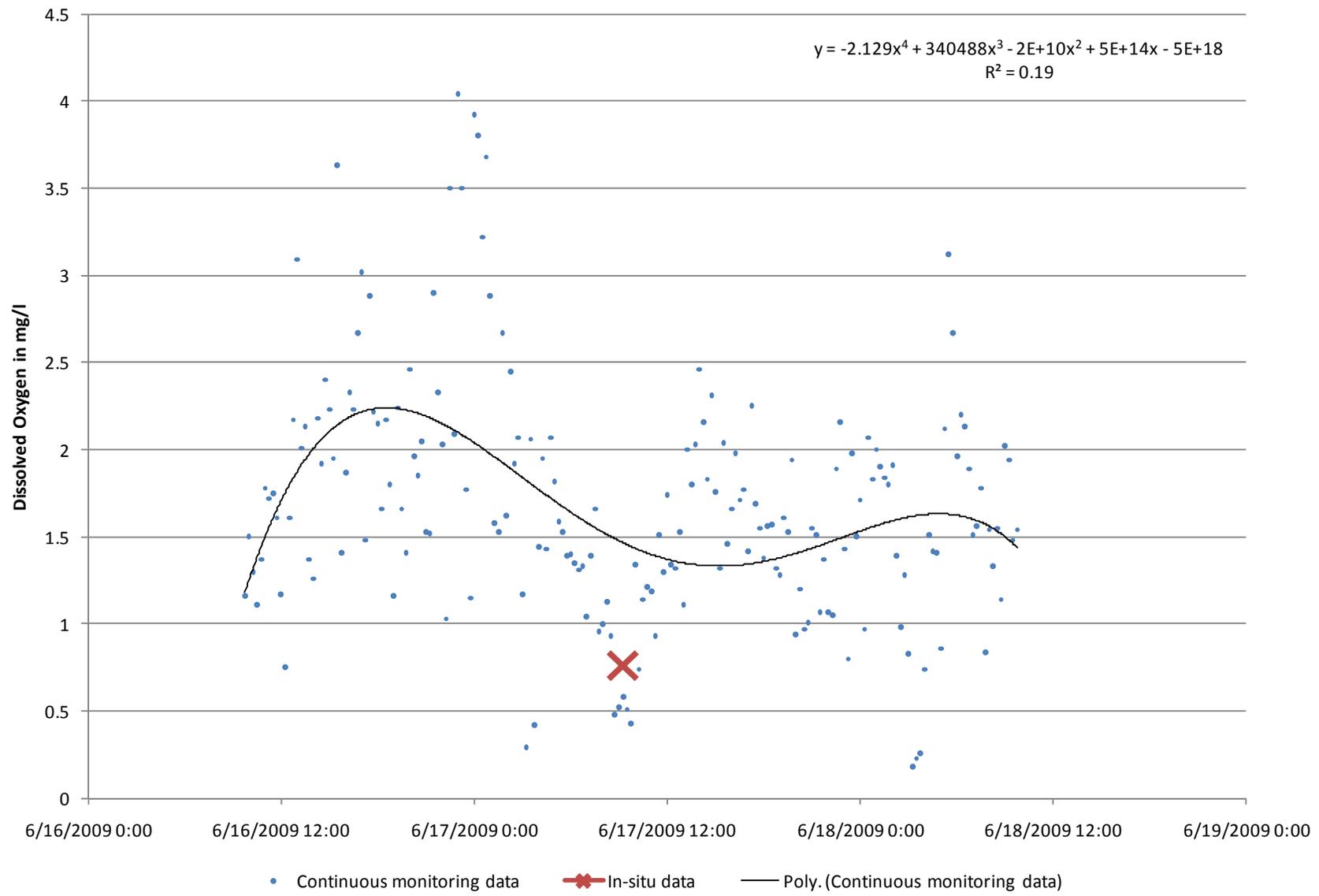
Site	LEAU Site #	River Kilometers		Temp (C)	pH (units)	SpCond (umhos/cm)	DO % Sat	DO (mg/L)	Salinity (ppt)
BB03	3852	8.6	Average	32.30	7.59	4867.00	72.90	5.21	2.67
			Minimum	31.42	7.24	4743.00	49.90	3.63	2.60
			Maximum	33.54	8.00	5017.00	104.20	7.31	2.75
BB05	3855	4.5	Average	31.43	7.51	6500.87	86.96	6.28	3.60
			Minimum	30.50	7.26	5957.00	61.80	4.55	3.29
			Maximum	32.63	7.84	7208.00	114.20	8.12	4.01
BB06	3853	0.5	Average	31.12	7.71	6951.00	98.20	7.12	3.86
			Minimum	30.06	7.41	6695.00	84.00	6.20	3.72
			Maximum	32.55	8.15	7268.00	114.90	8.15	4.05
BB07	3856	0.0	Average	30.41	7.97	3125.88	UNUSEABLE	UNUSEABLE	1.70
			Minimum	29.12	7.48	1674.00			0.89
			Maximum	32.02	8.28	6949.00			3.86







SITE BB02/3848 DISSOLVED OXYGEN



Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

Date	Time	Date/Time	TEMP	pH	Cond	Sal	LDO%	LDO
M/D/YYYY	HH:MM:SS		°C	Units	uS/cm	ppt	Sat	mg/l
6/16/2009	9:45:00	6/16/2009 9:45	29.32	7.14	942	0.49	15.3	1.16
6/16/2009	10:00:00	6/16/2009 10:00	29.36	7.15	895	0.47	19.6	1.5
6/16/2009	10:15:00	6/16/2009 10:15	29.37	7.13	905	0.47	17.1	1.3
6/16/2009	10:30:00	6/16/2009 10:30	29.36	7.11	913	0.48	14.5	1.11
6/16/2009	10:45:00	6/16/2009 10:45	29.36	7.12	926	0.48	17.9	1.37
6/16/2009	11:00:00	6/16/2009 11:00	29.47	7.15	842	0.44	23.4	1.78
6/16/2009	11:15:00	6/16/2009 11:15	29.41	7.13	903	0.47	22.6	1.72
6/16/2009	11:30:00	6/16/2009 11:30	29.47	7.15	882	0.46	22.9	1.75
6/16/2009	11:45:00	6/16/2009 11:45	29.59	7.14	810	0.42	21.2	1.61
6/16/2009	12:00:00	6/16/2009 12:00	29.39	7.08	907	0.47	15.4	1.17
6/16/2009	12:15:00	6/16/2009 12:15	29.32	7.06	964	0.5	9.9	0.75
6/16/2009	12:30:00	6/16/2009 12:30	29.59	7.11	882	0.46	21.2	1.61
6/16/2009	12:45:00	6/16/2009 12:45	29.91	7.17	784	0.41	28.8	2.17
6/16/2009	13:00:00	6/16/2009 13:00	30.05	7.2	836	0.43	41	3.09
6/16/2009	13:15:00	6/16/2009 13:15	29.81	7.13	840	0.44	26.6	2.01
6/16/2009	13:30:00	6/16/2009 13:30	29.85	7.14	813	0.42	28.2	2.13
6/16/2009	13:45:00	6/16/2009 13:45	29.54	7.09	890	0.46	18	1.37
6/16/2009	14:00:00	6/16/2009 14:00	29.52	7.09	933	0.49	16.6	1.26
6/16/2009	14:15:00	6/16/2009 14:15	29.77	7.13	892	0.46	28.9	2.18
6/16/2009	14:30:00	6/16/2009 14:30	29.76	7.11	883	0.46	25.4	1.92
6/16/2009	14:45:00	6/16/2009 14:45	29.73	7.14	894	0.47	31.7	2.4
6/16/2009	15:00:00	6/16/2009 15:00	29.77	7.13	907	0.47	29.4	2.23
6/16/2009	15:15:00	6/16/2009 15:15	29.63	7.11	927	0.48	25.6	1.95
6/16/2009	15:30:00	6/16/2009 15:30	29.98	7.21	882	0.46	48.2	3.63
6/16/2009	15:45:00	6/16/2009 15:45	29.62	7.09	960	0.5	18.6	1.41
6/16/2009	16:00:00	6/16/2009 16:00	29.73	7.12	926	0.48	24.7	1.87
6/16/2009	16:15:00	6/16/2009 16:15	29.7	7.14	917	0.48	30.7	2.33
6/16/2009	16:30:00	6/16/2009 16:30	29.69	7.13	922	0.48	29.4	2.23
6/16/2009	16:45:00	6/16/2009 16:45	29.84	7.16	905	0.47	35.4	2.67
6/16/2009	17:00:00	6/16/2009 17:00	29.97	7.19	893	0.47	40	3.02
6/16/2009	17:15:00	6/16/2009 17:15	29.63	7.1	940	0.49	19.5	1.48
6/16/2009	17:30:00	6/16/2009 17:30	29.98	7.16	882	0.46	38.2	2.88

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

6/16/2009	17:45:00	6/16/2009 17:45	30.1	7.14	887	0.46	29.5	2.22
6/16/2009	18:00:00	6/16/2009 18:00	30.11	7.12	884	0.46	28.6	2.15
6/16/2009	18:15:00	6/16/2009 18:15	29.91	7.11	906	0.47	22	1.66
6/16/2009	18:30:00	6/16/2009 18:30	30.22	7.14	881	0.46	28.9	2.17
6/16/2009	18:45:00	6/16/2009 18:45	30.03	7.12	903	0.47	23.9	1.8
6/16/2009	19:00:00	6/16/2009 19:00	29.87	7.09	922	0.48	15.3	1.16
6/16/2009	19:15:00	6/16/2009 19:15	30.14	7.14	874	0.46	29.8	2.24
6/16/2009	19:30:00	6/16/2009 19:30	29.93	7.12	902	0.47	21.9	1.66
6/16/2009	19:45:00	6/16/2009 19:45	29.9	7.1	901	0.47	18.7	1.41
6/16/2009	20:00:00	6/16/2009 20:00	30.09	7.15	907	0.47	32.7	2.46
6/16/2009	20:15:00	6/16/2009 20:15	29.99	7.13	907	0.47	26	1.96
6/16/2009	20:30:00	6/16/2009 20:30	29.86	7.12	917	0.48	24.5	1.85
6/16/2009	20:45:00	6/16/2009 20:45	29.93	7.14	923	0.48	27.2	2.05
6/16/2009	21:00:00	6/16/2009 21:00	29.83	7.11	938	0.49	20.3	1.53
6/16/2009	21:15:00	6/16/2009 21:15	29.71	7.1	976	0.51	20.1	1.52
6/16/2009	21:30:00	6/16/2009 21:30	30.08	7.17	956	0.5	38.5	2.9
6/16/2009	21:45:00	6/16/2009 21:45	30.2	7.16	888	0.46	31	2.33
6/16/2009	22:00:00	6/16/2009 22:00	29.82	7.11	959	0.5	26.9	2.03
6/16/2009	22:15:00	6/16/2009 22:15	29.66	7.06	1046	0.55	13.6	1.03
6/16/2009	22:30:00	6/16/2009 22:30	30.36	7.2	963	0.5	46.7	3.5
6/16/2009	22:45:00	6/16/2009 22:45	29.9	7.12	1046	0.55	27.7	2.09
6/16/2009	23:00:00	6/16/2009 23:00	30.54	7.27	888	0.46	54.1	4.04
6/16/2009	23:15:00	6/16/2009 23:15	30.43	7.23	849	0.44	46.7	3.5
6/16/2009	23:30:00	6/16/2009 23:30	30.01	7.11	971	0.51	23.5	1.77
6/16/2009	23:45:00	6/16/2009 23:45	29.67	7.06	1058	0.55	15.2	1.15
6/17/2009	0:00:00	6/17/2009 0:00	30.5	7.29	859	0.45	52.4	3.92
6/17/2009	0:15:00	6/17/2009 0:15	30.46	7.28	833	0.43	50.8	3.8
6/17/2009	0:30:00	6/17/2009 0:30	30.42	7.24	843	0.44	43	3.22
6/17/2009	0:45:00	6/17/2009 0:45	30.41	7.27	821	0.43	49.1	3.68
6/17/2009	1:00:00	6/17/2009 1:00	30.32	7.22	833	0.43	38.4	2.88
6/17/2009	1:15:00	6/17/2009 1:15	30.22	7.14	863	0.45	21	1.58
6/17/2009	1:30:00	6/17/2009 1:30	30.13	7.13	897	0.47	20.3	1.53
6/17/2009	1:45:00	6/17/2009 1:45	30.29	7.22	815	0.42	35.6	2.67
6/17/2009	2:00:00	6/17/2009 2:00	30.21	7.14	857	0.45	21.5	1.62

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

6/17/2009	2:15:00	6/17/2009 2:15	30.28	7.19	816	0.42	32.7	2.45
6/17/2009	2:30:00	6/17/2009 2:30	30.25	7.17	822	0.43	25.6	1.92
6/17/2009	2:45:00	6/17/2009 2:45	30.26	7.18	799	0.41	27.6	2.07
6/17/2009	3:00:00	6/17/2009 3:00	30.13	7.12	859	0.45	15.5	1.17
6/17/2009	3:15:00	6/17/2009 3:15	29.92	7.07	910	0.47	3.9	0.29
6/17/2009	3:30:00	6/17/2009 3:30	30.21	7.18	801	0.42	27.4	2.06
6/17/2009	3:45:00	6/17/2009 3:45	29.97	7.08	938	0.49	5.6	0.42
6/17/2009	4:00:00	6/17/2009 4:00	30.14	7.13	801	0.42	19.2	1.44
6/17/2009	4:15:00	6/17/2009 4:15	30.13	7.19	763	0.39	25.9	1.95
6/17/2009	4:30:00	6/17/2009 4:30	30.06	7.14	824	0.43	19	1.43
6/17/2009	4:45:00	6/17/2009 4:45	30.02	7.18	795	0.41	27.4	2.07
6/17/2009	5:00:00	6/17/2009 5:00	30.02	7.18	771	0.4	24.1	1.82
6/17/2009	5:15:00	6/17/2009 5:15	29.99	7.16	798	0.41	21	1.59
6/17/2009	5:30:00	6/17/2009 5:30	29.94	7.16	787	0.41	20.2	1.53
6/17/2009	5:45:00	6/17/2009 5:45	29.94	7.16	788	0.41	18.4	1.39
6/17/2009	6:00:00	6/17/2009 6:00	29.89	7.16	773	0.4	18.5	1.4
6/17/2009	6:15:00	6/17/2009 6:15	29.91	7.16	796	0.41	17.8	1.35
6/17/2009	6:30:00	6/17/2009 6:30	29.89	7.15	777	0.4	17.3	1.31
6/17/2009	6:45:00	6/17/2009 6:45	29.88	7.16	787	0.41	17.6	1.33
6/17/2009	7:00:00	6/17/2009 7:00	29.85	7.14	798	0.41	13.8	1.04
6/17/2009	7:15:00	6/17/2009 7:15	29.8	7.17	745	0.39	18.4	1.39
6/17/2009	7:30:00	6/17/2009 7:30	29.76	7.17	736	0.38	21.9	1.66
6/17/2009	7:45:00	6/17/2009 7:45	29.74	7.14	788	0.41	12.7	0.96
6/17/2009	8:00:00	6/17/2009 8:00	29.73	7.15	768	0.4	13.2	1
6/17/2009	8:15:00	6/17/2009 8:15	29.71	7.15	756	0.39	14.9	1.13
6/17/2009	8:30:00	6/17/2009 8:30	29.69	7.14	756	0.39	12.2	0.93
6/17/2009	8:45:00	6/17/2009 8:45	29.71	7.12	821	0.43	6.4	0.48
6/17/2009	9:00:00	6/17/2009 9:00	29.71	7.12	796	0.41	6.8	0.52
6/17/2009	9:15:00	6/17/2009 9:15	29.71	7.11	823	0.43	7.7	0.58
6/17/2009	9:30:00	6/17/2009 9:30	29.65	7.09	875	0.46	6.7	0.51
6/17/2009	9:45:00	6/17/2009 9:45	29.65	7.09	881	0.46	5.6	0.43
6/17/2009	10:00:00	6/17/2009 10:00	29.66	7.15	836	0.43	17.6	1.34
6/17/2009	10:15:00	6/17/2009 10:15	29.56	7.09	914	0.48	9.8	0.74
6/17/2009	10:30:00	6/17/2009 10:30	29.68	7.14	835	0.43	15	1.14

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

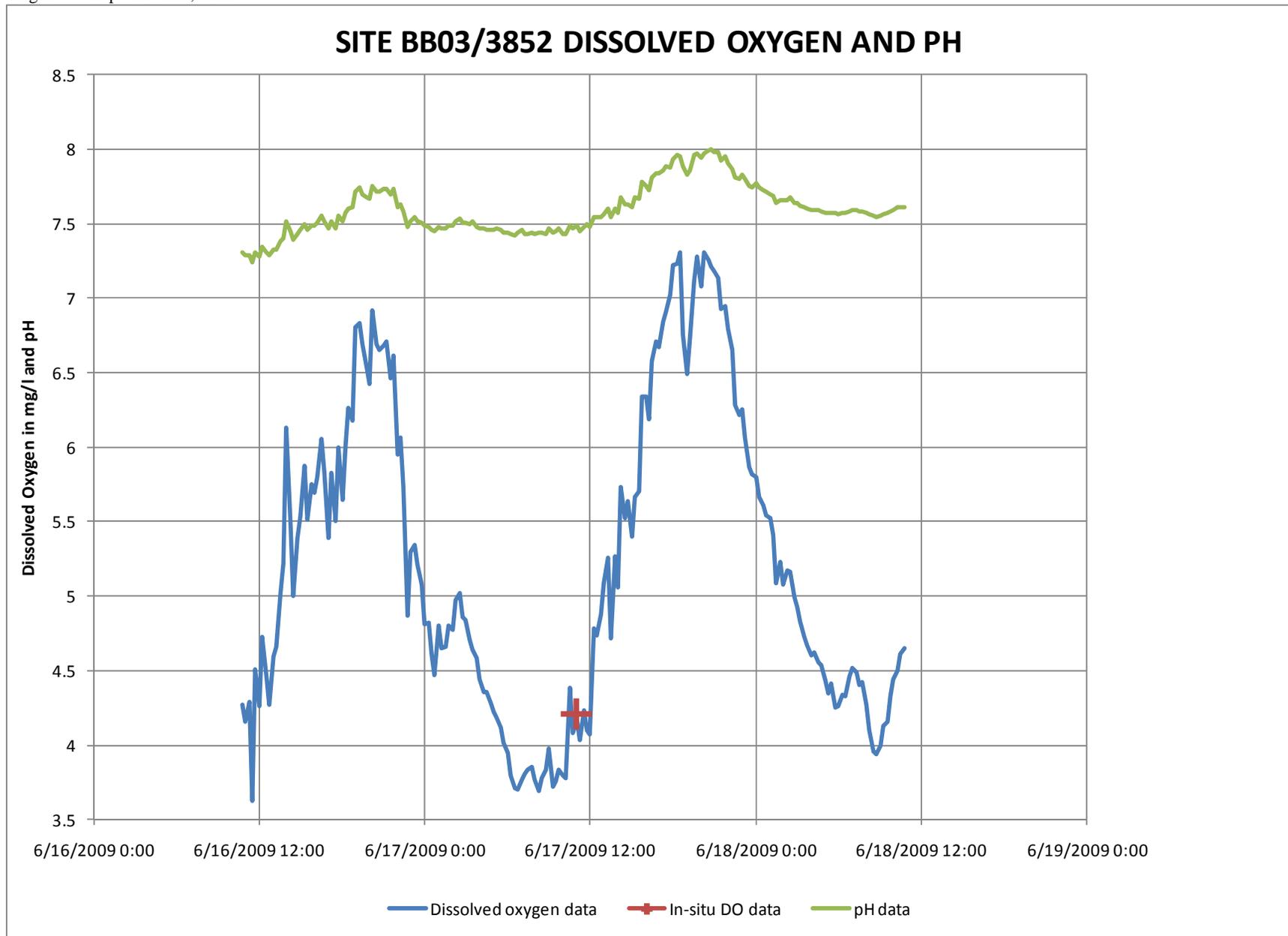
6/17/2009	10:45:00	6/17/2009 10:45	29.66	7.14	860	0.45	16	1.21
6/17/2009	11:00:00	6/17/2009 11:00	29.62	7.15	871	0.45	15.7	1.19
6/17/2009	11:15:00	6/17/2009 11:15	29.61	7.13	885	0.46	12.3	0.93
6/17/2009	11:30:00	6/17/2009 11:30	29.65	7.15	877	0.46	19.9	1.51
6/17/2009	11:45:00	6/17/2009 11:45	29.67	7.14	866	0.45	17.1	1.3
6/17/2009	12:00:00	6/17/2009 12:00	29.71	7.17	862	0.45	23	1.74
6/17/2009	12:15:00	6/17/2009 12:15	29.66	7.14	877	0.46	17.7	1.34
6/17/2009	12:30:00	6/17/2009 12:30	29.69	7.14	876	0.46	17.4	1.32
6/17/2009	12:45:00	6/17/2009 12:45	29.68	7.14	924	0.48	20.2	1.53
6/17/2009	13:00:00	6/17/2009 13:00	29.68	7.12	923	0.48	14.6	1.11
6/17/2009	13:15:00	6/17/2009 13:15	29.76	7.16	928	0.48	26.4	2
6/17/2009	13:30:00	6/17/2009 13:30	29.75	7.15	935	0.49	23.8	1.8
6/17/2009	13:45:00	6/17/2009 13:45	29.8	7.16	909	0.47	26.8	2.03
6/17/2009	14:00:00	6/17/2009 14:00	29.87	7.2	910	0.47	32.6	2.46
6/17/2009	14:15:00	6/17/2009 14:15	29.88	7.17	901	0.47	28.6	2.16
6/17/2009	14:30:00	6/17/2009 14:30	29.81	7.15	926	0.48	24.2	1.83
6/17/2009	14:45:00	6/17/2009 14:45	29.91	7.18	906	0.47	30.6	2.31
6/17/2009	15:00:00	6/17/2009 15:00	29.85	7.15	923	0.48	23.3	1.76
6/17/2009	15:15:00	6/17/2009 15:15	29.76	7.13	935	0.49	17.4	1.32
6/17/2009	15:30:00	6/17/2009 15:30	29.88	7.17	912	0.48	27	2.04
6/17/2009	15:45:00	6/17/2009 15:45	29.79	7.14	939	0.49	19.3	1.46
6/17/2009	16:00:00	6/17/2009 16:00	29.87	7.15	922	0.48	22	1.66
6/17/2009	16:15:00	6/17/2009 16:15	30.02	7.17	907	0.47	26.3	1.98
6/17/2009	16:30:00	6/17/2009 16:30	29.91	7.16	917	0.48	22.6	1.71
6/17/2009	16:45:00	6/17/2009 16:45	29.88	7.16	927	0.48	23.5	1.77
6/17/2009	17:00:00	6/17/2009 17:00	29.82	7.13	955	0.5	18.8	1.42
6/17/2009	17:15:00	6/17/2009 17:15	30	7.18	903	0.47	29.8	2.25
6/17/2009	17:30:00	6/17/2009 17:30	29.98	7.16	931	0.49	22.4	1.69
6/17/2009	17:45:00	6/17/2009 17:45	29.87	7.13	946	0.49	20.5	1.55
6/17/2009	18:00:00	6/17/2009 18:00	29.87	7.13	951	0.5	18.3	1.38
6/17/2009	18:15:00	6/17/2009 18:15	29.9	7.15	948	0.5	20.7	1.56
6/17/2009	18:30:00	6/17/2009 18:30	30.18	7.15	915	0.48	20.9	1.57
6/17/2009	18:45:00	6/17/2009 18:45	30.11	7.14	907	0.47	17.5	1.32
6/17/2009	19:00:00	6/17/2009 19:00	30.04	7.14	924	0.48	17.1	1.28

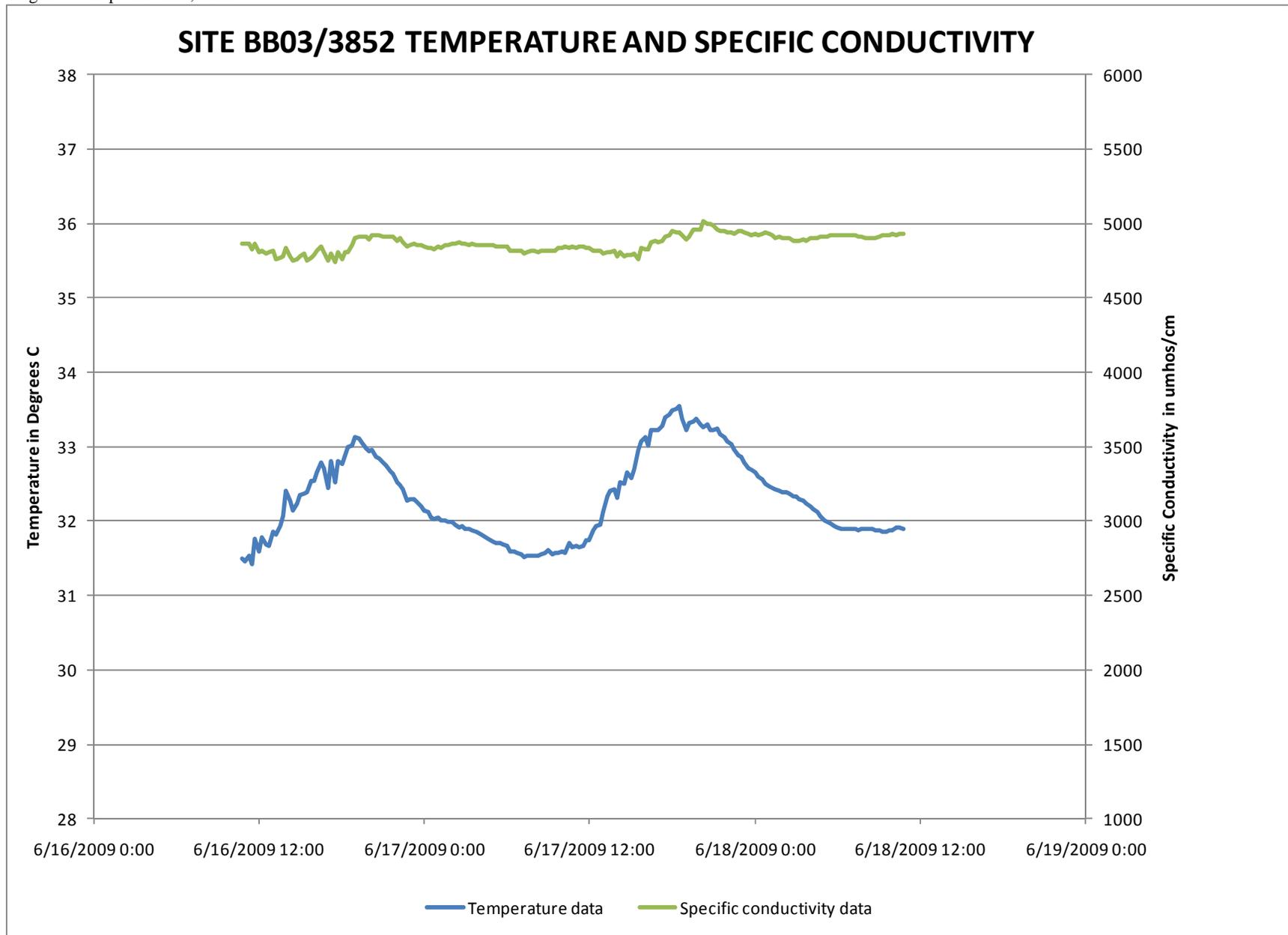
Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

6/17/2009	19:15:00	6/17/2009 19:15	30.12	7.15	916	0.48	21.4	1.61
6/17/2009	19:30:00	6/17/2009 19:30	30.22	7.15	908	0.47	20.4	1.53
6/17/2009	19:45:00	6/17/2009 19:45	30.33	7.17	883	0.46	25.9	1.94
6/17/2009	20:00:00	6/17/2009 20:00	30.13	7.12	914	0.48	12.4	0.94
6/17/2009	20:15:00	6/17/2009 20:15	30.23	7.13	907	0.47	16	1.2
6/17/2009	20:30:00	6/17/2009 20:30	30.08	7.12	918	0.48	12.8	0.97
6/17/2009	20:45:00	6/17/2009 20:45	30.01	7.12	943	0.49	13.4	1.01
6/17/2009	21:00:00	6/17/2009 21:00	30.35	7.16	894	0.47	20.7	1.55
6/17/2009	21:15:00	6/17/2009 21:15	30.23	7.14	927	0.48	20.2	1.51
6/17/2009	21:30:00	6/17/2009 21:30	30.15	7.12	944	0.49	14.3	1.07
6/17/2009	21:45:00	6/17/2009 21:45	30.18	7.13	934	0.49	18.2	1.37
6/17/2009	22:00:00	6/17/2009 22:00	30.09	7.11	950	0.5	14.2	1.07
6/17/2009	22:15:00	6/17/2009 22:15	29.89	7.11	982	0.51	13.9	1.05
6/17/2009	22:30:00	6/17/2009 22:30	30.21	7.15	947	0.49	25.1	1.89
6/17/2009	22:45:00	6/17/2009 22:45	30.31	7.17	941	0.49	28.9	2.16
6/17/2009	23:00:00	6/17/2009 23:00	30.06	7.13	975	0.51	19	1.43
6/17/2009	23:15:00	6/17/2009 23:15	29.92	7.1	984	0.51	10.6	0.8
6/17/2009	23:30:00	6/17/2009 23:30	30.27	7.16	940	0.49	26.4	1.98
6/17/2009	23:45:00	6/17/2009 23:45	30.22	7.13	963	0.5	20	1.5
6/18/2009	0:00:00	6/18/2009 0:00	30.23	7.15	952	0.5	22.7	1.71
6/18/2009	0:15:00	6/18/2009 0:15	30.02	7.11	980	0.51	12.9	0.97
6/18/2009	0:30:00	6/18/2009 0:30	30.44	7.16	920	0.48	27.7	2.07
6/18/2009	0:45:00	6/18/2009 0:45	30.39	7.17	914	0.48	24.4	1.83
6/18/2009	1:00:00	6/18/2009 1:00	30.48	7.18	872	0.45	26.8	2
6/18/2009	1:15:00	6/18/2009 1:15	30.41	7.18	879	0.46	25.4	1.9
6/18/2009	1:30:00	6/18/2009 1:30	30.46	7.18	865	0.45	24.6	1.84
6/18/2009	1:45:00	6/18/2009 1:45	30.44	7.17	858	0.45	24	1.8
6/18/2009	2:00:00	6/18/2009 2:00	30.51	7.18	844	0.44	25.5	1.91
6/18/2009	2:15:00	6/18/2009 2:15	30.44	7.15	859	0.45	18.6	1.39
6/18/2009	2:30:00	6/18/2009 2:30	30.4	7.13	866	0.45	13.1	0.98
6/18/2009	2:45:00	6/18/2009 2:45	30.41	7.15	872	0.45	17.1	1.28
6/18/2009	3:00:00	6/18/2009 3:00	30.32	7.12	901	0.47	11.1	0.83
6/18/2009	3:15:00	6/18/2009 3:15	30.05	7.08	927	0.48	2.4	0.18
6/18/2009	3:30:00	6/18/2009 3:30	30.05	7.08	938	0.49	3.1	0.23

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

6/18/2009	3:45:00	6/18/2009 3:45	30.08	7.1	914	0.48	3.5	0.26
6/18/2009	4:00:00	6/18/2009 4:00	30.16	7.12	934	0.49	9.8	0.74
6/18/2009	4:15:00	6/18/2009 4:15	30.25	7.17	893	0.47	20.1	1.51
6/18/2009	4:30:00	6/18/2009 4:30	30.22	7.14	913	0.48	18.9	1.42
6/18/2009	4:45:00	6/18/2009 4:45	30.23	7.17	832	0.43	18.8	1.41
6/18/2009	5:00:00	6/18/2009 5:00	30.05	7.13	945	0.49	11.4	0.86
6/18/2009	5:15:00	6/18/2009 5:15	30.16	7.2	829	0.43	28.3	2.12
6/18/2009	5:30:00	6/18/2009 5:30	30.17	7.26	823	0.43	41.5	3.12
6/18/2009	5:45:00	6/18/2009 5:45	30.13	7.23	840	0.44	35.4	2.67
6/18/2009	6:00:00	6/18/2009 6:00	30.09	7.17	944	0.49	26	1.96
6/18/2009	6:15:00	6/18/2009 6:15	30.08	7.19	837	0.44	29.2	2.2
6/18/2009	6:30:00	6/18/2009 6:30	30.05	7.2	824	0.43	28.3	2.13
6/18/2009	6:45:00	6/18/2009 6:45	30.02	7.19	839	0.44	25.1	1.89
6/18/2009	7:00:00	6/18/2009 7:00	29.99	7.16	864	0.45	20	1.51
6/18/2009	7:15:00	6/18/2009 7:15	29.94	7.16	853	0.44	20.6	1.56
6/18/2009	7:30:00	6/18/2009 7:30	29.95	7.19	860	0.45	23.6	1.78
6/18/2009	7:45:00	6/18/2009 7:45	29.88	7.12	902	0.47	11.1	0.84
6/18/2009	8:00:00	6/18/2009 8:00	29.91	7.18	831	0.43	20.3	1.54
6/18/2009	8:15:00	6/18/2009 8:15	29.89	7.16	847	0.44	17.5	1.33
6/18/2009	8:30:00	6/18/2009 8:30	29.85	7.17	843	0.44	20.5	1.55
6/18/2009	8:45:00	6/18/2009 8:45	29.85	7.14	928	0.48	15.1	1.14
6/18/2009	9:00:00	6/18/2009 9:00	29.85	7.19	890	0.46	26.7	2.02
6/18/2009	9:15:00	6/18/2009 9:15	29.88	7.19	868	0.45	25.7	1.94
6/18/2009	9:30:00	6/18/2009 9:30	29.85	7.16	906	0.47	19.6	1.48
6/18/2009	9:45:00	6/18/2009 9:45	29.83	7.16	927	0.48	20.3	1.54





Date M/D/YYYY	Time HH:MM:SS	Date/Time	TEMP °C	pH Units	Cond uS/cm	Sal ppt	LDO% Sat	LDO mg/l
6/16/2009	10:45:00	6/16/2009 10:45	31.49	7.31	4861	2.67	58.8	4.27
6/16/2009	11:00:00	6/16/2009 11:00	31.46	7.29	4867	2.67	57.2	4.16
6/16/2009	11:15:00	6/16/2009 11:15	31.54	7.29	4865	2.67	59.1	4.29
6/16/2009	11:30:00	6/16/2009 11:30	31.42	7.24	4829	2.65	49.9	3.63
6/16/2009	11:45:00	6/16/2009 11:45	31.77	7.31	4859	2.66	62.3	4.51
6/16/2009	12:00:00	6/16/2009 12:00	31.6	7.28	4809	2.64	58.7	4.26
6/16/2009	12:15:00	6/16/2009 12:15	31.79	7.34	4812	2.64	65.5	4.73
6/16/2009	12:30:00	6/16/2009 12:30	31.69	7.31	4799	2.63	61.6	4.46
6/16/2009	12:45:00	6/16/2009 12:45	31.67	7.29	4804	2.63	58.9	4.27
6/16/2009	13:00:00	6/16/2009 13:00	31.85	7.33	4815	2.64	63.6	4.59
6/16/2009	13:15:00	6/16/2009 13:15	31.82	7.33	4759	2.61	64.5	4.66
6/16/2009	13:30:00	6/16/2009 13:30	31.93	7.38	4770	2.61	69.6	5.02
6/16/2009	13:45:00	6/16/2009 13:45	32.06	7.4	4776	2.62	72.6	5.22
6/16/2009	14:00:00	6/16/2009 14:00	32.41	7.52	4836	2.65	85.7	6.13
6/16/2009	14:15:00	6/16/2009 14:15	32.28	7.45	4783	2.62	76.7	5.5
6/16/2009	14:30:00	6/16/2009 14:30	32.15	7.39	4747	2.6	69.6	5
6/16/2009	14:45:00	6/16/2009 14:45	32.23	7.43	4764	2.61	75.1	5.39
6/16/2009	15:00:00	6/16/2009 15:00	32.35	7.46	4774	2.62	77.2	5.53
6/16/2009	15:15:00	6/16/2009 15:15	32.36	7.5	4795	2.63	82	5.87
6/16/2009	15:30:00	6/16/2009 15:30	32.38	7.46	4753	2.6	77	5.51
6/16/2009	15:45:00	6/16/2009 15:45	32.54	7.49	4769	2.61	80.6	5.75
6/16/2009	16:00:00	6/16/2009 16:00	32.54	7.49	4791	2.63	79.7	5.69
6/16/2009	16:15:00	6/16/2009 16:15	32.66	7.51	4820	2.64	81.5	5.8
6/16/2009	16:30:00	6/16/2009 16:30	32.78	7.55	4845	2.66	85.2	6.05
6/16/2009	16:45:00	6/16/2009 16:45	32.71	7.52	4809	2.64	82	5.84
6/16/2009	17:00:00	6/16/2009 17:00	32.45	7.47	4754	2.6	75.4	5.39
6/16/2009	17:15:00	6/16/2009 17:15	32.8	7.52	4798	2.63	82	5.83
6/16/2009	17:30:00	6/16/2009 17:30	32.52	7.47	4743	2.6	77	5.5
6/16/2009	17:45:00	6/16/2009 17:45	32.81	7.55	4808	2.63	84.5	6
6/16/2009	18:00:00	6/16/2009 18:00	32.77	7.52	4755	2.6	79.4	5.65
6/16/2009	18:15:00	6/16/2009 18:15	32.89	7.57	4805	2.63	84.6	6

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

6/16/2009	18:30:00	6/16/2009 18:30	32.99	7.6	4811	2.64	88.4	6.26
6/16/2009	18:45:00	6/16/2009 18:45	33.02	7.61	4853	2.66	87.3	6.18
6/16/2009	19:00:00	6/16/2009 19:00	33.12	7.71	4902	2.69	96.3	6.8
6/16/2009	19:15:00	6/16/2009 19:15	33.1	7.74	4913	2.7	96.7	6.83
6/16/2009	19:30:00	6/16/2009 19:30	33.05	7.7	4915	2.7	94.6	6.69
6/16/2009	19:45:00	6/16/2009 19:45	32.98	7.68	4912	2.69	92.4	6.54
6/16/2009	20:00:00	6/16/2009 20:00	32.94	7.67	4894	2.68	90.6	6.42
6/16/2009	20:15:00	6/16/2009 20:15	32.96	7.75	4916	2.7	97.7	6.92
6/16/2009	20:30:00	6/16/2009 20:30	32.87	7.71	4919	2.7	94.3	6.69
6/16/2009	20:45:00	6/16/2009 20:45	32.84	7.71	4919	2.7	93.7	6.65
6/16/2009	21:00:00	6/16/2009 21:00	32.79	7.73	4915	2.7	94	6.68
6/16/2009	21:15:00	6/16/2009 21:15	32.74	7.73	4911	2.69	94.3	6.71
6/16/2009	21:30:00	6/16/2009 21:30	32.68	7.7	4914	2.7	90.8	6.46
6/16/2009	21:45:00	6/16/2009 21:45	32.64	7.73	4911	2.69	92.8	6.61
6/16/2009	22:00:00	6/16/2009 22:00	32.52	7.61	4887	2.68	83.4	5.95
6/16/2009	22:15:00	6/16/2009 22:15	32.48	7.63	4898	2.69	84.9	6.06
6/16/2009	22:30:00	6/16/2009 22:30	32.42	7.58	4877	2.67	80.2	5.73
6/16/2009	22:45:00	6/16/2009 22:45	32.28	7.48	4840	2.65	68	4.87
6/16/2009	23:00:00	6/16/2009 23:00	32.29	7.52	4853	2.66	73.9	5.3
6/16/2009	23:15:00	6/16/2009 23:15	32.29	7.54	4861	2.67	74.6	5.34
6/16/2009	23:30:00	6/16/2009 23:30	32.25	7.52	4856	2.66	72.6	5.21
6/16/2009	23:45:00	6/16/2009 23:45	32.2	7.51	4854	2.66	70.8	5.08
6/17/2009	0:00:00	6/17/2009 0:00	32.14	7.49	4843	2.66	67	4.81
6/17/2009	0:15:00	6/17/2009 0:15	32.12	7.48	4839	2.65	67.1	4.82
6/17/2009	0:30:00	6/17/2009 0:30	32.05	7.46	4832	2.65	64.1	4.61
6/17/2009	0:45:00	6/17/2009 0:45	32.02	7.45	4822	2.64	62.1	4.47
6/17/2009	1:00:00	6/17/2009 1:00	32.05	7.48	4845	2.66	66.7	4.8
6/17/2009	1:15:00	6/17/2009 1:15	32.01	7.47	4837	2.65	64.5	4.65
6/17/2009	1:30:00	6/17/2009 1:30	32.01	7.47	4851	2.66	64.7	4.66
6/17/2009	1:45:00	6/17/2009 1:45	31.99	7.49	4857	2.66	66.7	4.8
6/17/2009	2:00:00	6/17/2009 2:00	31.98	7.49	4860	2.66	66.2	4.77
6/17/2009	2:15:00	6/17/2009 2:15	31.96	7.52	4868	2.67	68.9	4.97
6/17/2009	2:30:00	6/17/2009 2:30	31.92	7.53	4871	2.67	69.6	5.02
6/17/2009	2:45:00	6/17/2009 2:45	31.93	7.51	4865	2.67	67.5	4.86

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

6/17/2009	3:00:00	6/17/2009 3:00	31.9	7.51	4864	2.67	67.1	4.84
6/17/2009	3:15:00	6/17/2009 3:15	31.89	7.5	4857	2.66	65.3	4.71
6/17/2009	3:30:00	6/17/2009 3:30	31.87	7.52	4859	2.66	64.2	4.64
6/17/2009	3:45:00	6/17/2009 3:45	31.85	7.48	4858	2.66	63.4	4.58
6/17/2009	4:00:00	6/17/2009 4:00	31.83	7.47	4855	2.66	61.5	4.44
6/17/2009	4:15:00	6/17/2009 4:15	31.8	7.47	4854	2.66	60.3	4.36
6/17/2009	4:30:00	6/17/2009 4:30	31.79	7.46	4855	2.66	60.3	4.36
6/17/2009	4:45:00	6/17/2009 4:45	31.74	7.46	4855	2.66	59.1	4.28
6/17/2009	5:00:00	6/17/2009 5:00	31.72	7.46	4851	2.66	58.3	4.22
6/17/2009	5:15:00	6/17/2009 5:15	31.71	7.47	4845	2.66	57.8	4.19
6/17/2009	5:30:00	6/17/2009 5:30	31.7	7.46	4843	2.66	57	4.12
6/17/2009	5:45:00	6/17/2009 5:45	31.68	7.44	4841	2.65	55.4	4.01
6/17/2009	6:00:00	6/17/2009 6:00	31.66	7.44	4843	2.66	54.6	3.95
6/17/2009	6:15:00	6/17/2009 6:15	31.6	7.43	4820	2.64	52.4	3.8
6/17/2009	6:30:00	6/17/2009 6:30	31.59	7.42	4814	2.64	51.1	3.71
6/17/2009	6:45:00	6/17/2009 6:45	31.58	7.44	4815	2.64	50.9	3.7
6/17/2009	7:00:00	6/17/2009 7:00	31.56	7.46	4817	2.64	52	3.77
6/17/2009	7:15:00	6/17/2009 7:15	31.52	7.43	4801	2.63	52.5	3.81
6/17/2009	7:30:00	6/17/2009 7:30	31.53	7.43	4810	2.64	52.7	3.83
6/17/2009	7:45:00	6/17/2009 7:45	31.54	7.44	4813	2.64	53	3.85
6/17/2009	8:00:00	6/17/2009 8:00	31.54	7.43	4814	2.64	51.9	3.77
6/17/2009	8:15:00	6/17/2009 8:15	31.53	7.44	4810	2.64	50.9	3.69
6/17/2009	8:30:00	6/17/2009 8:30	31.55	7.44	4818	2.64	52.1	3.78
6/17/2009	8:45:00	6/17/2009 8:45	31.58	7.43	4816	2.64	52.7	3.83
6/17/2009	9:00:00	6/17/2009 9:00	31.61	7.47	4815	2.64	55	3.98
6/17/2009	9:15:00	6/17/2009 9:15	31.56	7.44	4819	2.64	51.3	3.72
6/17/2009	9:30:00	6/17/2009 9:30	31.57	7.45	4817	2.64	51.8	3.76
6/17/2009	9:45:00	6/17/2009 9:45	31.57	7.47	4837	2.65	52.8	3.83
6/17/2009	10:00:00	6/17/2009 10:00	31.59	7.43	4838	2.65	52.5	3.8
6/17/2009	10:15:00	6/17/2009 10:15	31.57	7.43	4842	2.65	52.2	3.78
6/17/2009	10:30:00	6/17/2009 10:30	31.7	7.49	4837	2.65	60.5	4.38
6/17/2009	10:45:00	6/17/2009 10:45	31.64	7.47	4842	2.65	56.3	4.08
6/17/2009	11:00:00	6/17/2009 11:00	31.66	7.49	4838	2.65	57.6	4.17
6/17/2009	11:15:00	6/17/2009 11:15	31.64	7.45	4843	2.66	55.6	4.03

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

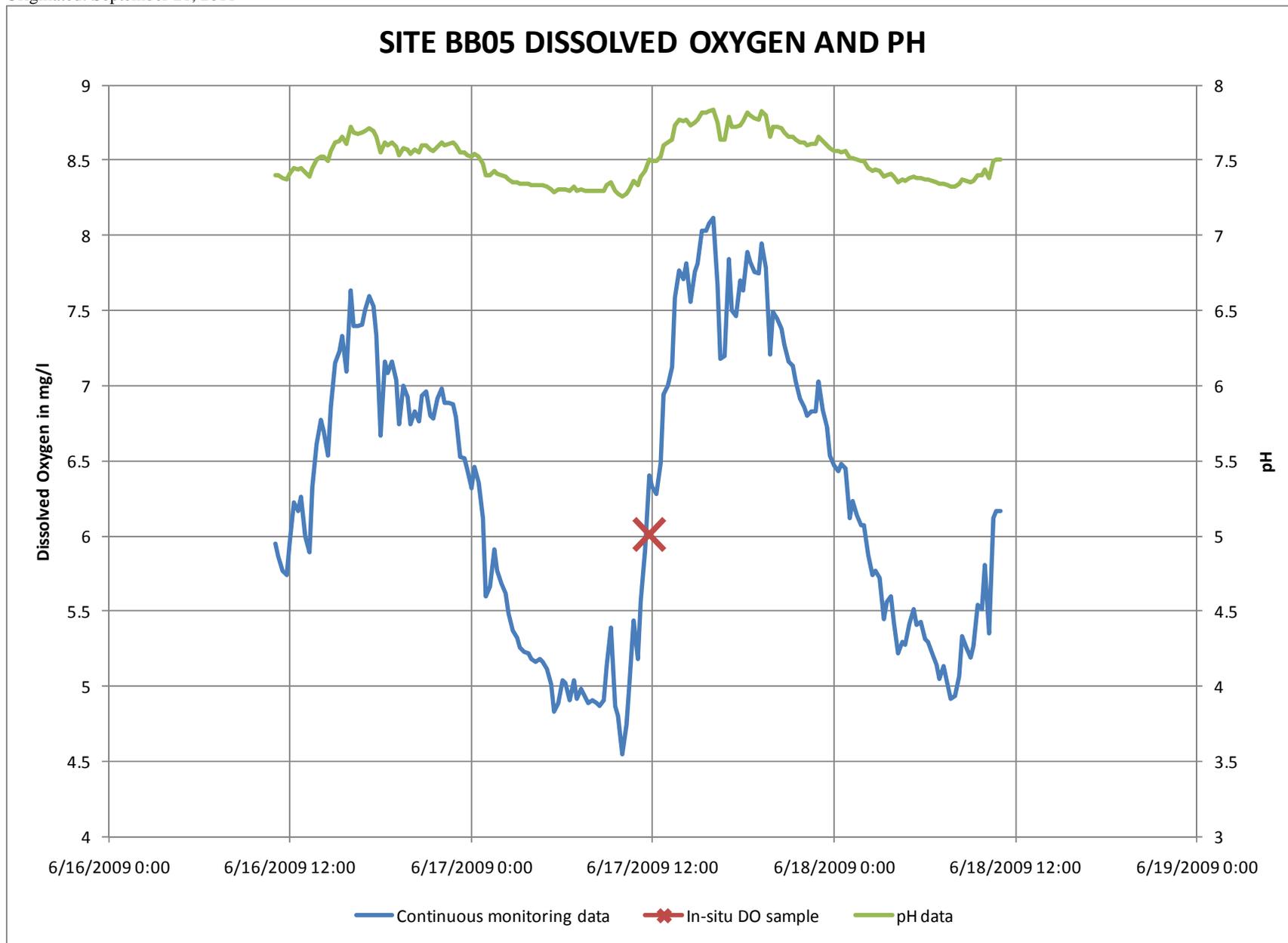
6/17/2009	11:30:00	6/17/2009 11:30	31.67	7.48	4842	2.65	58.5	4.23
6/17/2009	11:45:00	6/17/2009 11:45	31.75	7.5	4835	2.65	56.7	4.1
6/17/2009	12:00:00	6/17/2009 12:00	31.74	7.48	4836	2.65	56.3	4.07
6/17/2009	12:15:00	6/17/2009 12:15	31.87	7.54	4818	2.64	66.2	4.78
6/17/2009	12:30:00	6/17/2009 12:30	31.93	7.54	4815	2.64	65.8	4.74
6/17/2009	12:45:00	6/17/2009 12:45	31.96	7.54	4818	2.64	67.7	4.88
6/17/2009	13:00:00	6/17/2009 13:00	32.13	7.56	4801	2.63	70.9	5.09
6/17/2009	13:15:00	6/17/2009 13:15	32.33	7.6	4810	2.64	73.4	5.26
6/17/2009	13:30:00	6/17/2009 13:30	32.41	7.54	4809	2.64	66	4.72
6/17/2009	13:45:00	6/17/2009 13:45	32.43	7.6	4816	2.64	73.8	5.27
6/17/2009	14:00:00	6/17/2009 14:00	32.31	7.57	4774	2.62	70.7	5.06
6/17/2009	14:15:00	6/17/2009 14:15	32.53	7.68	4809	2.64	80.3	5.73
6/17/2009	14:30:00	6/17/2009 14:30	32.5	7.63	4777	2.62	77.3	5.52
6/17/2009	14:45:00	6/17/2009 14:45	32.65	7.63	4788	2.62	79.2	5.64
6/17/2009	15:00:00	6/17/2009 15:00	32.58	7.61	4792	2.63	75.7	5.4
6/17/2009	15:15:00	6/17/2009 15:15	32.7	7.68	4801	2.63	79.7	5.67
6/17/2009	15:30:00	6/17/2009 15:30	32.96	7.67	4762	2.61	80.4	5.7
6/17/2009	15:45:00	6/17/2009 15:45	33.08	7.78	4834	2.65	89.7	6.34
6/17/2009	16:00:00	6/17/2009 16:00	33.12	7.75	4822	2.64	89.7	6.34
6/17/2009	16:15:00	6/17/2009 16:15	33.02	7.72	4825	2.64	87.4	6.19
6/17/2009	16:30:00	6/17/2009 16:30	33.23	7.81	4872	2.67	93.3	6.58
6/17/2009	16:45:00	6/17/2009 16:45	33.22	7.84	4884	2.68	95.1	6.71
6/17/2009	17:00:00	6/17/2009 17:00	33.22	7.84	4874	2.67	94.5	6.67
6/17/2009	17:15:00	6/17/2009 17:15	33.28	7.86	4887	2.68	97.1	6.84
6/17/2009	17:30:00	6/17/2009 17:30	33.39	7.89	4915	2.7	98.3	6.91
6/17/2009	17:45:00	6/17/2009 17:45	33.43	7.88	4916	2.7	99.9	7.02
6/17/2009	18:00:00	6/17/2009 18:00	33.49	7.93	4950	2.72	102.8	7.22
6/17/2009	18:15:00	6/17/2009 18:15	33.51	7.96	4940	2.71	103.1	7.23
6/17/2009	18:30:00	6/17/2009 18:30	33.54	7.95	4942	2.71	104.2	7.31
6/17/2009	18:45:00	6/17/2009 18:45	33.38	7.89	4918	2.7	96.1	6.76
6/17/2009	19:00:00	6/17/2009 19:00	33.22	7.83	4894	2.68	92	6.49
6/17/2009	19:15:00	6/17/2009 19:15	33.31	7.86	4915	2.7	95.5	6.73
6/17/2009	19:30:00	6/17/2009 19:30	33.34	7.96	4957	2.72	101.1	7.12
6/17/2009	19:45:00	6/17/2009 19:45	33.37	7.97	4958	2.72	103.5	7.28

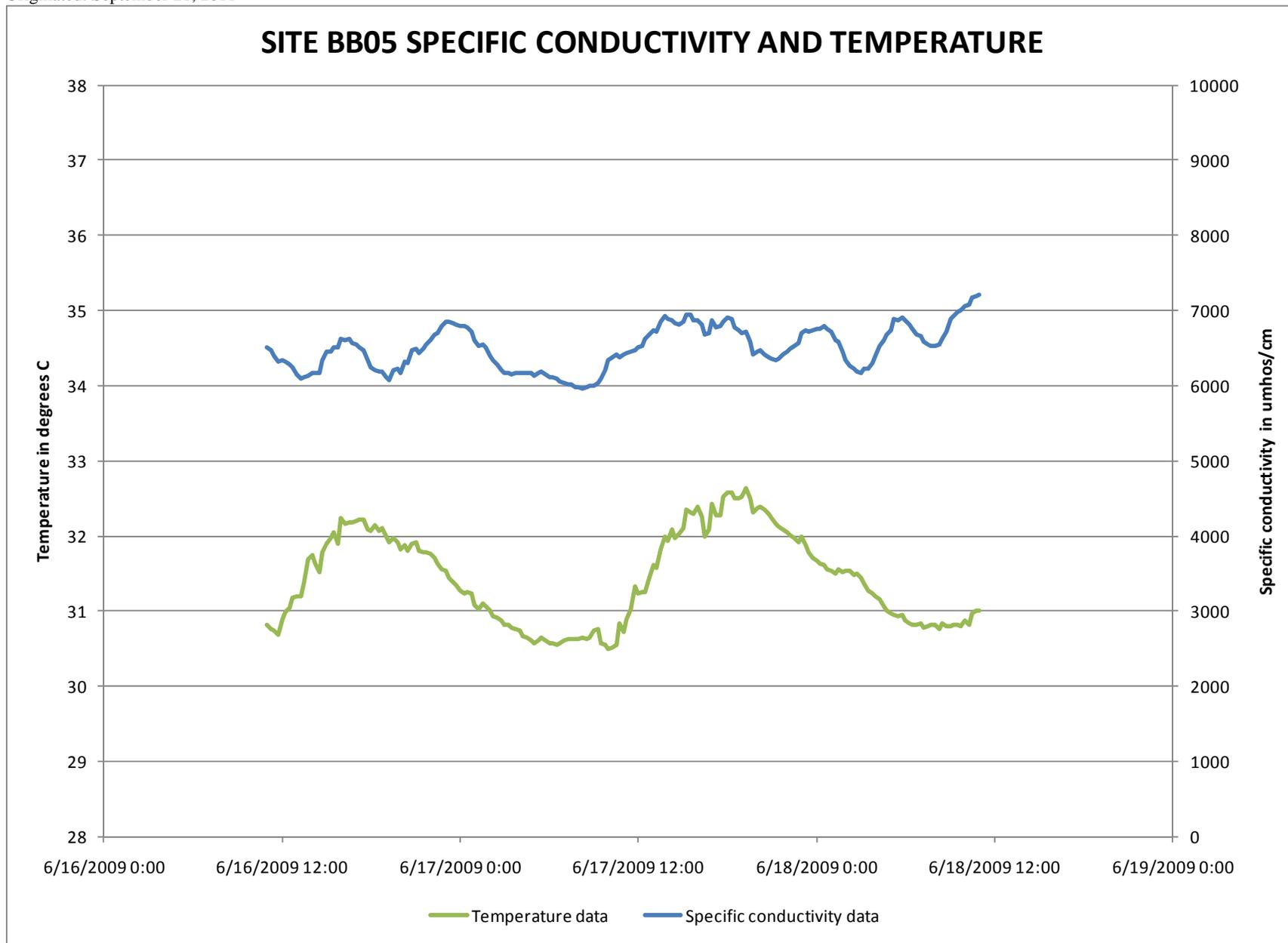
Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

6/17/2009	20:00:00	6/17/2009 20:00	33.29	7.94	4962	2.72	100.4	7.08
6/17/2009	20:15:00	6/17/2009 20:15	33.26	7.97	5017	2.75	103.7	7.31
6/17/2009	20:30:00	6/17/2009 20:30	33.29	7.99	4998	2.74	103.1	7.26
6/17/2009	20:45:00	6/17/2009 20:45	33.23	8	4996	2.74	102.3	7.21
6/17/2009	21:00:00	6/17/2009 21:00	33.23	7.98	4988	2.74	101.8	7.18
6/17/2009	21:15:00	6/17/2009 21:15	33.24	7.98	4963	2.72	101.3	7.14
6/17/2009	21:30:00	6/17/2009 21:30	33.17	7.92	4949	2.72	98.2	6.93
6/17/2009	21:45:00	6/17/2009 21:45	33.13	7.95	4946	2.71	98.4	6.95
6/17/2009	22:00:00	6/17/2009 22:00	33.08	7.9	4943	2.71	96	6.79
6/17/2009	22:15:00	6/17/2009 22:15	33.03	7.87	4939	2.71	94.1	6.65
6/17/2009	22:30:00	6/17/2009 22:30	32.96	7.81	4930	2.7	88.6	6.28
6/17/2009	22:45:00	6/17/2009 22:45	32.88	7.8	4952	2.72	87.7	6.22
6/17/2009	23:00:00	6/17/2009 23:00	32.87	7.83	4948	2.71	88	6.25
6/17/2009	23:15:00	6/17/2009 23:15	32.78	7.8	4937	2.71	85.3	6.06
6/17/2009	23:30:00	6/17/2009 23:30	32.71	7.75	4928	2.7	82.4	5.86
6/17/2009	23:45:00	6/17/2009 23:45	32.7	7.74	4923	2.7	81.9	5.82
6/18/2009	0:00:00	6/18/2009 0:00	32.66	7.77	4928	2.7	81.5	5.8
6/18/2009	0:15:00	6/18/2009 0:15	32.59	7.74	4921	2.7	79.6	5.67
6/18/2009	0:30:00	6/18/2009 0:30	32.56	7.72	4927	2.7	78.7	5.61
6/18/2009	0:45:00	6/18/2009 0:45	32.51	7.71	4938	2.71	77.6	5.54
6/18/2009	1:00:00	6/18/2009 1:00	32.47	7.7	4926	2.7	77.4	5.52
6/18/2009	1:15:00	6/18/2009 1:15	32.45	7.69	4919	2.7	75.7	5.41
6/18/2009	1:30:00	6/18/2009 1:30	32.43	7.64	4903	2.69	71.2	5.09
6/18/2009	1:45:00	6/18/2009 1:45	32.41	7.66	4907	2.69	73.1	5.23
6/18/2009	2:00:00	6/18/2009 2:00	32.39	7.66	4903	2.69	71	5.08
6/18/2009	2:15:00	6/18/2009 2:15	32.38	7.66	4902	2.69	72.3	5.17
6/18/2009	2:30:00	6/18/2009 2:30	32.37	7.68	4897	2.69	72.2	5.16
6/18/2009	2:45:00	6/18/2009 2:45	32.34	7.64	4884	2.68	69.7	4.99
6/18/2009	3:00:00	6/18/2009 3:00	32.33	7.64	4884	2.68	68.9	4.93
6/18/2009	3:15:00	6/18/2009 3:15	32.3	7.62	4885	2.68	67.4	4.83
6/18/2009	3:30:00	6/18/2009 3:30	32.27	7.61	4893	2.68	66	4.73
6/18/2009	3:45:00	6/18/2009 3:45	32.23	7.6	4887	2.68	65.1	4.67
6/18/2009	4:00:00	6/18/2009 4:00	32.19	7.59	4898	2.69	64.2	4.6
6/18/2009	4:15:00	6/18/2009 4:15	32.16	7.59	4899	2.69	64.3	4.62

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

6/18/2009	4:30:00	6/18/2009 4:30	32.12	7.59	4901	2.69	63.4	4.56
6/18/2009	4:45:00	6/18/2009 4:45	32.07	7.58	4910	2.69	63.2	4.54
6/18/2009	5:00:00	6/18/2009 5:00	32.01	7.57	4914	2.7	61.5	4.43
6/18/2009	5:15:00	6/18/2009 5:15	31.98	7.57	4914	2.7	60.4	4.35
6/18/2009	5:30:00	6/18/2009 5:30	31.97	7.57	4925	2.7	61.2	4.41
6/18/2009	5:45:00	6/18/2009 5:45	31.93	7.57	4921	2.7	59	4.25
6/18/2009	6:00:00	6/18/2009 6:00	31.92	7.56	4924	2.7	59.1	4.26
6/18/2009	6:15:00	6/18/2009 6:15	31.9	7.57	4923	2.7	60.2	4.34
6/18/2009	6:30:00	6/18/2009 6:30	31.89	7.57	4925	2.7	60.1	4.33
6/18/2009	6:45:00	6/18/2009 6:45	31.89	7.58	4918	2.7	61.9	4.46
6/18/2009	7:00:00	6/18/2009 7:00	31.9	7.59	4917	2.7	62.7	4.52
6/18/2009	7:15:00	6/18/2009 7:15	31.9	7.59	4916	2.7	62.3	4.49
6/18/2009	7:30:00	6/18/2009 7:30	31.88	7.58	4914	2.7	61	4.4
6/18/2009	7:45:00	6/18/2009 7:45	31.9	7.58	4912	2.69	61.3	4.42
6/18/2009	8:00:00	6/18/2009 8:00	31.9	7.57	4906	2.69	59.3	4.27
6/18/2009	8:15:00	6/18/2009 8:15	31.9	7.56	4898	2.69	56.9	4.1
6/18/2009	8:30:00	6/18/2009 8:30	31.89	7.55	4900	2.69	54.9	3.96
6/18/2009	8:45:00	6/18/2009 8:45	31.88	7.54	4904	2.69	54.6	3.94
6/18/2009	9:00:00	6/18/2009 9:00	31.87	7.55	4909	2.69	55.4	4
6/18/2009	9:15:00	6/18/2009 9:15	31.85	7.56	4921	2.7	57.2	4.13
6/18/2009	9:30:00	6/18/2009 9:30	31.85	7.57	4921	2.7	57.7	4.16
6/18/2009	9:45:00	6/18/2009 9:45	31.87	7.58	4923	2.7	60	4.33
6/18/2009	10:00:00	6/18/2009 10:00	31.87	7.59	4930	2.7	61.6	4.44
6/18/2009	10:15:00	6/18/2009 10:15	31.92	7.61	4924	2.7	62.5	4.5
6/18/2009	10:30:00	6/18/2009 10:30	31.91	7.61	4926	2.7	63.9	4.61
6/18/2009	10:45:00	6/18/2009 10:45	31.9	7.61	4927	2.7	64.5	4.65





Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

Date M/D/YYYY	Time HH:MM:SS	Date/Time	TEMP °C	pH Units	Cond uS/cm	Sal ppt	LDO% Sat	LDO mg/l
11:00:00	6/16/2009 11:00	30.81 7.4	6513	3.61	81.4	5.95		
11:15:00	6/16/2009 11:15	30.77 7.4	6478	3.59	80.1	5.86		
11:30:00	6/16/2009 11:30	30.74 7.38	6401	3.55	78.8	5.77		
11:45:00	6/16/2009 11:45	30.69 7.37	6326	3.5	78.4	5.74		
12:00:00	6/16/2009 12:00	30.9 7.41	6345	3.51	81.5	5.95		
12:15:00	6/16/2009 12:15	30.99 7.45	6315	3.5	85.4	6.22		
12:30:00	6/16/2009 12:30	31.05 7.44	6277	3.47	84.7	6.17		
12:45:00	6/16/2009 12:45	31.17 7.45	6243	3.45	86.2	6.26		
13:00:00	6/16/2009 13:00	31.2 7.42	6154	3.4	82.6	6		
13:15:00	6/16/2009 13:15	31.19 7.39	6098	3.37	81	5.89		
13:30:00	6/16/2009 13:30	31.37 7.45	6115	3.38	87.4	6.33		
13:45:00	6/16/2009 13:45	31.69 7.5	6124	3.39	91.7	6.61		
14:00:00	6/16/2009 14:00	31.75 7.52	6164	3.41	94	6.77		
14:15:00	6/16/2009 14:15	31.64 7.52	6167	3.41	92.8	6.7		
14:30:00	6/16/2009 14:30	31.52 7.49	6168	3.41	90.4	6.54		
14:45:00	6/16/2009 14:45	31.78 7.56	6330	3.5	95.4	6.86		
15:00:00	6/16/2009 15:00	31.89 7.62	6448	3.57	99.6	7.15		
15:15:00	6/16/2009 15:15	31.97 7.63	6450	3.57	100.9	7.23		
15:30:00	6/16/2009 15:30	32.05 7.66	6500	3.6	102.4	7.33		
15:45:00	6/16/2009 15:45	31.9 7.61	6508	3.61	98.8	7.09		
16:00:00	6/16/2009 16:00	32.23 7.72	6622	3.67	106.9	7.63		
16:15:00	6/16/2009 16:15	32.17 7.68	6604	3.66	103.7	7.4		
16:30:00	6/16/2009 16:30	32.18 7.67	6614	3.67	103.7	7.4		
16:45:00	6/16/2009 16:45	32.18 7.68	6569	3.64	103.8	7.41		
17:00:00	6/16/2009 17:00	32.2 7.69	6542	3.63	105	7.5		
17:15:00	6/16/2009 17:15	32.22 7.71	6515	3.61	106.5	7.6		
17:30:00	6/16/2009 17:30	32.21 7.69	6467	3.58	105.4	7.53		
17:45:00	6/16/2009 17:45	32.08 7.66	6346	3.51	102.6	7.34		
18:00:00	6/16/2009 18:00	32.06 7.55	6251	3.46	93.1	6.67		
18:15:00	6/16/2009 18:15	32.14 7.62	6207	3.43	100.1	7.16		
18:30:00	6/16/2009 18:30	32.06 7.6	6184	3.42	98.9	7.08		
18:45:00	6/16/2009 18:45	32.1 7.62	6192	3.43	100.1	7.16		

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

19:00:00	6/16/2009 19:00	31.99	7.59	6116	3.38	98.2	7.04
19:15:00	6/16/2009 19:15	31.92	7.53	6076	3.36	93.9	6.74
19:30:00	6/16/2009 19:30	31.97	7.58	6213	3.44	97.5	7
19:45:00	6/16/2009 19:45	31.91	7.57	6217	3.44	96.3	6.92
20:00:00	6/16/2009 20:00	31.82	7.54	6170	3.41	93.8	6.74
20:15:00	6/16/2009 20:15	31.87	7.57	6321	3.5	95.1	6.83
20:30:00	6/16/2009 20:30	31.8	7.55	6302	3.49	94	6.76
20:45:00	6/16/2009 20:45	31.9	7.6	6463	3.58	96.5	6.93
21:00:00	6/16/2009 21:00	31.92	7.6	6486	3.6	97	6.96
21:15:00	6/16/2009 21:15	31.8	7.57	6429	3.56	94.5	6.8
21:30:00	6/16/2009 21:30	31.78	7.56	6490	3.6	94.3	6.78
21:45:00	6/16/2009 21:45	31.79	7.59	6550	3.63	96.1	6.91
22:00:00	6/16/2009 22:00	31.76	7.62	6612	3.67	97.1	6.98
22:15:00	6/16/2009 22:15	31.7	7.6	6672	3.7	95.7	6.89
22:30:00	6/16/2009 22:30	31.64	7.61	6701	3.72	95.7	6.89
22:45:00	6/16/2009 22:45	31.55	7.62	6802	3.78	95.4	6.88
23:00:00	6/16/2009 23:00	31.54	7.6	6847	3.8	94.1	6.79
23:15:00	6/16/2009 23:15	31.45	7.55	6853	3.81	90.4	6.53
23:30:00	6/16/2009 23:30	31.38	7.55	6822	3.79	90.1	6.52
23:45:00	6/16/2009 23:45	31.34	7.53	6815	3.79	88.9	6.44
0:00:00	6/17/2009 0:00	31.27	7.52	6797	3.77	87.2	6.32
0:15:00	6/17/2009 0:15	31.24	7.54	6799	3.78	89.1	6.46
0:30:00	6/17/2009 0:30	31.26	7.52	6783	3.77	87.8	6.36
0:45:00	6/17/2009 0:45	31.23	7.48	6727	3.73	84.5	6.12
1:00:00	6/17/2009 1:00	31.09	7.4	6597	3.66	77	5.6
1:15:00	6/17/2009 1:15	31.02	7.4	6532	3.62	77.8	5.66
1:30:00	6/17/2009 1:30	31.1	7.43	6549	3.63	81.3	5.91
1:45:00	6/17/2009 1:45	31.06	7.41	6502	3.6	79.3	5.77
2:00:00	6/17/2009 2:00	31.01	7.4	6395	3.54	78	5.68
2:15:00	6/17/2009 2:15	30.93	7.39	6332	3.51	77	5.62
2:30:00	6/17/2009 2:30	30.92	7.37	6284	3.48	75.1	5.48
2:45:00	6/17/2009 2:45	30.87	7.35	6208	3.43	73.5	5.37
3:00:00	6/17/2009 3:00	30.82	7.35	6172	3.41	72.8	5.32
3:15:00	6/17/2009 3:15	30.82	7.34	6161	3.41	72	5.26

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

3:30:00	6/17/2009 3:30	30.78	7.34	6152	3.4	71.4	5.23
3:45:00	6/17/2009 3:45	30.77	7.34	6160	3.41	71.3	5.22
4:00:00	6/17/2009 4:00	30.74	7.33	6169	3.41	70.7	5.18
4:15:00	6/17/2009 4:15	30.66	7.33	6164	3.41	70.3	5.16
4:30:00	6/17/2009 4:30	30.65	7.33	6173	3.41	70.6	5.18
4:45:00	6/17/2009 4:45	30.61	7.33	6164	3.41	70.3	5.16
5:00:00	6/17/2009 5:00	30.58	7.32	6138	3.39	69.6	5.12
5:15:00	6/17/2009 5:15	30.61	7.31	6165	3.41	68.3	5.01
5:30:00	6/17/2009 5:30	30.65	7.29	6193	3.43	65.8	4.83
5:45:00	6/17/2009 5:45	30.61	7.31	6146	3.4	66.6	4.89
6:00:00	6/17/2009 6:00	30.57	7.31	6116	3.38	68.6	5.04
6:15:00	6/17/2009 6:15	30.57	7.31	6108	3.38	68.3	5.02
6:30:00	6/17/2009 6:30	30.56	7.3	6095	3.37	66.8	4.91
6:45:00	6/17/2009 6:45	30.58	7.32	6054	3.35	68.5	5.04
7:00:00	6/17/2009 7:00	30.61	7.3	6042	3.34	67.1	4.92
7:15:00	6/17/2009 7:15	30.62	7.31	6024	3.33	67.8	4.98
7:30:00	6/17/2009 7:30	30.62	7.3	6011	3.32	67.1	4.93
7:45:00	6/17/2009 7:45	30.62	7.3	5979	3.3	66.5	4.89
8:00:00	6/17/2009 8:00	30.62	7.3	5972	3.3	66.9	4.91
8:15:00	6/17/2009 8:15	30.64	7.3	5957	3.29	66.6	4.89
8:30:00	6/17/2009 8:30	30.63	7.3	5975	3.3	66.3	4.87
8:45:00	6/17/2009 8:45	30.65	7.3	5990	3.31	66.9	4.91
9:00:00	6/17/2009 9:00	30.75	7.33	6006	3.32	70	5.13
9:15:00	6/17/2009 9:15	30.76	7.35	6034	3.33	73.6	5.39
9:30:00	6/17/2009 9:30	30.57	7.3	6089	3.37	66.2	4.87
9:45:00	6/17/2009 9:45	30.56	7.28	6215	3.44	65.3	4.8
10:00:00	6/17/2009 10:00	30.5	7.26	6334	3.51	61.8	4.55
10:15:00	6/17/2009 10:15	30.51	7.28	6368	3.53	64.7	4.75
10:30:00	6/17/2009 10:30	30.56	7.31	6408	3.55	68.2	5.01
10:45:00	6/17/2009 10:45	30.84	7.36	6373	3.53	74.4	5.44
11:00:00	6/17/2009 11:00	30.73	7.33	6407	3.55	70.7	5.18
11:15:00	6/17/2009 11:15	30.9	7.39	6443	3.57	76.4	5.57
11:30:00	6/17/2009 11:30	31.03	7.43	6462	3.58	81	5.9
11:45:00	6/17/2009 11:45	31.32	7.5	6474	3.59	88.4	6.4

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

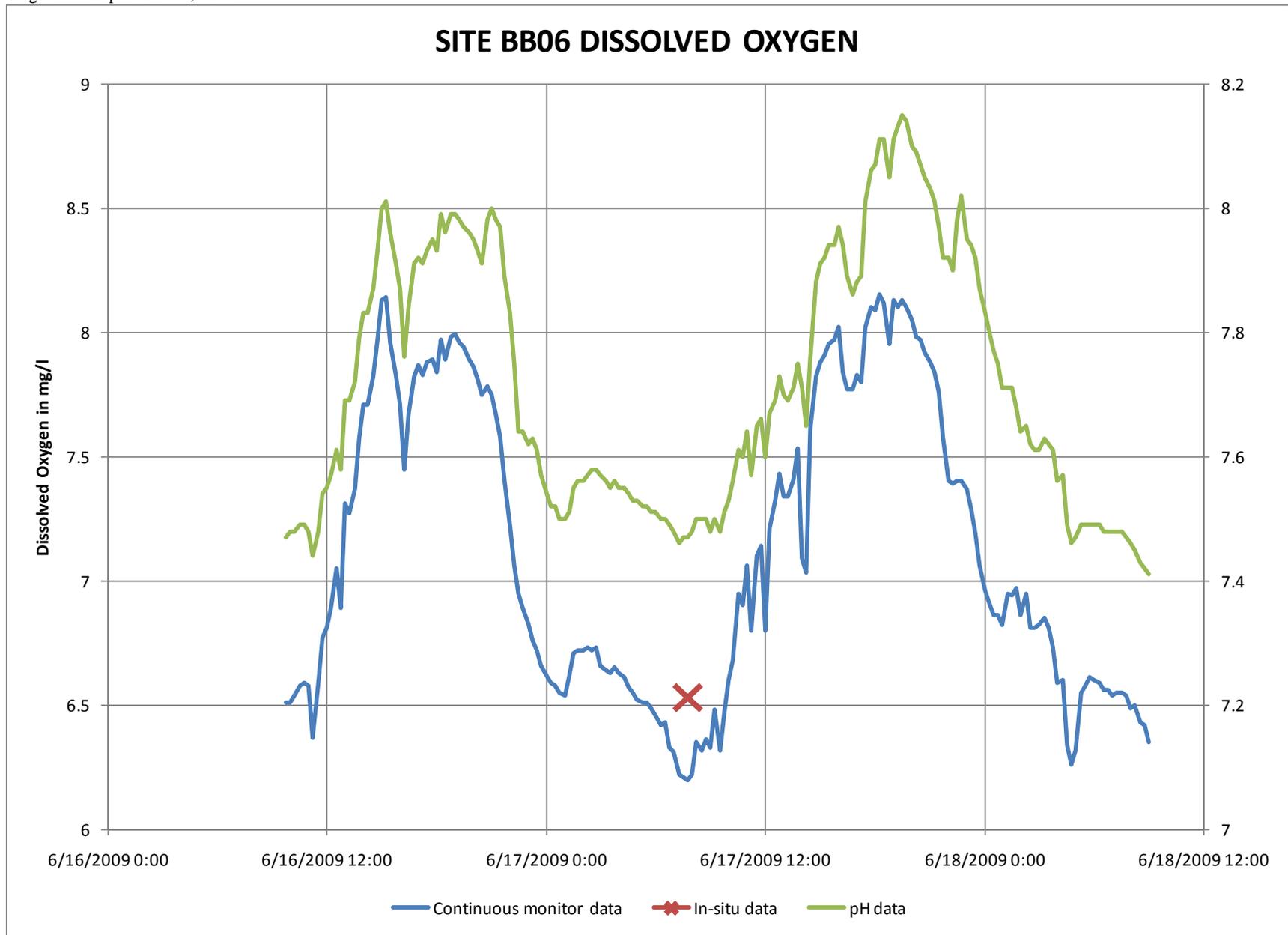
12:00:00	6/17/2009 12:00	31.23	7.49	6505	3.61	87.3	6.33
12:15:00	6/17/2009 12:15	31.25	7.49	6527	3.62	86.6	6.28
12:30:00	6/17/2009 12:30	31.25	7.52	6629	3.68	89.5	6.49
12:45:00	6/17/2009 12:45	31.44	7.6	6672	3.7	96	6.94
13:00:00	6/17/2009 13:00	31.61	7.62	6739	3.74	97.2	7
13:15:00	6/17/2009 13:15	31.58	7.64	6727	3.73	98.7	7.12
13:30:00	6/17/2009 13:30	31.83	7.73	6853	3.81	105.8	7.59
13:45:00	6/17/2009 13:45	32	7.77	6927	3.85	108.7	7.77
14:00:00	6/17/2009 14:00	31.94	7.76	6889	3.83	107.7	7.71
14:15:00	6/17/2009 14:15	32.08	7.77	6864	3.81	109.3	7.81
14:30:00	6/17/2009 14:30	31.97	7.73	6836	3.8	105.6	7.56
14:45:00	6/17/2009 14:45	32.03	7.75	6810	3.78	108.5	7.76
15:00:00	6/17/2009 15:00	32.1	7.77	6841	3.8	109.3	7.81
15:15:00	6/17/2009 15:15	32.36	7.82	6945	3.86	112.9	8.03
15:30:00	6/17/2009 15:30	32.32	7.82	6937	3.86	112.9	8.03
15:45:00	6/17/2009 15:45	32.3	7.83	6861	3.81	113.5	8.08
16:00:00	6/17/2009 16:00	32.38	7.84	6873	3.82	114.2	8.12
16:15:00	6/17/2009 16:15	32.25	7.75	6808	3.78	107.6	7.67
16:30:00	6/17/2009 16:30	31.99	7.64	6681	3.71	100.2	7.18
16:45:00	6/17/2009 16:45	32.08	7.64	6703	3.72	100.7	7.2
17:00:00	6/17/2009 17:00	32.42	7.79	6875	3.82	110.3	7.84
17:15:00	6/17/2009 17:15	32.28	7.72	6777	3.76	105.4	7.5
17:30:00	6/17/2009 17:30	32.27	7.72	6788	3.77	104.7	7.46
17:45:00	6/17/2009 17:45	32.52	7.73	6846	3.8	108.6	7.7
18:00:00	6/17/2009 18:00	32.57	7.76	6904	3.84	107.7	7.63
18:15:00	6/17/2009 18:15	32.58	7.82	6890	3.83	111.4	7.89
18:30:00	6/17/2009 18:30	32.5	7.8	6781	3.77	110.2	7.82
18:45:00	6/17/2009 18:45	32.51	7.78	6730	3.74	109.4	7.76
19:00:00	6/17/2009 19:00	32.53	7.77	6705	3.72	109.3	7.75
19:15:00	6/17/2009 19:15	32.63	7.83	6727	3.73	112.3	7.95
19:30:00	6/17/2009 19:30	32.5	7.8	6588	3.65	109.5	7.78
19:45:00	6/17/2009 19:45	32.31	7.66	6421	3.56	101.1	7.21
20:00:00	6/17/2009 20:00	32.37	7.72	6457	3.58	105.2	7.49
20:15:00	6/17/2009 20:15	32.39	7.72	6466	3.58	104.5	7.44

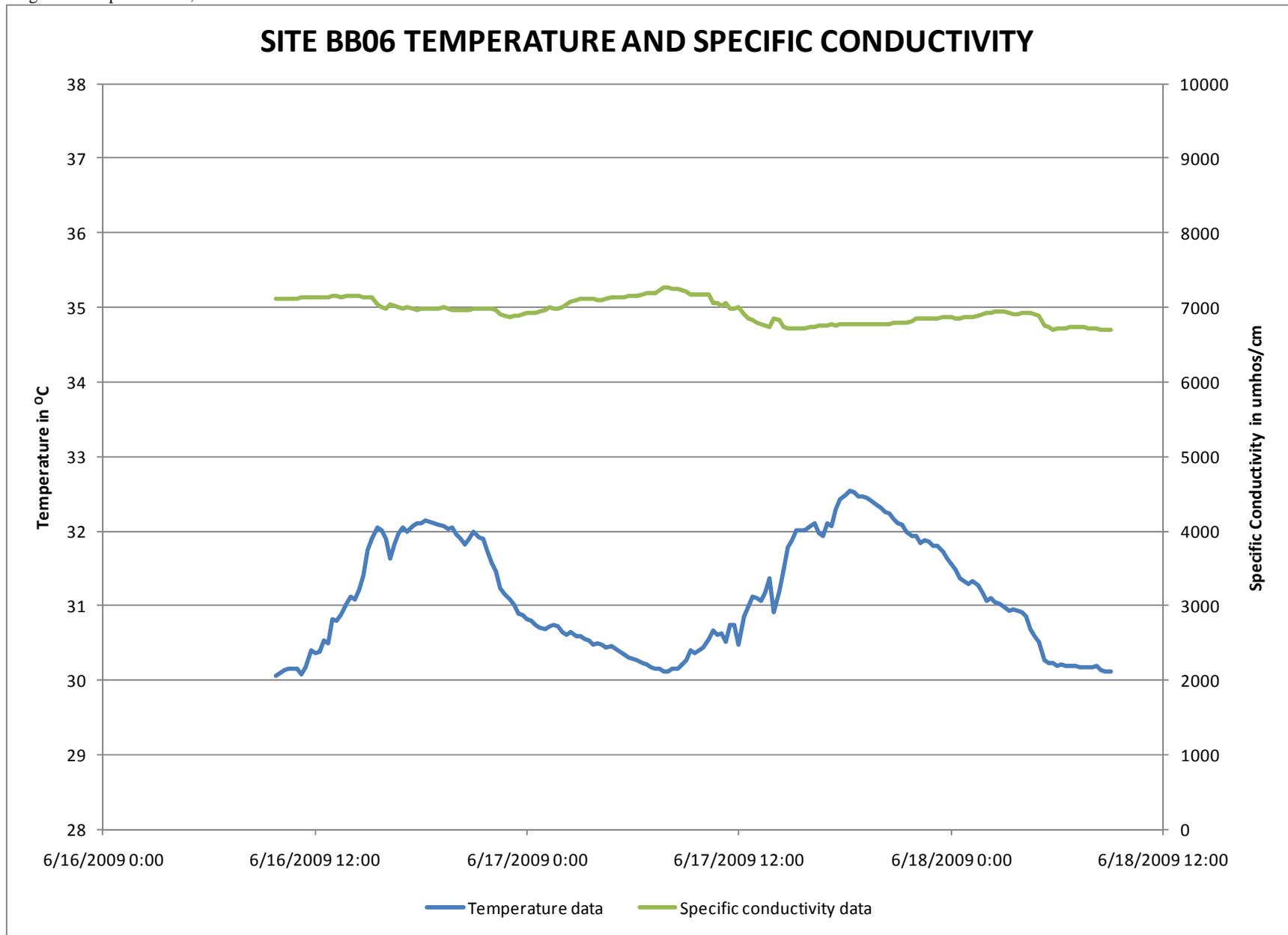
Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

20:30:00	6/17/2009 20:30	32.36	7.71	6422	3.56	103.6	7.38
20:45:00	6/17/2009 20:45	32.3	7.68	6380	3.53	102	7.27
21:00:00	6/17/2009 21:00	32.23	7.66	6350	3.52	100.3	7.16
21:15:00	6/17/2009 21:15	32.17	7.66	6339	3.51	99.7	7.13
21:30:00	6/17/2009 21:30	32.12	7.64	6357	3.52	98.3	7.03
21:45:00	6/17/2009 21:45	32.08	7.62	6412	3.55	96.6	6.91
22:00:00	6/17/2009 22:00	32.04	7.62	6456	3.58	95.8	6.86
22:15:00	6/17/2009 22:15	32.01	7.6	6498	3.6	94.9	6.8
22:30:00	6/17/2009 22:30	31.98	7.61	6530	3.62	95.3	6.83
22:45:00	6/17/2009 22:45	31.92	7.61	6567	3.64	95.2	6.83
23:00:00	6/17/2009 23:00	31.99	7.66	6693	3.71	98.2	7.03
23:15:00	6/17/2009 23:15	31.87	7.63	6737	3.74	95.3	6.84
23:30:00	6/17/2009 23:30	31.78	7.6	6726	3.73	93.6	6.72
23:45:00	6/17/2009 23:45	31.71	7.58	6739	3.74	91	6.54
0:00:00	6/18/2009 0:00	31.67	7.56	6752	3.75	89.8	6.47
0:15:00	6/18/2009 0:15	31.63	7.56	6759	3.75	89.2	6.43
0:30:00	6/18/2009 0:30	31.62	7.55	6791	3.77	90	6.48
0:45:00	6/18/2009 0:45	31.56	7.56	6747	3.75	89.4	6.45
1:00:00	6/18/2009 1:00	31.53	7.51	6720	3.73	84.9	6.12
1:15:00	6/18/2009 1:15	31.5	7.51	6602	3.66	86.3	6.23
1:30:00	6/18/2009 1:30	31.55	7.5	6580	3.65	85	6.14
1:45:00	6/18/2009 1:45	31.52	7.49	6457	3.58	84.1	6.07
2:00:00	6/18/2009 2:00	31.53	7.49	6340	3.51	84	6.07
2:15:00	6/18/2009 2:15	31.53	7.45	6261	3.47	81.3	5.87
2:30:00	6/18/2009 2:30	31.49	7.43	6217	3.44	79.3	5.74
2:45:00	6/18/2009 2:45	31.5	7.44	6189	3.42	79.8	5.77
3:00:00	6/18/2009 3:00	31.44	7.43	6175	3.42	79.1	5.72
3:15:00	6/18/2009 3:15	31.37	7.39	6216	3.44	75.2	5.45
3:30:00	6/18/2009 3:30	31.28	7.4	6230	3.45	76.6	5.56
3:45:00	6/18/2009 3:45	31.23	7.41	6298	3.49	77.1	5.6
4:00:00	6/18/2009 4:00	31.2	7.39	6405	3.55	74.8	5.43
4:15:00	6/18/2009 4:15	31.15	7.35	6521	3.61	71.8	5.22
4:30:00	6/18/2009 4:30	31.06	7.37	6601	3.66	72.8	5.3
4:45:00	6/18/2009 4:45	31	7.36	6680	3.71	72.5	5.28

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

5:00:00	6/18/2009 5:00	30.96	7.38	6735	3.74	74.3	5.42
5:15:00	6/18/2009 5:15	30.95	7.39	6882	3.82	75.7	5.51
5:30:00	6/18/2009 5:30	30.93	7.38	6871	3.82	74.3	5.41
5:45:00	6/18/2009 5:45	30.95	7.38	6903	3.84	74.6	5.43
6:00:00	6/18/2009 6:00	30.88	7.37	6860	3.81	72.9	5.31
6:15:00	6/18/2009 6:15	30.84	7.37	6810	3.78	72.7	5.3
6:30:00	6/18/2009 6:30	30.82	7.36	6751	3.75	71.5	5.22
6:45:00	6/18/2009 6:45	30.82	7.35	6673	3.7	70.3	5.14
7:00:00	6/18/2009 7:00	30.83	7.34	6669	3.7	69.2	5.05
7:15:00	6/18/2009 7:15	30.78	7.34	6583	3.65	70.1	5.13
7:30:00	6/18/2009 7:30	30.8	7.33	6538	3.62	68.4	5
7:45:00	6/18/2009 7:45	30.81	7.32	6528	3.62	67.3	4.92
8:00:00	6/18/2009 8:00	30.81	7.32	6532	3.62	67.6	4.94
8:15:00	6/18/2009 8:15	30.77	7.34	6548	3.63	69.4	5.07
8:30:00	6/18/2009 8:30	30.83	7.37	6619	3.67	72.9	5.33
8:45:00	6/18/2009 8:45	30.79	7.36	6725	3.73	72	5.26
9:00:00	6/18/2009 9:00	30.79	7.35	6879	3.82	71.1	5.19
9:15:00	6/18/2009 9:15	30.81	7.36	6924	3.85	72.1	5.27
9:30:00	6/18/2009 9:30	30.81	7.4	6983	3.88	76	5.54
9:45:00	6/18/2009 9:45	30.8	7.4	7010	3.9	75.4	5.51
10:00:00	6/18/2009 10:00	30.88	7.44	7056	3.92	79.7	5.81
10:15:00	6/18/2009 10:15	30.81	7.38	7084	3.94	73.3	5.35
10:30:00	6/18/2009 10:30	30.97	7.49	7181	4	84.1	6.12
10:45:00	6/18/2009 10:45	31	7.5	7194	4	84.8	6.17
11:00:00	6/18/2009 11:00	31.01	7.5	7208	4.01	84.9	6.17





Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

Date M/D/YYYY	Time HH:MM:SS	Date/Time	TEMP °C	pH Units	Cond uS/cm	Sal ppt	LDO% Sat	LDO mg/l
6/16/2009	9:45:00	6/16/2009 9:45	30.06	7.47	7113	3.96	88.1	6.51
6/16/2009	10:00:00	6/16/2009 10:00	30.1	7.48	7119	3.96	88.1	6.51
6/16/2009	10:15:00	6/16/2009 10:15	30.14	7.48	7118	3.96	88.6	6.54
6/16/2009	10:30:00	6/16/2009 10:30	30.16	7.49	7115	3.96	89.2	6.58
6/16/2009	10:45:00	6/16/2009 10:45	30.16	7.49	7119	3.96	89.3	6.59
6/16/2009	11:00:00	6/16/2009 11:00	30.16	7.48	7121	3.96	89.2	6.58
6/16/2009	11:15:00	6/16/2009 11:15	30.08	7.44	7133	3.97	86.2	6.37
6/16/2009	11:30:00	6/16/2009 11:30	30.18	7.48	7132	3.97	89.4	6.59
6/16/2009	11:45:00	6/16/2009 11:45	30.41	7.54	7129	3.97	92.2	6.77
6/16/2009	12:00:00	6/16/2009 12:00	30.36	7.55	7132	3.97	92.7	6.81
6/16/2009	12:15:00	6/16/2009 12:15	30.38	7.57	7127	3.97	93.8	6.89
6/16/2009	12:30:00	6/16/2009 12:30	30.54	7.61	7126	3.97	96.2	7.05
6/16/2009	12:45:00	6/16/2009 12:45	30.49	7.58	7135	3.97	93.9	6.89
6/16/2009	13:00:00	6/16/2009 13:00	30.82	7.69	7147	3.98	100.2	7.31
6/16/2009	13:15:00	6/16/2009 13:15	30.79	7.69	7152	3.98	99.6	7.27
6/16/2009	13:30:00	6/16/2009 13:30	30.87	7.72	7142	3.97	101.2	7.37
6/16/2009	13:45:00	6/16/2009 13:45	31.03	7.79	7152	3.98	104.2	7.57
6/16/2009	14:00:00	6/16/2009 14:00	31.13	7.83	7148	3.98	106.3	7.71
6/16/2009	14:15:00	6/16/2009 14:15	31.08	7.83	7156	3.98	106.2	7.71
6/16/2009	14:30:00	6/16/2009 14:30	31.22	7.87	7153	3.98	107.9	7.82
6/16/2009	14:45:00	6/16/2009 14:45	31.41	7.93	7141	3.97	110.4	7.97
6/16/2009	15:00:00	6/16/2009 15:00	31.74	8	7141	3.97	113.2	8.13
6/16/2009	15:15:00	6/16/2009 15:15	31.89	8.01	7128	3.97	113.7	8.14
6/16/2009	15:30:00	6/16/2009 15:30	32.04	7.96	7040	3.92	111.4	7.96
6/16/2009	15:45:00	6/16/2009 15:45	32.01	7.91	6995	3.89	109.5	7.83
6/16/2009	16:00:00	6/16/2009 16:00	31.89	7.87	6984	3.88	107.6	7.71
6/16/2009	16:15:00	6/16/2009 16:15	31.64	7.76	7035	3.91	103.6	7.45
6/16/2009	16:30:00	6/16/2009 16:30	31.82	7.84	7017	3.9	107	7.67
6/16/2009	16:45:00	6/16/2009 16:45	31.98	7.91	7004	3.89	109.4	7.82
6/16/2009	17:00:00	6/16/2009 17:00	32.04	7.92	6991	3.89	110.1	7.87
6/16/2009	17:15:00	6/16/2009 17:15	31.99	7.91	7009	3.9	109.5	7.83
6/16/2009	17:30:00	6/16/2009 17:30	32.06	7.93	6990	3.89	110.2	7.88

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

6/16/2009	17:45:00	6/16/2009 17:45	32.11	7.95	6962	3.87	110.6	7.89
6/16/2009	18:00:00	6/16/2009 18:00	32.1	7.93	6985	3.88	109.8	7.84
6/16/2009	18:15:00	6/16/2009 18:15	32.15	7.99	6983	3.88	111.7	7.97
6/16/2009	18:30:00	6/16/2009 18:30	32.12	7.96	6992	3.89	110.6	7.89
6/16/2009	18:45:00	6/16/2009 18:45	32.1	7.99	6981	3.88	111.8	7.98
6/16/2009	19:00:00	6/16/2009 19:00	32.09	7.99	6988	3.89	111.8	7.99
6/16/2009	19:15:00	6/16/2009 19:15	32.06	7.98	6995	3.89	111.5	7.96
6/16/2009	19:30:00	6/16/2009 19:30	32.03	7.97	6982	3.88	111	7.94
6/16/2009	19:45:00	6/16/2009 19:45	32.04	7.96	6971	3.88	110.4	7.89
6/16/2009	20:00:00	6/16/2009 20:00	31.95	7.95	6973	3.88	109.7	7.86
6/16/2009	20:15:00	6/16/2009 20:15	31.89	7.93	6971	3.88	108.9	7.81
6/16/2009	20:30:00	6/16/2009 20:30	31.82	7.91	6970	3.87	108.1	7.75
6/16/2009	20:45:00	6/16/2009 20:45	31.9	7.98	6972	3.88	108.6	7.78
6/16/2009	21:00:00	6/16/2009 21:00	31.99	8	6979	3.88	108.4	7.75
6/16/2009	21:15:00	6/16/2009 21:15	31.91	7.98	6984	3.88	107	7.67
6/16/2009	21:30:00	6/16/2009 21:30	31.89	7.97	6982	3.88	105.8	7.58
6/16/2009	21:45:00	6/16/2009 21:45	31.73	7.89	6986	3.88	103.1	7.41
6/16/2009	22:00:00	6/16/2009 22:00	31.58	7.83	6992	3.89	100.2	7.22
6/16/2009	22:15:00	6/16/2009 22:15	31.47	7.75	6969	3.87	97.8	7.06
6/16/2009	22:30:00	6/16/2009 22:30	31.23	7.64	6906	3.84	95.9	6.95
6/16/2009	22:45:00	6/16/2009 22:45	31.16	7.64	6891	3.83	95	6.89
6/16/2009	23:00:00	6/16/2009 23:00	31.09	7.62	6868	3.82	94	6.83
6/16/2009	23:15:00	6/16/2009 23:15	31	7.63	6886	3.83	93	6.76
6/16/2009	23:30:00	6/16/2009 23:30	30.9	7.61	6885	3.83	92.1	6.72
6/16/2009	23:45:00	6/16/2009 23:45	30.87	7.57	6904	3.84	91.3	6.66
6/17/2009	0:00:00	6/17/2009 0:00	30.82	7.54	6923	3.85	90.7	6.62
6/17/2009	0:15:00	6/17/2009 0:15	30.79	7.52	6931	3.85	90.2	6.59
6/17/2009	0:30:00	6/17/2009 0:30	30.75	7.52	6933	3.85	90.1	6.58
6/17/2009	0:45:00	6/17/2009 0:45	30.71	7.5	6953	3.86	89.5	6.55
6/17/2009	1:00:00	6/17/2009 1:00	30.69	7.5	6964	3.87	89.4	6.54
6/17/2009	1:15:00	6/17/2009 1:15	30.72	7.51	6993	3.89	90.6	6.62
6/17/2009	1:30:00	6/17/2009 1:30	30.75	7.55	6991	3.89	91.8	6.71
6/17/2009	1:45:00	6/17/2009 1:45	30.73	7.56	6986	3.88	92	6.72
6/17/2009	2:00:00	6/17/2009 2:00	30.65	7.56	6993	3.89	91.8	6.72

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

6/17/2009	2:15:00	6/17/2009 2:15	30.61	7.57	7038	3.91	92	6.73
6/17/2009	2:30:00	6/17/2009 2:30	30.65	7.58	7075	3.94	91.8	6.72
6/17/2009	2:45:00	6/17/2009 2:45	30.6	7.58	7089	3.94	91.9	6.73
6/17/2009	3:00:00	6/17/2009 3:00	30.59	7.57	7109	3.96	91	6.66
6/17/2009	3:15:00	6/17/2009 3:15	30.56	7.56	7116	3.96	90.6	6.64
6/17/2009	3:30:00	6/17/2009 3:30	30.53	7.55	7123	3.96	90.4	6.63
6/17/2009	3:45:00	6/17/2009 3:45	30.48	7.56	7106	3.95	90.6	6.65
6/17/2009	4:00:00	6/17/2009 4:00	30.5	7.55	7103	3.95	90.4	6.63
6/17/2009	4:15:00	6/17/2009 4:15	30.47	7.55	7101	3.95	90.1	6.61
6/17/2009	4:30:00	6/17/2009 4:30	30.43	7.54	7116	3.96	89.5	6.57
6/17/2009	4:45:00	6/17/2009 4:45	30.45	7.53	7141	3.97	89.3	6.55
6/17/2009	5:00:00	6/17/2009 5:00	30.42	7.53	7140	3.97	88.8	6.52
6/17/2009	5:15:00	6/17/2009 5:15	30.38	7.52	7141	3.97	88.7	6.51
6/17/2009	5:30:00	6/17/2009 5:30	30.34	7.52	7142	3.97	88.5	6.51
6/17/2009	5:45:00	6/17/2009 5:45	30.3	7.51	7148	3.98	88.2	6.49
6/17/2009	6:00:00	6/17/2009 6:00	30.29	7.51	7146	3.98	87.8	6.46
6/17/2009	6:15:00	6/17/2009 6:15	30.26	7.5	7156	3.98	87.3	6.42
6/17/2009	6:30:00	6/17/2009 6:30	30.23	7.5	7163	3.99	87.3	6.43
6/17/2009	6:45:00	6/17/2009 6:45	30.21	7.49	7192	4	85.9	6.33
6/17/2009	7:00:00	6/17/2009 7:00	30.18	7.48	7192	4	85.6	6.31
6/17/2009	7:15:00	6/17/2009 7:15	30.16	7.46	7194	4	84.4	6.22
6/17/2009	7:30:00	6/17/2009 7:30	30.15	7.47	7225	4.02	84.2	6.21
6/17/2009	7:45:00	6/17/2009 7:45	30.12	7.47	7261	4.04	84	6.2
6/17/2009	8:00:00	6/17/2009 8:00	30.12	7.48	7268	4.05	84.3	6.22
6/17/2009	8:15:00	6/17/2009 8:15	30.16	7.5	7243	4.03	86.1	6.35
6/17/2009	8:30:00	6/17/2009 8:30	30.16	7.5	7240	4.03	85.8	6.32
6/17/2009	8:45:00	6/17/2009 8:45	30.22	7.5	7231	4.03	86.4	6.36
6/17/2009	9:00:00	6/17/2009 9:00	30.27	7.48	7206	4.01	86	6.33
6/17/2009	9:15:00	6/17/2009 9:15	30.4	7.5	7179	4	88.2	6.48
6/17/2009	9:30:00	6/17/2009 9:30	30.36	7.48	7180	4	86	6.32
6/17/2009	9:45:00	6/17/2009 9:45	30.41	7.51	7181	4	88.1	6.47
6/17/2009	10:00:00	6/17/2009 10:00	30.44	7.53	7179	4	90	6.6
6/17/2009	10:15:00	6/17/2009 10:15	30.55	7.56	7163	3.99	91.2	6.68
6/17/2009	10:30:00	6/17/2009 10:30	30.67	7.61	7063	3.93	95	6.95

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

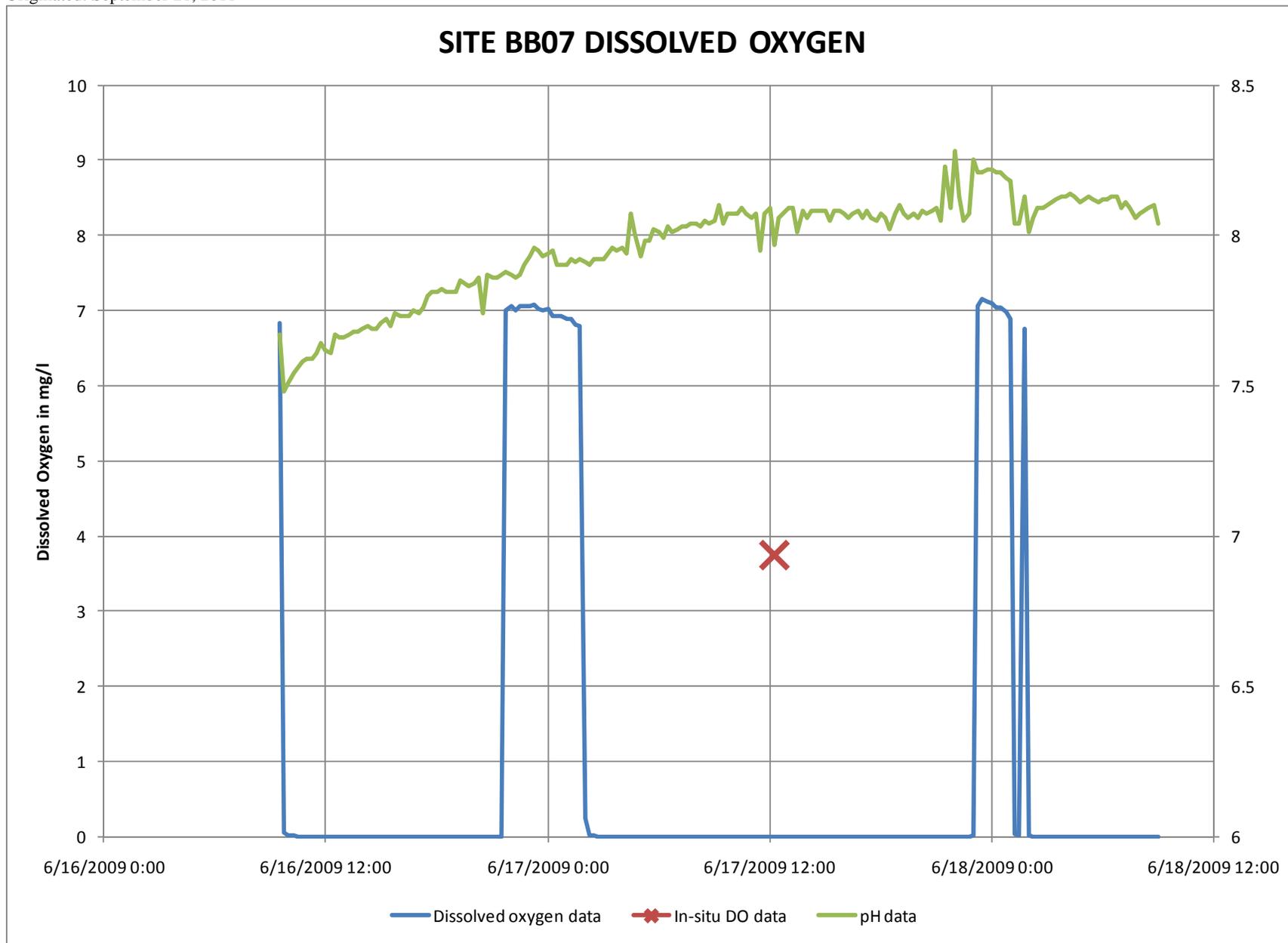
6/17/2009	10:45:00	6/17/2009 10:45	30.61	7.6	7050	3.92	94.2	6.9
6/17/2009	11:00:00	6/17/2009 11:00	30.63	7.64	7023	3.91	96.5	7.06
6/17/2009	11:15:00	6/17/2009 11:15	30.52	7.57	7049	3.92	92.7	6.8
6/17/2009	11:30:00	6/17/2009 11:30	30.75	7.65	6987	3.88	97.2	7.1
6/17/2009	11:45:00	6/17/2009 11:45	30.74	7.66	6979	3.88	97.8	7.14
6/17/2009	12:00:00	6/17/2009 12:00	30.48	7.6	7011	3.9	92.6	6.8
6/17/2009	12:15:00	6/17/2009 12:15	30.86	7.67	6910	3.84	98.8	7.21
6/17/2009	12:30:00	6/17/2009 12:30	30.98	7.69	6857	3.81	100.5	7.32
6/17/2009	12:45:00	6/17/2009 12:45	31.13	7.73	6823	3.79	102.3	7.43
6/17/2009	13:00:00	6/17/2009 13:00	31.11	7.7	6788	3.77	101.1	7.34
6/17/2009	13:15:00	6/17/2009 13:15	31.07	7.69	6776	3.76	100.9	7.34
6/17/2009	13:30:00	6/17/2009 13:30	31.17	7.71	6757	3.75	102	7.41
6/17/2009	13:45:00	6/17/2009 13:45	31.37	7.75	6740	3.74	104.2	7.53
6/17/2009	14:00:00	6/17/2009 14:00	30.91	7.71	6850	3.81	97.3	7.09
6/17/2009	14:15:00	6/17/2009 14:15	31.2	7.65	6827	3.79	97	7.03
6/17/2009	14:30:00	6/17/2009 14:30	31.48	7.76	6733	3.74	105.6	7.62
6/17/2009	14:45:00	6/17/2009 14:45	31.78	7.88	6722	3.73	108.9	7.82
6/17/2009	15:00:00	6/17/2009 15:00	31.87	7.91	6724	3.73	109.8	7.88
6/17/2009	15:15:00	6/17/2009 15:15	32.02	7.92	6723	3.73	110.5	7.91
6/17/2009	15:30:00	6/17/2009 15:30	32.01	7.94	6726	3.73	111.1	7.95
6/17/2009	15:45:00	6/17/2009 15:45	32.01	7.94	6727	3.73	111.3	7.97
6/17/2009	16:00:00	6/17/2009 16:00	32.07	7.97	6731	3.74	112.1	8.02
6/17/2009	16:15:00	6/17/2009 16:15	32.11	7.94	6731	3.74	109.7	7.84
6/17/2009	16:30:00	6/17/2009 16:30	31.98	7.89	6752	3.75	108.5	7.77
6/17/2009	16:45:00	6/17/2009 16:45	31.93	7.86	6761	3.75	108.4	7.77
6/17/2009	17:00:00	6/17/2009 17:00	32.11	7.88	6757	3.75	109.6	7.83
6/17/2009	17:15:00	6/17/2009 17:15	32.07	7.89	6774	3.76	109.1	7.8
6/17/2009	17:30:00	6/17/2009 17:30	32.3	8.01	6764	3.76	112.6	8.02
6/17/2009	17:45:00	6/17/2009 17:45	32.42	8.06	6766	3.76	113.9	8.1
6/17/2009	18:00:00	6/17/2009 18:00	32.48	8.07	6772	3.76	114	8.09
6/17/2009	18:15:00	6/17/2009 18:15	32.55	8.11	6772	3.76	114.9	8.15
6/17/2009	18:30:00	6/17/2009 18:30	32.53	8.11	6772	3.76	114.4	8.12
6/17/2009	18:45:00	6/17/2009 18:45	32.46	8.05	6783	3.77	112	7.95
6/17/2009	19:00:00	6/17/2009 19:00	32.47	8.11	6775	3.76	114.5	8.13

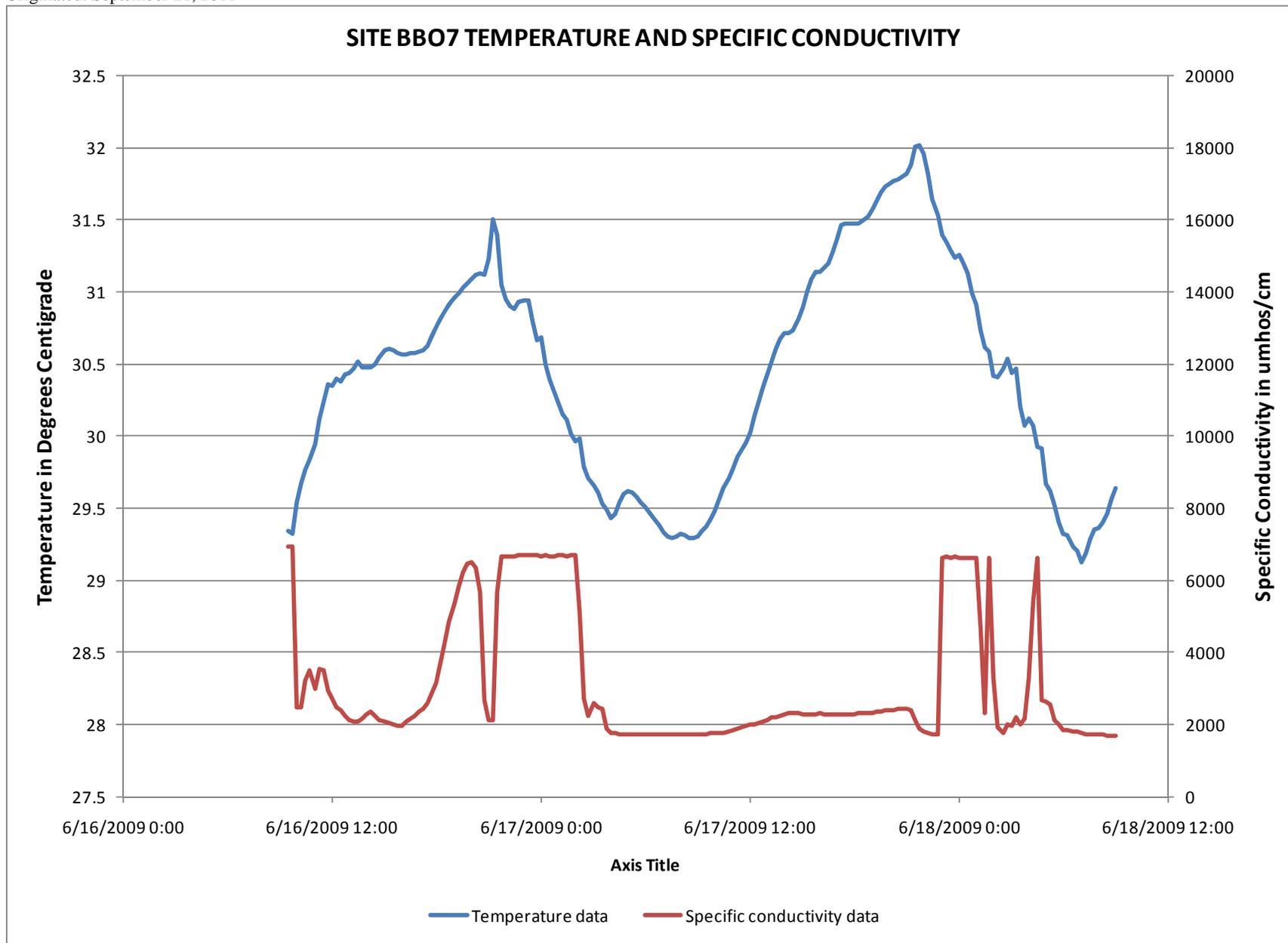
Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

6/17/2009	19:15:00	6/17/2009 19:15	32.45	8.13	6778	3.76	114	8.1
6/17/2009	19:30:00	6/17/2009 19:30	32.41	8.15	6775	3.76	114.4	8.13
6/17/2009	19:45:00	6/17/2009 19:45	32.36	8.14	6777	3.76	113.8	8.1
6/17/2009	20:00:00	6/17/2009 20:00	32.32	8.1	6779	3.76	113	8.05
6/17/2009	20:15:00	6/17/2009 20:15	32.26	8.09	6783	3.77	112	7.98
6/17/2009	20:30:00	6/17/2009 20:30	32.24	8.07	6783	3.77	111.8	7.97
6/17/2009	20:45:00	6/17/2009 20:45	32.16	8.05	6786	3.77	111	7.92
6/17/2009	21:00:00	6/17/2009 21:00	32.11	8.03	6788	3.77	110.2	7.88
6/17/2009	21:15:00	6/17/2009 21:15	32.08	8.01	6793	3.77	109.7	7.84
6/17/2009	21:30:00	6/17/2009 21:30	31.99	7.97	6797	3.77	108.4	7.76
6/17/2009	21:45:00	6/17/2009 21:45	31.93	7.92	6810	3.78	105.7	7.58
6/17/2009	22:00:00	6/17/2009 22:00	31.94	7.92	6856	3.81	103.3	7.4
6/17/2009	22:15:00	6/17/2009 22:15	31.84	7.9	6844	3.8	103.1	7.39
6/17/2009	22:30:00	6/17/2009 22:30	31.87	7.98	6851	3.81	103.2	7.4
6/17/2009	22:45:00	6/17/2009 22:45	31.85	8.02	6859	3.81	103.1	7.4
6/17/2009	23:00:00	6/17/2009 23:00	31.8	7.95	6854	3.81	102.6	7.37
6/17/2009	23:15:00	6/17/2009 23:15	31.8	7.94	6859	3.81	101.6	7.29
6/17/2009	23:30:00	6/17/2009 23:30	31.72	7.92	6870	3.82	100.1	7.19
6/17/2009	23:45:00	6/17/2009 23:45	31.63	7.87	6869	3.82	98	7.06
6/18/2009	0:00:00	6/18/2009 0:00	31.55	7.83	6862	3.81	96.6	6.96
6/18/2009	0:15:00	6/18/2009 0:15	31.48	7.8	6858	3.81	95.7	6.91
6/18/2009	0:30:00	6/18/2009 0:30	31.37	7.77	6858	3.81	94.9	6.86
6/18/2009	0:45:00	6/18/2009 0:45	31.32	7.75	6864	3.81	94.7	6.86
6/18/2009	1:00:00	6/18/2009 1:00	31.29	7.71	6868	3.82	94.2	6.82
6/18/2009	1:15:00	6/18/2009 1:15	31.32	7.71	6867	3.81	96	6.95
6/18/2009	1:30:00	6/18/2009 1:30	31.28	7.71	6883	3.82	95.9	6.94
6/18/2009	1:45:00	6/18/2009 1:45	31.18	7.68	6900	3.83	96	6.97
6/18/2009	2:00:00	6/18/2009 2:00	31.07	7.64	6920	3.85	94.4	6.86
6/18/2009	2:15:00	6/18/2009 2:15	31.1	7.65	6927	3.85	95.6	6.95
6/18/2009	2:30:00	6/18/2009 2:30	31.04	7.62	6943	3.86	93.6	6.81
6/18/2009	2:45:00	6/18/2009 2:45	31.03	7.61	6945	3.86	93.7	6.81
6/18/2009	3:00:00	6/18/2009 3:00	30.99	7.61	6941	3.86	93.8	6.82
6/18/2009	3:15:00	6/18/2009 3:15	30.93	7.63	6917	3.84	94	6.85
6/18/2009	3:30:00	6/18/2009 3:30	30.95	7.62	6909	3.84	93.5	6.81

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

6/18/2009	3:45:00	6/18/2009 3:45	30.93	7.61	6905	3.84	92.4	6.73
6/18/2009	4:00:00	6/18/2009 4:00	30.92	7.56	6935	3.85	90.5	6.59
6/18/2009	4:15:00	6/18/2009 4:15	30.86	7.57	6918	3.84	90.5	6.6
6/18/2009	4:30:00	6/18/2009 4:30	30.68	7.49	6922	3.85	86.6	6.34
6/18/2009	4:45:00	6/18/2009 4:45	30.59	7.46	6903	3.84	85.4	6.26
6/18/2009	5:00:00	6/18/2009 5:00	30.52	7.47	6888	3.83	86.1	6.32
6/18/2009	5:15:00	6/18/2009 5:15	30.27	7.49	6748	3.75	88.8	6.55
6/18/2009	5:30:00	6/18/2009 5:30	30.23	7.49	6729	3.74	89.1	6.58
6/18/2009	5:45:00	6/18/2009 5:45	30.23	7.49	6707	3.72	89.6	6.61
6/18/2009	6:00:00	6/18/2009 6:00	30.2	7.49	6710	3.72	89.5	6.6
6/18/2009	6:15:00	6/18/2009 6:15	30.22	7.49	6717	3.73	89.3	6.59
6/18/2009	6:30:00	6/18/2009 6:30	30.2	7.48	6721	3.73	88.9	6.56
6/18/2009	6:45:00	6/18/2009 6:45	30.19	7.48	6731	3.74	88.8	6.56
6/18/2009	7:00:00	6/18/2009 7:00	30.19	7.48	6739	3.74	88.6	6.54
6/18/2009	7:15:00	6/18/2009 7:15	30.17	7.48	6735	3.74	88.7	6.55
6/18/2009	7:30:00	6/18/2009 7:30	30.18	7.48	6733	3.74	88.7	6.55
6/18/2009	7:45:00	6/18/2009 7:45	30.18	7.47	6725	3.73	88.5	6.54
6/18/2009	8:00:00	6/18/2009 8:00	30.18	7.46	6722	3.73	88	6.49
6/18/2009	8:15:00	6/18/2009 8:15	30.19	7.45	6716	3.73	88	6.5
6/18/2009	8:30:00	6/18/2009 8:30	30.14	7.43	6703	3.72	87	6.43
6/18/2009	8:45:00	6/18/2009 8:45	30.11	7.42	6697	3.72	86.8	6.42
6/18/2009	9:00:00	6/18/2009 9:00	30.11	7.41	6695	3.72	85.8	6.35





Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

Date M/D/YYYY	Time HH:MM:SS	Date/Time	TEMP °C	pH Units	Cond uS/cm	Sal ppt	LDO% Sat	LDO mg/l
6/16/2009	9:30:00	6/16/2009 9:30	29.34	7.67	6949	3.86	91.3	6.83
6/16/2009	9:45:00	6/16/2009 9:45	29.32	7.48	6946	3.86	0.7	0.06
6/16/2009	10:00:00	6/16/2009 10:00	29.54	7.51	2472	1.33	0.2	0.02
6/16/2009	10:15:00	6/16/2009 10:15	29.67	7.54	2487	1.34	0.1	0.01
6/16/2009	10:30:00	6/16/2009 10:30	29.77	7.56	3216	1.74	0.1	0
6/16/2009	10:45:00	6/16/2009 10:45	29.84	7.58	3483	1.89	0	0
6/16/2009	11:00:00	6/16/2009 11:00	29.94	7.59	2989	1.61	0	0
6/16/2009	11:15:00	6/16/2009 11:15	30.12	7.59	3519	1.91	0	0
6/16/2009	11:30:00	6/16/2009 11:30	30.24	7.61	3482	1.89	0	0
6/16/2009	11:45:00	6/16/2009 11:45	30.36	7.64	2952	1.59	0	0
6/16/2009	12:00:00	6/16/2009 12:00	30.35	7.62	2709	1.46	0	0
6/16/2009	12:15:00	6/16/2009 12:15	30.4	7.61	2463	1.32	0	0
6/16/2009	12:30:00	6/16/2009 12:30	30.38	7.67	2407	1.29	0	0
6/16/2009	12:45:00	6/16/2009 12:45	30.43	7.66	2222	1.19	0	0
6/16/2009	13:00:00	6/16/2009 13:00	30.44	7.66	2107	1.13	0	0
6/16/2009	13:15:00	6/16/2009 13:15	30.47	7.67	2079	1.11	0	0
6/16/2009	13:30:00	6/16/2009 13:30	30.52	7.68	2078	1.11	0	0
6/16/2009	13:45:00	6/16/2009 13:45	30.48	7.68	2157	1.16	0	0
6/16/2009	14:00:00	6/16/2009 14:00	30.48	7.69	2289	1.23	0	0
6/16/2009	14:15:00	6/16/2009 14:15	30.48	7.7	2335	1.25	0	0
6/16/2009	14:30:00	6/16/2009 14:30	30.5	7.69	2253	1.21	0	0
6/16/2009	14:45:00	6/16/2009 14:45	30.55	7.69	2122	1.14	0	0
6/16/2009	15:00:00	6/16/2009 15:00	30.6	7.71	2076	1.11	0	0
6/16/2009	15:15:00	6/16/2009 15:15	30.61	7.72	2046	1.09	0	0
6/16/2009	15:30:00	6/16/2009 15:30	30.6	7.7	1980	1.06	0	0
6/16/2009	15:45:00	6/16/2009 15:45	30.58	7.74	1946	1.04	0	0
6/16/2009	16:00:00	6/16/2009 16:00	30.57	7.73	1970	1.05	0	0
6/16/2009	16:15:00	6/16/2009 16:15	30.57	7.73	2083	1.11	0	0
6/16/2009	16:30:00	6/16/2009 16:30	30.58	7.73	2139	1.14	0	0
6/16/2009	16:45:00	6/16/2009 16:45	30.58	7.75	2232	1.2	0	0
6/16/2009	17:00:00	6/16/2009 17:00	30.59	7.74	2339	1.25	0	0
6/16/2009	17:15:00	6/16/2009 17:15	30.6	7.76	2425	1.3	0	0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

6/16/2009	17:30:00	6/16/2009 17:30	30.63	7.8	2588	1.39	0	0
6/16/2009	17:45:00	6/16/2009 17:45	30.69	7.81	2852	1.54	0	0
6/16/2009	18:00:00	6/16/2009 18:00	30.75	7.81	3155	1.71	0	0
6/16/2009	18:15:00	6/16/2009 18:15	30.81	7.82	3693	2.01	0	0
6/16/2009	18:30:00	6/16/2009 18:30	30.86	7.81	4244	2.32	0	0
6/16/2009	18:45:00	6/16/2009 18:45	30.91	7.81	4844	2.66	0	0
6/16/2009	19:00:00	6/16/2009 19:00	30.96	7.81	5339	2.94	0	0
6/16/2009	19:15:00	6/16/2009 19:15	30.99	7.85	5816	3.21	0	0
6/16/2009	19:30:00	6/16/2009 19:30	31.03	7.84	6241	3.45	0	0
6/16/2009	19:45:00	6/16/2009 19:45	31.06	7.83	6441	3.57	0	0
6/16/2009	20:00:00	6/16/2009 20:00	31.09	7.84	6503	3.6	0	0
6/16/2009	20:15:00	6/16/2009 20:15	31.12	7.86	6342	3.51	0	0
6/16/2009	20:30:00	6/16/2009 20:30	31.13	7.74	5660	3.12	0	0
6/16/2009	20:45:00	6/16/2009 20:45	31.12	7.87	2682	1.44	0	0
6/16/2009	21:00:00	6/16/2009 21:00	31.23	7.86	2131	1.14	0	0
6/16/2009	21:15:00	6/16/2009 21:15	31.5	7.86	2121	1.13	0	0
6/16/2009	21:30:00	6/16/2009 21:30	31.4	7.87	5660	3.12	0	0
6/16/2009	21:45:00	6/16/2009 21:45	31.05	7.88	6671	3.7	96.3	7
6/16/2009	22:00:00	6/16/2009 22:00	30.95	7.87	6663	3.7	96.8	7.05
6/16/2009	22:15:00	6/16/2009 22:15	30.9	7.86	6654	3.69	96	7.01
6/16/2009	22:30:00	6/16/2009 22:30	30.88	7.87	6639	3.68	96.7	7.05
6/16/2009	22:45:00	6/16/2009 22:45	30.93	7.9	6693	3.71	96.7	7.05
6/16/2009	23:00:00	6/16/2009 23:00	30.94	7.93	6701	3.72	96.8	7.05
6/16/2009	23:15:00	6/16/2009 23:15	30.94	7.96	6715	3.73	97	7.07
6/16/2009	23:30:00	6/16/2009 23:30	30.79	7.95	6700	3.72	96.1	7.02
6/16/2009	23:45:00	6/16/2009 23:45	30.66	7.93	6681	3.71	95.7	7.01
6/17/2009	0:00:00	6/17/2009 0:00	30.68	7.94	6676	3.7	95.8	7.02
6/17/2009	0:15:00	6/17/2009 0:15	30.5	7.95	6713	3.73	94.2	6.92
6/17/2009	0:30:00	6/17/2009 0:30	30.39	7.9	6639	3.68	94.2	6.93
6/17/2009	0:45:00	6/17/2009 0:45	30.31	7.9	6641	3.68	93.9	6.92
6/17/2009	1:00:00	6/17/2009 1:00	30.23	7.9	6677	3.71	93.4	6.89
6/17/2009	1:15:00	6/17/2009 1:15	30.15	7.92	6684	3.71	93.2	6.88
6/17/2009	1:30:00	6/17/2009 1:30	30.11	7.91	6666	3.7	92.3	6.82
6/17/2009	1:45:00	6/17/2009 1:45	30.01	7.92	6690	3.71	91.8	6.8

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

6/17/2009	2:00:00	6/17/2009 2:00	29.96	7.91	6691	3.71	3.4	0.25
6/17/2009	2:15:00	6/17/2009 2:15	29.98	7.9	5135	2.82	0.2	0.01
6/17/2009	2:30:00	6/17/2009 2:30	29.79	7.92	2689	1.45	0.1	0.01
6/17/2009	2:45:00	6/17/2009 2:45	29.71	7.92	2253	1.21	0	0
6/17/2009	3:00:00	6/17/2009 3:00	29.66	7.92	2592	1.39	0	0
6/17/2009	3:15:00	6/17/2009 3:15	29.61	7.94	2489	1.34	0	0
6/17/2009	3:30:00	6/17/2009 3:30	29.53	7.96	2413	1.3	0	0
6/17/2009	3:45:00	6/17/2009 3:45	29.49	7.95	1862	0.99	0	0
6/17/2009	4:00:00	6/17/2009 4:00	29.43	7.96	1775	0.95	0	0
6/17/2009	4:15:00	6/17/2009 4:15	29.46	7.94	1742	0.93	0	0
6/17/2009	4:30:00	6/17/2009 4:30	29.54	8.07	1726	0.92	0	0
6/17/2009	4:45:00	6/17/2009 4:45	29.6	8	1723	0.92	0	0
6/17/2009	5:00:00	6/17/2009 5:00	29.62	7.93	1714	0.91	0	0
6/17/2009	5:15:00	6/17/2009 5:15	29.61	7.98	1713	0.91	0	0
6/17/2009	5:30:00	6/17/2009 5:30	29.58	7.98	1722	0.92	0	0
6/17/2009	5:45:00	6/17/2009 5:45	29.54	8.02	1720	0.92	0	0
6/17/2009	6:00:00	6/17/2009 6:00	29.51	8.01	1714	0.91	0	0
6/17/2009	6:15:00	6/17/2009 6:15	29.47	7.99	1720	0.92	0	0
6/17/2009	6:30:00	6/17/2009 6:30	29.43	8.03	1722	0.92	0	0
6/17/2009	6:45:00	6/17/2009 6:45	29.38	8.01	1716	0.91	0	0
6/17/2009	7:00:00	6/17/2009 7:00	29.33	8.02	1716	0.91	0	0
6/17/2009	7:15:00	6/17/2009 7:15	29.3	8.03	1720	0.92	0	0
6/17/2009	7:30:00	6/17/2009 7:30	29.29	8.03	1720	0.92	0	0
6/17/2009	7:45:00	6/17/2009 7:45	29.3	8.04	1720	0.92	0	0
6/17/2009	8:00:00	6/17/2009 8:00	29.32	8.04	1723	0.92	0	0
6/17/2009	8:15:00	6/17/2009 8:15	29.31	8.03	1723	0.92	0	0
6/17/2009	8:30:00	6/17/2009 8:30	29.29	8.05	1727	0.92	0	0
6/17/2009	8:45:00	6/17/2009 8:45	29.29	8.04	1728	0.92	0	0
6/17/2009	9:00:00	6/17/2009 9:00	29.3	8.05	1731	0.92	0	0
6/17/2009	9:15:00	6/17/2009 9:15	29.34	8.1	1735	0.92	0	0
6/17/2009	9:30:00	6/17/2009 9:30	29.37	8.04	1737	0.92	0	0
6/17/2009	9:45:00	6/17/2009 9:45	29.42	8.07	1742	0.93	0	0
6/17/2009	10:00:00	6/17/2009 10:00	29.48	8.07	1747	0.93	0	0
6/17/2009	10:15:00	6/17/2009 10:15	29.56	8.07	1753	0.93	0	0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

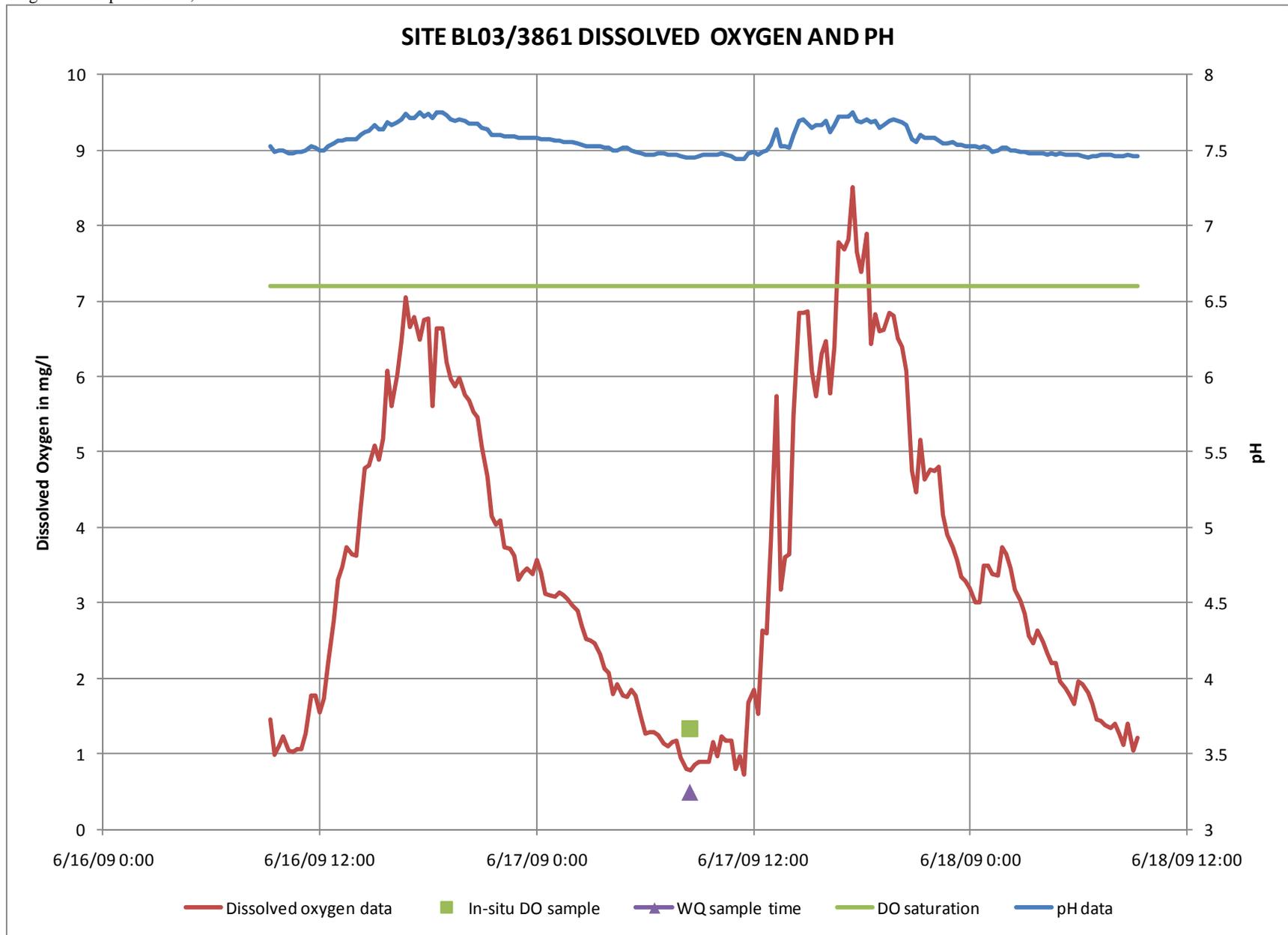
6/17/2009	10:30:00	6/17/2009 10:30	29.64	8.09	1767	0.94	0	0
6/17/2009	10:45:00	6/17/2009 10:45	29.71	8.07	1809	0.96	0	0
6/17/2009	11:00:00	6/17/2009 11:00	29.78	8.06	1838	0.98	0	0
6/17/2009	11:15:00	6/17/2009 11:15	29.86	8.07	1876	1	0	0
6/17/2009	11:30:00	6/17/2009 11:30	29.9	7.95	1921	1.03	0	0
6/17/2009	11:45:00	6/17/2009 11:45	29.95	8.07	1963	1.05	0	0
6/17/2009	12:00:00	6/17/2009 12:00	30.02	8.09	1993	1.06	0	0
6/17/2009	12:15:00	6/17/2009 12:15	30.14	7.97	2015	1.08	0	0
6/17/2009	12:30:00	6/17/2009 12:30	30.24	8.06	2053	1.1	0	0
6/17/2009	12:45:00	6/17/2009 12:45	30.34	8.07	2083	1.11	0	0
6/17/2009	13:00:00	6/17/2009 13:00	30.43	8.09	2135	1.14	0	0
6/17/2009	13:15:00	6/17/2009 13:15	30.52	8.09	2178	1.17	0	0
6/17/2009	13:30:00	6/17/2009 13:30	30.61	8.01	2203	1.18	0	0
6/17/2009	13:45:00	6/17/2009 13:45	30.67	8.08	2246	1.2	0	0
6/17/2009	14:00:00	6/17/2009 14:00	30.71	8.06	2271	1.22	0	0
6/17/2009	14:15:00	6/17/2009 14:15	30.71	8.08	2301	1.23	0	0
6/17/2009	14:30:00	6/17/2009 14:30	30.73	8.08	2301	1.23	0	0
6/17/2009	14:45:00	6/17/2009 14:45	30.81	8.08	2295	1.23	0	0
6/17/2009	15:00:00	6/17/2009 15:00	30.89	8.08	2282	1.22	0	0
6/17/2009	15:15:00	6/17/2009 15:15	31	8.05	2283	1.22	0	0
6/17/2009	15:30:00	6/17/2009 15:30	31.09	8.08	2282	1.22	0	0
6/17/2009	15:45:00	6/17/2009 15:45	31.14	8.08	2291	1.23	0	0
6/17/2009	16:00:00	6/17/2009 16:00	31.14	8.07	2299	1.23	0	0
6/17/2009	16:15:00	6/17/2009 16:15	31.17	8.06	2289	1.23	0	0
6/17/2009	16:30:00	6/17/2009 16:30	31.2	8.07	2290	1.23	0	0
6/17/2009	16:45:00	6/17/2009 16:45	31.28	8.08	2291	1.23	0	0
6/17/2009	17:00:00	6/17/2009 17:00	31.37	8.06	2285	1.23	0	0
6/17/2009	17:15:00	6/17/2009 17:15	31.46	8.08	2290	1.23	0	0
6/17/2009	17:30:00	6/17/2009 17:30	31.47	8.06	2282	1.22	0	0
6/17/2009	17:45:00	6/17/2009 17:45	31.47	8.05	2289	1.23	0	0
6/17/2009	18:00:00	6/17/2009 18:00	31.47	8.07	2291	1.23	0	0
6/17/2009	18:15:00	6/17/2009 18:15	31.47	8.06	2295	1.23	0	0
6/17/2009	18:30:00	6/17/2009 18:30	31.49	8.02	2307	1.24	0	0
6/17/2009	18:45:00	6/17/2009 18:45	31.52	8.07	2318	1.24	0	0

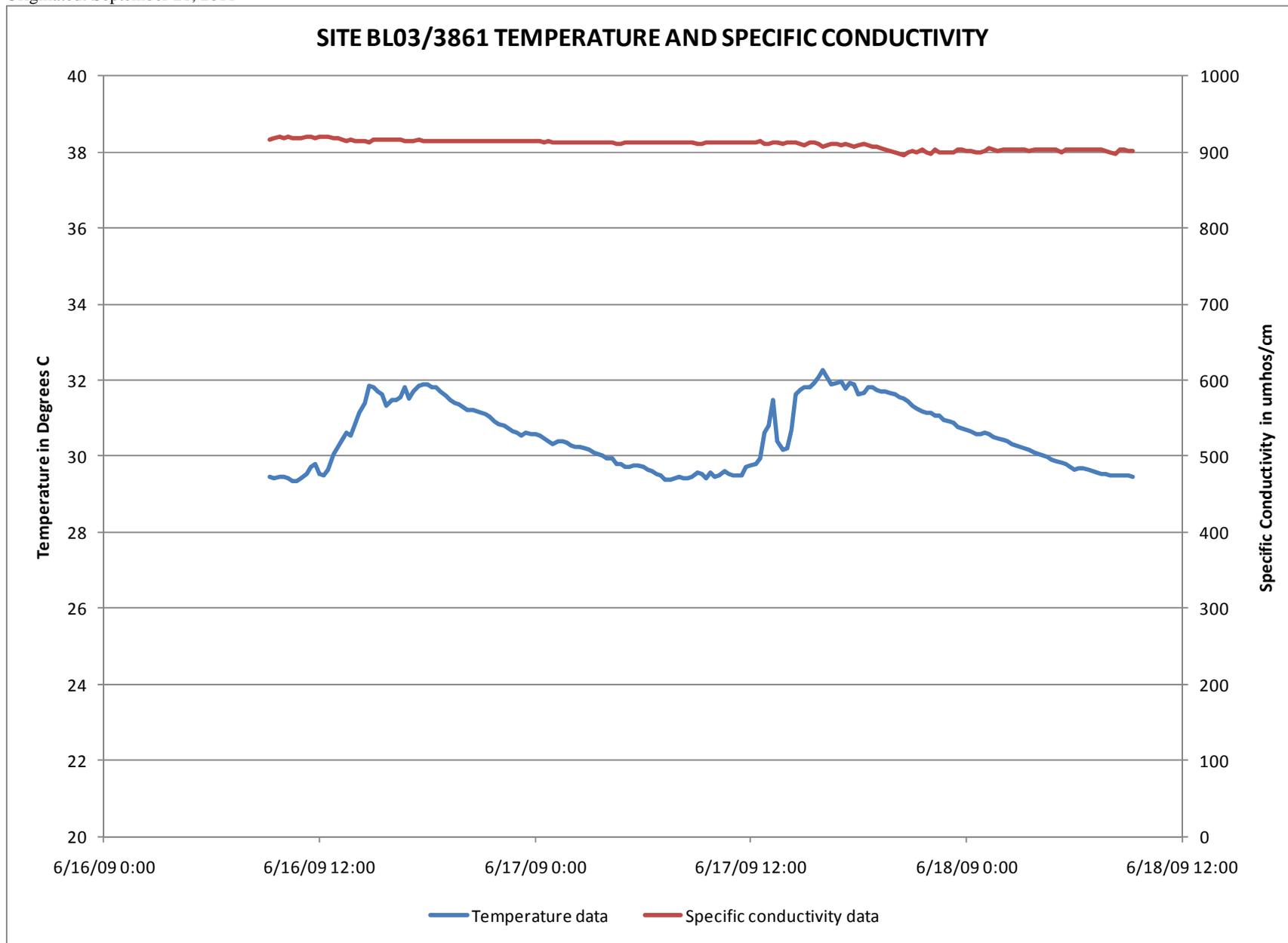
Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

6/17/2009	19:00:00	6/17/2009 19:00	31.57	8.1	2326	1.25	0	0
6/17/2009	19:15:00	6/17/2009 19:15	31.63	8.07	2340	1.26	0	0
6/17/2009	19:30:00	6/17/2009 19:30	31.69	8.06	2353	1.26	0	0
6/17/2009	19:45:00	6/17/2009 19:45	31.73	8.07	2375	1.27	0	0
6/17/2009	20:00:00	6/17/2009 20:00	31.75	8.06	2389	1.28	0	0
6/17/2009	20:15:00	6/17/2009 20:15	31.77	8.08	2405	1.29	0	0
6/17/2009	20:30:00	6/17/2009 20:30	31.78	8.07	2421	1.3	0	0
6/17/2009	20:45:00	6/17/2009 20:45	31.8	8.08	2433	1.31	0	0
6/17/2009	21:00:00	6/17/2009 21:00	31.82	8.09	2431	1.31	0	0
6/17/2009	21:15:00	6/17/2009 21:15	31.88	8.05	2374	1.27	0	0
6/17/2009	21:30:00	6/17/2009 21:30	32.01	8.23	2116	1.13	0	0
6/17/2009	21:45:00	6/17/2009 21:45	32.02	8.09	1894	1.01	0	0
6/17/2009	22:00:00	6/17/2009 22:00	31.96	8.28	1783	0.95	0	0
6/17/2009	22:15:00	6/17/2009 22:15	31.82	8.13	1760	0.94	0	0
6/17/2009	22:30:00	6/17/2009 22:30	31.64	8.05	1717	0.91	0	0
6/17/2009	22:45:00	6/17/2009 22:45	31.53	8.07	1709	0.91	0	0
6/17/2009	23:00:00	6/17/2009 23:00	31.4	8.25	6631	3.68	0.3	0.02
6/17/2009	23:15:00	6/17/2009 23:15	31.35	8.21	6639	3.68	97.3	7.05
6/17/2009	23:30:00	6/17/2009 23:30	31.29	8.21	6634	3.68	98.7	7.16
6/17/2009	23:45:00	6/17/2009 23:45	31.24	8.22	6638	3.68	98.2	7.12
6/18/2009	0:00:00	6/18/2009 0:00	31.26	8.22	6634	3.68	97.9	7.09
6/18/2009	0:15:00	6/18/2009 0:15	31.2	8.21	6630	3.68	97.1	7.04
6/18/2009	0:30:00	6/18/2009 0:30	31.13	8.21	6629	3.68	96.8	7.04
6/18/2009	0:45:00	6/18/2009 0:45	30.99	8.19	6623	3.67	96	6.99
6/18/2009	1:00:00	6/18/2009 1:00	30.91	8.18	6625	3.68	94.3	6.88
6/18/2009	1:15:00	6/18/2009 1:15	30.73	8.04	4668	2.56	0.5	0.04
6/18/2009	1:30:00	6/18/2009 1:30	30.62	8.04	2296	1.23	0.2	0.01
6/18/2009	1:45:00	6/18/2009 1:45	30.59	8.13	6609	3.67	92.2	6.76
6/18/2009	2:00:00	6/18/2009 2:00	30.42	8.01	3293	1.78	0.2	0.01
6/18/2009	2:15:00	6/18/2009 2:15	30.41	8.06	1908	1.02	0	0
6/18/2009	2:30:00	6/18/2009 2:30	30.47	8.09	1745	0.93	0	0
6/18/2009	2:45:00	6/18/2009 2:45	30.54	8.09	2014	1.08	0	0
6/18/2009	3:00:00	6/18/2009 3:00	30.44	8.1	1950	1.04	0	0
6/18/2009	3:15:00	6/18/2009 3:15	30.47	8.11	2206	1.18	0	0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

6/18/2009	3:30:00	6/18/2009 3:30	30.2	8.12	1997	1.07	0	0
6/18/2009	3:45:00	6/18/2009 3:45	30.07	8.13	2172	1.16	0	0
6/18/2009	4:00:00	6/18/2009 4:00	30.12	8.13	3296	1.79	0	0
6/18/2009	4:15:00	6/18/2009 4:15	30.07	8.14	5408	2.98	0	0
6/18/2009	4:30:00	6/18/2009 4:30	29.92	8.13	6620	3.67	0	0
6/18/2009	4:45:00	6/18/2009 4:45	29.91	8.11	2650	1.43	0	0
6/18/2009	5:00:00	6/18/2009 5:00	29.67	8.12	2624	1.41	0	0
6/18/2009	5:15:00	6/18/2009 5:15	29.62	8.13	2538	1.36	0	0
6/18/2009	5:30:00	6/18/2009 5:30	29.52	8.12	2124	1.14	0	0
6/18/2009	5:45:00	6/18/2009 5:45	29.4	8.11	2004	1.07	0	0
6/18/2009	6:00:00	6/18/2009 6:00	29.32	8.12	1858	0.99	0	0
6/18/2009	6:15:00	6/18/2009 6:15	29.31	8.12	1824	0.97	0	0
6/18/2009	6:30:00	6/18/2009 6:30	29.23	8.13	1805	0.96	0	0
6/18/2009	6:45:00	6/18/2009 6:45	29.2	8.13	1785	0.95	0	0
6/18/2009	7:00:00	6/18/2009 7:00	29.12	8.09	1750	0.93	0	0
6/18/2009	7:15:00	6/18/2009 7:15	29.18	8.11	1738	0.93	0	0
6/18/2009	7:30:00	6/18/2009 7:30	29.28	8.09	1728	0.92	0	0
6/18/2009	7:45:00	6/18/2009 7:45	29.35	8.06	1718	0.91	0	0
6/18/2009	8:00:00	6/18/2009 8:00	29.36	8.07	1715	0.91	0	0
6/18/2009	8:15:00	6/18/2009 8:15	29.4	8.08	1703	0.91	0	0
6/18/2009	8:30:00	6/18/2009 8:30	29.46	8.09	1686	0.9	0	0
6/18/2009	8:45:00	6/18/2009 8:45	29.56	8.1	1696	0.9	0	0
6/18/2009	9:00:00	6/18/2009 9:00	29.64	8.04	1674	0.89	0	0





Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

Date M/D/YYYY	Time HH:MM:SS	Date/Time	TEMP °C	pH Units	Cond uS/cm	Sal ppt	LDO% Sat	LDO mg/l
6/16/2009	9:15:00	6/16/09 9:15	29.46	7.52	916	0.48	19.2	1.46
6/16/2009	9:30:00	6/16/09 9:30	29.42	7.49	918	0.48	12.9	0.98
6/16/2009	9:45:00	6/16/09 9:45	29.45	7.5	919	0.48	14.4	1.1
6/16/2009	10:00:00	6/16/09 10:00	29.47	7.5	918	0.48	16.3	1.24
6/16/2009	10:15:00	6/16/09 10:15	29.42	7.48	919	0.48	13.7	1.04
6/16/2009	10:30:00	6/16/09 10:30	29.36	7.48	918	0.48	13.3	1.02
6/16/2009	10:45:00	6/16/09 10:45	29.34	7.49	918	0.48	14	1.06
6/16/2009	11:00:00	6/16/09 11:00	29.42	7.49	918	0.48	14	1.06
6/16/2009	11:15:00	6/16/09 11:15	29.54	7.5	920	0.48	16.7	1.27
6/16/2009	11:30:00	6/16/09 11:30	29.7	7.52	919	0.48	23.4	1.77
6/16/2009	11:45:00	6/16/09 11:45	29.78	7.51	918	0.48	23.6	1.78
6/16/2009	12:00:00	6/16/09 12:00	29.54	7.5	919	0.48	20.4	1.55
6/16/2009	12:15:00	6/16/09 12:15	29.5	7.5	919	0.48	22.7	1.73
6/16/2009	12:30:00	6/16/09 12:30	29.63	7.52	919	0.48	29	2.2
6/16/2009	12:45:00	6/16/09 12:45	30.07	7.54	917	0.48	36.6	2.76
6/16/2009	13:00:00	6/16/09 13:00	30.26	7.56	918	0.48	44	3.3
6/16/2009	13:15:00	6/16/09 13:15	30.43	7.56	916	0.48	46.3	3.47
6/16/2009	13:30:00	6/16/09 13:30	30.62	7.57	915	0.48	50.1	3.74
6/16/2009	13:45:00	6/16/09 13:45	30.54	7.57	916	0.48	48.9	3.65
6/16/2009	14:00:00	6/16/09 14:00	30.83	7.57	914	0.48	48.7	3.62
6/16/2009	14:15:00	6/16/09 14:15	31.14	7.6	914	0.48	57.3	4.24
6/16/2009	14:30:00	6/16/09 14:30	31.42	7.62	915	0.48	64.9	4.78
6/16/2009	14:45:00	6/16/09 14:45	31.85	7.63	912	0.48	65.9	4.82
6/16/2009	15:00:00	6/16/09 15:00	31.82	7.66	916	0.48	69.6	5.09
6/16/2009	15:15:00	6/16/09 15:15	31.7	7.64	916	0.48	66.7	4.89
6/16/2009	15:30:00	6/16/09 15:30	31.61	7.64	916	0.48	70.5	5.17
6/16/2009	15:45:00	6/16/09 15:45	31.32	7.68	916	0.48	82.4	6.07
6/16/2009	16:00:00	6/16/09 16:00	31.46	7.66	916	0.48	76.2	5.61
6/16/2009	16:15:00	6/16/09 16:15	31.49	7.68	916	0.48	81.9	6.02
6/16/2009	16:30:00	6/16/09 16:30	31.55	7.7	916	0.48	88	6.46
6/16/2009	16:45:00	6/16/09 16:45	31.83	7.74	915	0.48	96.4	7.04
6/16/2009	17:00:00	6/16/09 17:00	31.53	7.71	915	0.48	90.7	6.66

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

6/16/2009	17:15:00	6/16/09 17:15	31.71	7.71	915	0.48	92.7	6.78
6/16/2009	17:30:00	6/16/09 17:30	31.84	7.75	916	0.48	88.9	6.49
6/16/2009	17:45:00	6/16/09 17:45	31.88	7.72	914	0.48	92.3	6.74
6/16/2009	18:00:00	6/16/09 18:00	31.9	7.74	915	0.48	92.8	6.77
6/16/2009	18:15:00	6/16/09 18:15	31.83	7.71	915	0.48	76.7	5.6
6/16/2009	18:30:00	6/16/09 18:30	31.82	7.75	915	0.48	90.8	6.63
6/16/2009	18:45:00	6/16/09 18:45	31.71	7.75	915	0.48	90.6	6.63
6/16/2009	19:00:00	6/16/09 19:00	31.59	7.73	915	0.48	84.4	6.19
6/16/2009	19:15:00	6/16/09 19:15	31.46	7.7	915	0.48	81.1	5.96
6/16/2009	19:30:00	6/16/09 19:30	31.41	7.69	915	0.48	79.7	5.86
6/16/2009	19:45:00	6/16/09 19:45	31.35	7.7	915	0.48	81.1	5.98
6/16/2009	20:00:00	6/16/09 20:00	31.29	7.69	915	0.48	78	5.75
6/16/2009	20:15:00	6/16/09 20:15	31.23	7.67	915	0.48	77.1	5.69
6/16/2009	20:30:00	6/16/09 20:30	31.22	7.67	915	0.48	74.9	5.53
6/16/2009	20:45:00	6/16/09 20:45	31.18	7.67	914	0.48	73.9	5.46
6/16/2009	21:00:00	6/16/09 21:00	31.14	7.65	914	0.48	68.4	5.06
6/16/2009	21:15:00	6/16/09 21:15	31.09	7.64	915	0.48	63.3	4.68
6/16/2009	21:30:00	6/16/09 21:30	31.01	7.6	915	0.48	55.8	4.14
6/16/2009	21:45:00	6/16/09 21:45	30.9	7.6	915	0.48	54.3	4.03
6/16/2009	22:00:00	6/16/09 22:00	30.84	7.6	915	0.48	55.1	4.09
6/16/2009	22:15:00	6/16/09 22:15	30.82	7.59	915	0.48	50.2	3.73
6/16/2009	22:30:00	6/16/09 22:30	30.74	7.59	915	0.48	49.9	3.71
6/16/2009	22:45:00	6/16/09 22:45	30.66	7.59	914	0.48	48.5	3.62
6/16/2009	23:00:00	6/16/09 23:00	30.6	7.58	915	0.48	44.3	3.31
6/16/2009	23:15:00	6/16/09 23:15	30.53	7.58	915	0.48	45.6	3.4
6/16/2009	23:30:00	6/16/09 23:30	30.6	7.58	914	0.48	46.3	3.45
6/16/2009	23:45:00	6/16/09 23:45	30.58	7.58	914	0.48	45.2	3.38
6/17/2009	0:00:00	6/17/09 0:00	30.57	7.58	914	0.48	47.7	3.56
6/17/2009	0:15:00	6/17/09 0:15	30.53	7.57	914	0.48	45.5	3.4
6/17/2009	0:30:00	6/17/09 0:30	30.46	7.57	913	0.48	41.8	3.12
6/17/2009	0:45:00	6/17/09 0:45	30.4	7.57	914	0.48	41.4	3.1
6/17/2009	1:00:00	6/17/09 1:00	30.33	7.56	913	0.48	41.1	3.08
6/17/2009	1:15:00	6/17/09 1:15	30.39	7.56	913	0.48	42	3.14
6/17/2009	1:30:00	6/17/09 1:30	30.39	7.55	913	0.48	41.4	3.1

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

6/17/2009	1:45:00	6/17/09 1:45	30.34	7.55	912	0.48	40.7	3.05
6/17/2009	2:00:00	6/17/09 2:00	30.28	7.55	912	0.48	39.6	2.97
6/17/2009	2:15:00	6/17/09 2:15	30.26	7.54	912	0.48	38.6	2.9
6/17/2009	2:30:00	6/17/09 2:30	30.23	7.53	912	0.48	35.8	2.69
6/17/2009	2:45:00	6/17/09 2:45	30.21	7.52	912	0.48	33.6	2.53
6/17/2009	3:00:00	6/17/09 3:00	30.16	7.52	912	0.48	33.2	2.5
6/17/2009	3:15:00	6/17/09 3:15	30.09	7.52	912	0.48	32.9	2.47
6/17/2009	3:30:00	6/17/09 3:30	30.07	7.52	912	0.48	30.8	2.32
6/17/2009	3:45:00	6/17/09 3:45	30	7.51	912	0.48	28.2	2.13
6/17/2009	4:00:00	6/17/09 4:00	29.94	7.51	912	0.48	27.6	2.08
6/17/2009	4:15:00	6/17/09 4:15	29.93	7.5	913	0.48	23.9	1.8
6/17/2009	4:30:00	6/17/09 4:30	29.79	7.5	911	0.48	25.5	1.93
6/17/2009	4:45:00	6/17/09 4:45	29.78	7.51	911	0.48	23.5	1.78
6/17/2009	5:00:00	6/17/09 5:00	29.71	7.51	912	0.48	23.2	1.76
6/17/2009	5:15:00	6/17/09 5:15	29.72	7.5	912	0.48	24.5	1.85
6/17/2009	5:30:00	6/17/09 5:30	29.76	7.49	912	0.48	23.4	1.77
6/17/2009	5:45:00	6/17/09 5:45	29.75	7.48	912	0.48	19.5	1.48
6/17/2009	6:00:00	6/17/09 6:00	29.7	7.47	913	0.48	16.7	1.27
6/17/2009	6:15:00	6/17/09 6:15	29.65	7.47	913	0.48	17	1.29
6/17/2009	6:30:00	6/17/09 6:30	29.6	7.47	913	0.48	16.9	1.28
6/17/2009	6:45:00	6/17/09 6:45	29.53	7.48	912	0.48	16.4	1.25
6/17/2009	7:00:00	6/17/09 7:00	29.49	7.48	913	0.48	15	1.14
6/17/2009	7:15:00	6/17/09 7:15	29.4	7.47	913	0.48	14.4	1.1
6/17/2009	7:30:00	6/17/09 7:30	29.37	7.47	913	0.48	15.2	1.16
6/17/2009	7:45:00	6/17/09 7:45	29.41	7.47	913	0.48	15.3	1.17
6/17/2009	8:00:00	6/17/09 8:00	29.44	7.46	913	0.48	12.5	0.95
6/17/2009	8:15:00	6/17/09 8:15	29.42	7.45	913	0.48	10.5	0.8
6/17/2009	8:30:00	6/17/09 8:30	29.43	7.45	912	0.48	10.4	0.79
6/17/2009	8:45:00	6/17/09 8:45	29.45	7.45	912	0.48	11.1	0.85
6/17/2009	9:00:00	6/17/09 9:00	29.57	7.46	911	0.47	11.8	0.89
6/17/2009	9:15:00	6/17/09 9:15	29.52	7.47	911	0.48	11.9	0.9
6/17/2009	9:30:00	6/17/09 9:30	29.41	7.47	912	0.48	11.7	0.89
6/17/2009	9:45:00	6/17/09 9:45	29.58	7.47	913	0.48	15.1	1.15
6/17/2009	10:00:00	6/17/09 10:00	29.44	7.47	912	0.48	12.8	0.97

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

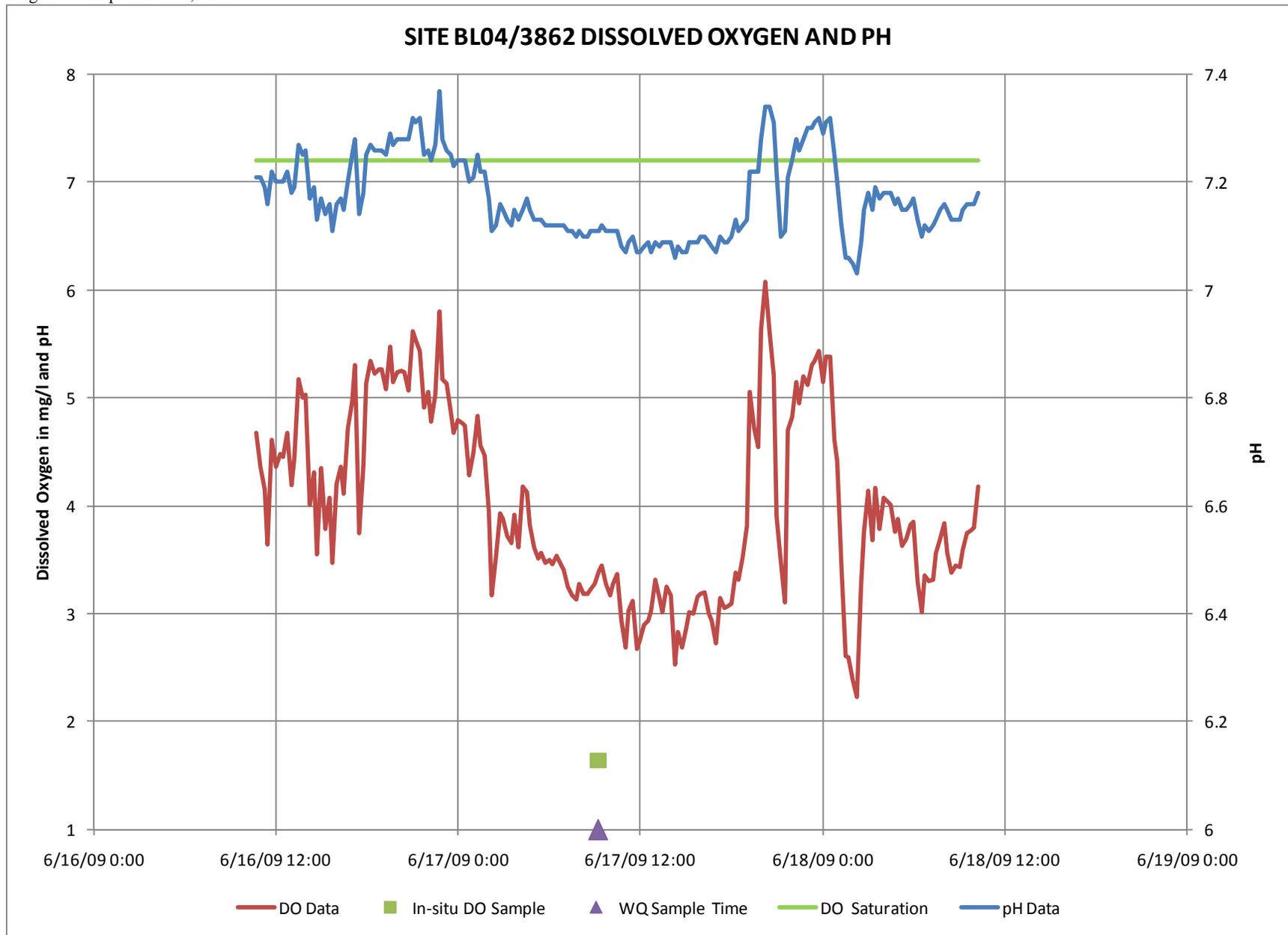
6/17/2009	10:15:00	6/17/09 10:15	29.5	7.48	912	0.48	16.3	1.24
6/17/2009	10:30:00	6/17/09 10:30	29.6	7.47	912	0.48	15.6	1.18
6/17/2009	10:45:00	6/17/09 10:45	29.54	7.46	912	0.48	15.4	1.17
6/17/2009	11:00:00	6/17/09 11:00	29.5	7.44	912	0.48	10.5	0.8
6/17/2009	11:15:00	6/17/09 11:15	29.49	7.44	912	0.48	12.8	0.97
6/17/2009	11:30:00	6/17/09 11:30	29.51	7.44	912	0.48	9.6	0.73
6/17/2009	11:45:00	6/17/09 11:45	29.71	7.48	913	0.48	22.2	1.68
6/17/2009	12:00:00	6/17/09 12:00	29.76	7.49	913	0.48	24.5	1.85
6/17/2009	12:15:00	6/17/09 12:15	29.78	7.47	913	0.48	20.3	1.54
6/17/2009	12:30:00	6/17/09 12:30	29.96	7.49	915	0.48	35.1	2.64
6/17/2009	12:45:00	6/17/09 12:45	30.6	7.5	910	0.47	34.7	2.59
6/17/2009	13:00:00	6/17/09 13:00	30.81	7.53	910	0.47	51.2	3.81
6/17/2009	13:15:00	6/17/09 13:15	31.49	7.64	912	0.48	78	5.73
6/17/2009	13:30:00	6/17/09 13:30	30.39	7.52	912	0.48	42.3	3.17
6/17/2009	13:45:00	6/17/09 13:45	30.18	7.52	911	0.48	47.9	3.6
6/17/2009	14:00:00	6/17/09 14:00	30.21	7.51	912	0.48	48.6	3.65
6/17/2009	14:15:00	6/17/09 14:15	30.69	7.6	912	0.48	73.5	5.48
6/17/2009	14:30:00	6/17/09 14:30	31.61	7.69	912	0.48	93.4	6.85
6/17/2009	14:45:00	6/17/09 14:45	31.74	7.7	910	0.47	93.6	6.85
6/17/2009	15:00:00	6/17/09 15:00	31.83	7.67	909	0.47	93.9	6.86
6/17/2009	15:15:00	6/17/09 15:15	31.81	7.65	912	0.48	83.2	6.08
6/17/2009	15:30:00	6/17/09 15:30	31.93	7.66	912	0.48	78.7	5.74
6/17/2009	15:45:00	6/17/09 15:45	32.08	7.66	911	0.47	86.5	6.29
6/17/2009	16:00:00	6/17/09 16:00	32.27	7.69	907	0.47	89	6.46
6/17/2009	16:15:00	6/17/09 16:15	32.07	7.62	908	0.47	79.3	5.77
6/17/2009	16:30:00	6/17/09 16:30	31.87	7.66	911	0.48	87.6	6.4
6/17/2009	16:45:00	6/17/09 16:45	31.93	7.72	910	0.47	106.7	7.78
6/17/2009	17:00:00	6/17/09 17:00	31.96	7.72	908	0.47	105.3	7.68
6/17/2009	17:15:00	6/17/09 17:15	31.79	7.72	910	0.47	107	7.82
6/17/2009	17:30:00	6/17/09 17:30	31.91	7.75	909	0.47	116.7	8.51
6/17/2009	17:45:00	6/17/09 17:45	31.87	7.69	907	0.47	104.6	7.64
6/17/2009	18:00:00	6/17/09 18:00	31.64	7.68	909	0.47	100.7	7.38
6/17/2009	18:15:00	6/17/09 18:15	31.67	7.7	910	0.47	107.7	7.89
6/17/2009	18:30:00	6/17/09 18:30	31.8	7.68	908	0.47	88	6.43

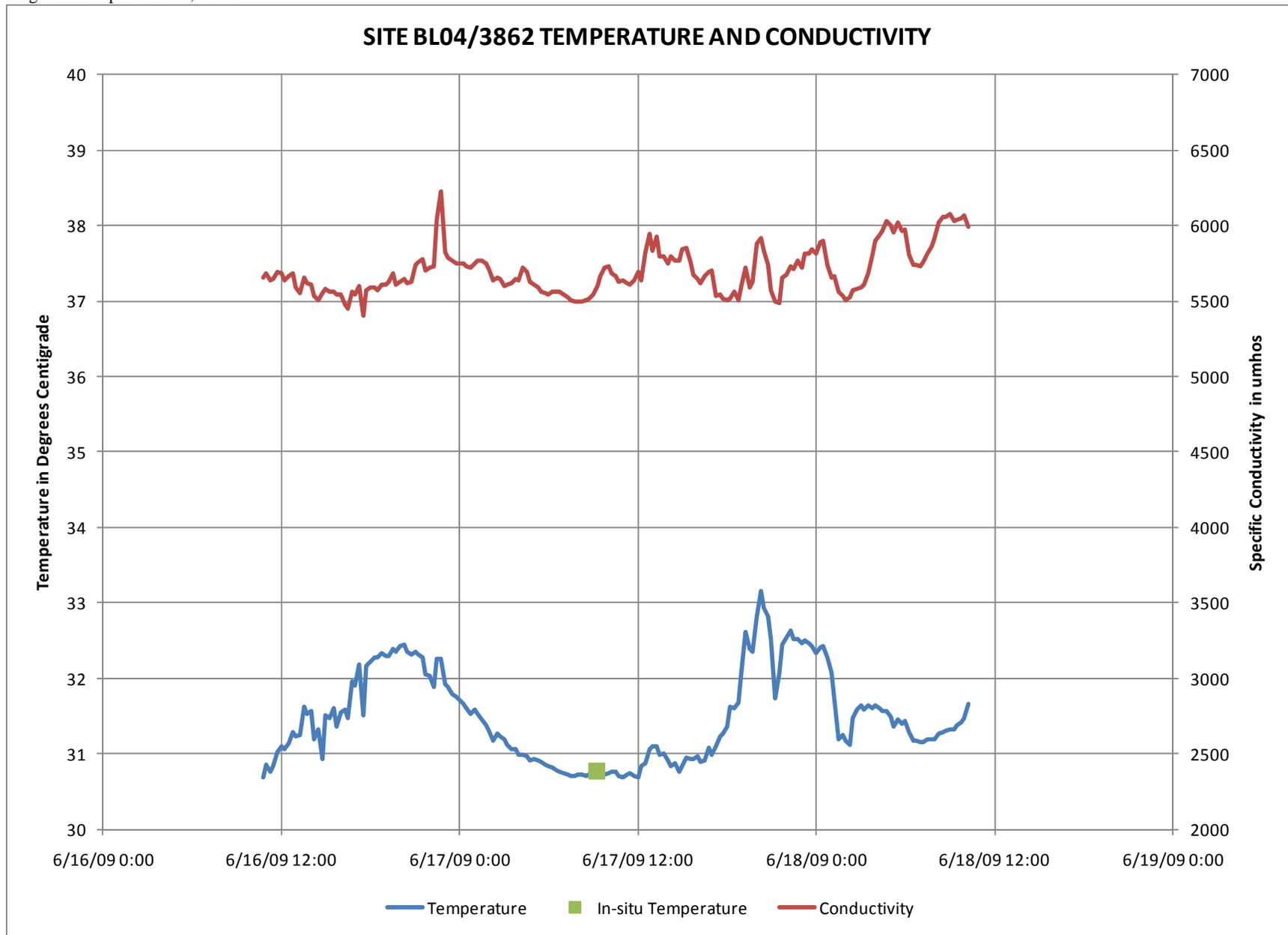
Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

6/17/2009	18:45:00	6/17/09 18:45	31.82	7.69	906	0.47	93.3	6.82
6/17/2009	19:00:00	6/17/09 19:00	31.73	7.65	906	0.47	90	6.59
6/17/2009	19:15:00	6/17/09 19:15	31.69	7.66	905	0.47	90.2	6.61
6/17/2009	19:30:00	6/17/09 19:30	31.69	7.69	903	0.47	93.3	6.84
6/17/2009	19:45:00	6/17/09 19:45	31.65	7.7	901	0.47	92.8	6.8
6/17/2009	20:00:00	6/17/09 20:00	31.61	7.69	899	0.47	88.7	6.5
6/17/2009	20:15:00	6/17/09 20:15	31.55	7.68	898	0.47	87.1	6.4
6/17/2009	20:30:00	6/17/09 20:30	31.51	7.66	896	0.47	82.7	6.08
6/17/2009	20:45:00	6/17/09 20:45	31.43	7.57	899	0.47	64.6	4.75
6/17/2009	21:00:00	6/17/09 21:00	31.31	7.55	901	0.47	60.7	4.47
6/17/2009	21:15:00	6/17/09 21:15	31.25	7.6	900	0.47	69.9	5.16
6/17/2009	21:30:00	6/17/09 21:30	31.17	7.58	902	0.47	62.7	4.63
6/17/2009	21:45:00	6/17/09 21:45	31.15	7.58	899	0.47	64.6	4.77
6/17/2009	22:00:00	6/17/09 22:00	31.13	7.58	897	0.47	64.3	4.75
6/17/2009	22:15:00	6/17/09 22:15	31.08	7.56	902	0.47	65	4.81
6/17/2009	22:30:00	6/17/09 22:30	31.05	7.54	900	0.47	56.4	4.17
6/17/2009	22:45:00	6/17/09 22:45	30.97	7.54	899	0.47	52.7	3.9
6/17/2009	23:00:00	6/17/09 23:00	30.91	7.55	900	0.47	50.4	3.74
6/17/2009	23:15:00	6/17/09 23:15	30.87	7.53	900	0.47	48	3.57
6/17/2009	23:30:00	6/17/09 23:30	30.77	7.53	902	0.47	45	3.34
6/17/2009	23:45:00	6/17/09 23:45	30.73	7.52	902	0.47	44.2	3.29
6/18/2009	0:00:00	6/18/09 0:00	30.69	7.52	901	0.47	43	3.2
6/18/2009	0:15:00	6/18/09 0:15	30.64	7.52	901	0.47	40.2	3
6/18/2009	0:30:00	6/18/09 0:30	30.59	7.51	900	0.47	40.2	3
6/18/2009	0:45:00	6/18/09 0:45	30.59	7.52	900	0.47	46.8	3.5
6/18/2009	1:00:00	6/18/09 1:00	30.61	7.51	901	0.47	46.9	3.5
6/18/2009	1:15:00	6/18/09 1:15	30.59	7.49	904	0.47	45.3	3.38
6/18/2009	1:30:00	6/18/09 1:30	30.52	7.5	902	0.47	45	3.36
6/18/2009	1:45:00	6/18/09 1:45	30.46	7.51	901	0.47	49.9	3.73
6/18/2009	2:00:00	6/18/09 2:00	30.43	7.51	902	0.47	48.7	3.65
6/18/2009	2:15:00	6/18/09 2:15	30.38	7.5	902	0.47	46	3.45
6/18/2009	2:30:00	6/18/09 2:30	30.32	7.5	902	0.47	42.4	3.18
6/18/2009	2:45:00	6/18/09 2:45	30.28	7.49	902	0.47	40.4	3.03
6/18/2009	3:00:00	6/18/09 3:00	30.23	7.49	903	0.47	38.1	2.86

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

6/18/2009	3:15:00	6/18/09 3:15	30.19	7.48	902	0.47	33.9	2.55
6/18/2009	3:30:00	6/18/09 3:30	30.16	7.48	901	0.47	32.8	2.47
6/18/2009	3:45:00	6/18/09 3:45	30.09	7.48	902	0.47	34.9	2.63
6/18/2009	4:00:00	6/18/09 4:00	30.07	7.48	902	0.47	33	2.49
6/18/2009	4:15:00	6/18/09 4:15	30.02	7.47	902	0.47	30.9	2.33
6/18/2009	4:30:00	6/18/09 4:30	29.98	7.48	902	0.47	29.3	2.21
6/18/2009	4:45:00	6/18/09 4:45	29.9	7.47	902	0.47	29.3	2.21
6/18/2009	5:00:00	6/18/09 5:00	29.87	7.48	902	0.47	26.1	1.97
6/18/2009	5:15:00	6/18/09 5:15	29.84	7.47	899	0.47	24.7	1.86
6/18/2009	5:30:00	6/18/09 5:30	29.8	7.47	903	0.47	23.4	1.77
6/18/2009	5:45:00	6/18/09 5:45	29.72	7.47	902	0.47	22	1.67
6/18/2009	6:00:00	6/18/09 6:00	29.65	7.47	902	0.47	25.8	1.96
6/18/2009	6:15:00	6/18/09 6:15	29.69	7.46	902	0.47	25.3	1.92
6/18/2009	6:30:00	6/18/09 6:30	29.68	7.45	903	0.47	23.8	1.81
6/18/2009	6:45:00	6/18/09 6:45	29.64	7.46	903	0.47	22	1.67
6/18/2009	7:00:00	6/18/09 7:00	29.62	7.46	903	0.47	19.1	1.45
6/18/2009	7:15:00	6/18/09 7:15	29.58	7.47	903	0.47	19	1.44
6/18/2009	7:30:00	6/18/09 7:30	29.53	7.47	902	0.47	18.1	1.38
6/18/2009	7:45:00	6/18/09 7:45	29.53	7.47	901	0.47	17.6	1.34
6/18/2009	8:00:00	6/18/09 8:00	29.51	7.46	899	0.47	18.4	1.4
6/18/2009	8:15:00	6/18/09 8:15	29.5	7.46	898	0.47	16.8	1.27
6/18/2009	8:30:00	6/18/09 8:30	29.48	7.46	903	0.47	14.7	1.12
6/18/2009	8:45:00	6/18/09 8:45	29.5	7.47	902	0.47	18.4	1.4
6/18/2009	9:00:00	6/18/09 9:00	29.48	7.46	901	0.47	13.8	1.05
6/18/2009	9:15:00	6/18/09 9:15	29.45	7.46	901	0.47	16.1	1.22





Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

Date M/D/YYYY	Time HH:MM:SS	Date/Time	TEMP °C	pH Units	Cond uS/cm	Sal ppt	LDO% Sat	LDO mg/l
6/16/2009	10:45:00	6/16/09 10:45	30.68	7.21	5656	3.12	63.7	4.68
6/16/2009	11:00:00	6/16/09 11:00	30.85	7.21	5678	3.13	59.5	4.36
6/16/2009	11:15:00	6/16/09 11:15	30.76	7.19	5632	3.1	56.6	4.15
6/16/2009	11:30:00	6/16/09 11:30	30.83	7.16	5647	3.11	49.6	3.64
6/16/2009	11:45:00	6/16/09 11:45	31.03	7.22	5695	3.14	63.1	4.61
6/16/2009	12:00:00	6/16/09 12:00	31.1	7.2	5685	3.13	59.8	4.36
6/16/2009	12:15:00	6/16/09 12:15	31.06	7.2	5636	3.11	61.4	4.48
6/16/2009	12:30:00	6/16/09 12:30	31.13	7.2	5660	3.12	61.1	4.45
6/16/2009	12:45:00	6/16/09 12:45	31.28	7.22	5678	3.13	64.4	4.68
6/16/2009	13:00:00	6/16/09 13:00	31.24	7.18	5586	3.08	57.6	4.19
6/16/2009	13:15:00	6/16/09 13:15	31.25	7.19	5548	3.06	61	4.44
6/16/2009	13:30:00	6/16/09 13:30	31.62	7.27	5650	3.11	71.5	5.17
6/16/2009	13:45:00	6/16/09 13:45	31.54	7.25	5615	3.09	69.2	5.01
6/16/2009	14:00:00	6/16/09 14:00	31.57	7.26	5608	3.09	69.5	5.03
6/16/2009	14:15:00	6/16/09 14:15	31.19	7.17	5534	3.05	55	4.01
6/16/2009	14:30:00	6/16/09 14:30	31.32	7.19	5503	3.03	59.3	4.31
6/16/2009	14:45:00	6/16/09 14:45	30.94	7.13	5552	3.06	48.6	3.55
6/16/2009	15:00:00	6/16/09 15:00	31.51	7.17	5583	3.08	60	4.35
6/16/2009	15:15:00	6/16/09 15:15	31.47	7.14	5564	3.07	52.2	3.78
6/16/2009	15:30:00	6/16/09 15:30	31.6	7.16	5557	3.06	56.4	4.08
6/16/2009	15:45:00	6/16/09 15:45	31.37	7.11	5540	3.05	47.8	3.47
6/16/2009	16:00:00	6/16/09 16:00	31.55	7.16	5540	3.05	58.2	4.21
6/16/2009	16:15:00	6/16/09 16:15	31.58	7.17	5480	3.02	60.2	4.36
6/16/2009	16:30:00	6/16/09 16:30	31.47	7.15	5449	3	56.8	4.12
6/16/2009	16:45:00	6/16/09 16:45	31.97	7.2	5561	3.06	65.6	4.72
6/16/2009	17:00:00	6/16/09 17:00	31.91	7.25	5542	3.05	69	4.96
6/16/2009	17:15:00	6/16/09 17:15	32.19	7.28	5601	3.09	74.1	5.31
6/16/2009	17:30:00	6/16/09 17:30	31.51	7.14	5401	2.97	51.8	3.75
6/16/2009	17:45:00	6/16/09 17:45	32.16	7.18	5566	3.07	61	4.37
6/16/2009	18:00:00	6/16/09 18:00	32.22	7.25	5589	3.08	71.7	5.13
6/16/2009	18:15:00	6/16/09 18:15	32.27	7.27	5589	3.08	74.6	5.34
6/16/2009	18:30:00	6/16/09 18:30	32.27	7.26	5573	3.07	73.1	5.23

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

6/16/2009	18:45:00	6/16/09 18:45	32.33	7.26	5611	3.09	73.7	5.27
6/16/2009	19:00:00	6/16/09 19:00	32.3	7.26	5608	3.09	73.7	5.27
6/16/2009	19:15:00	6/16/09 19:15	32.3	7.25	5627	3.1	71.1	5.08
6/16/2009	19:30:00	6/16/09 19:30	32.4	7.29	5683	3.13	76.8	5.48
6/16/2009	19:45:00	6/16/09 19:45	32.35	7.27	5604	3.09	72.1	5.15
6/16/2009	20:00:00	6/16/09 20:00	32.42	7.28	5624	3.1	73.4	5.24
6/16/2009	20:15:00	6/16/09 20:15	32.45	7.28	5649	3.11	73.6	5.25
6/16/2009	20:30:00	6/16/09 20:30	32.35	7.28	5613	3.09	73.4	5.24
6/16/2009	20:45:00	6/16/09 20:45	32.32	7.28	5624	3.1	71	5.07
6/16/2009	21:00:00	6/16/09 21:00	32.35	7.32	5740	3.17	78.8	5.62
6/16/2009	21:15:00	6/16/09 21:15	32.32	7.31	5755	3.17	77.6	5.54
6/16/2009	21:30:00	6/16/09 21:30	32.28	7.32	5776	3.19	76	5.43
6/16/2009	21:45:00	6/16/09 21:45	32.06	7.25	5697	3.14	68.4	4.91
6/16/2009	22:00:00	6/16/09 22:00	32.04	7.26	5723	3.16	70.4	5.05
6/16/2009	22:15:00	6/16/09 22:15	31.89	7.24	5730	3.16	66.4	4.78
6/16/2009	22:30:00	6/16/09 22:30	32.26	7.27	6042	3.34	70.4	5.03
6/16/2009	22:45:00	6/16/09 22:45	32.26	7.37	6229	3.45	81.2	5.8
6/16/2009	23:00:00	6/16/09 23:00	31.92	7.28	5827	3.22	72.1	5.18
6/16/2009	23:15:00	6/16/09 23:15	31.89	7.26	5787	3.19	71.3	5.13
6/16/2009	23:30:00	6/16/09 23:30	31.79	7.25	5771	3.18	67.6	4.87
6/16/2009	23:45:00	6/16/09 23:45	31.76	7.23	5752	3.17	64.9	4.68
6/17/2009	0:00:00	6/17/09 0:00	31.72	7.24	5751	3.17	66.4	4.79
6/17/2009	0:15:00	6/17/09 0:15	31.67	7.24	5745	3.17	66	4.77
6/17/2009	0:30:00	6/17/09 0:30	31.6	7.24	5732	3.16	65.6	4.74
6/17/2009	0:45:00	6/17/09 0:45	31.54	7.2	5716	3.15	59.3	4.29
6/17/2009	1:00:00	6/17/09 1:00	31.59	7.21	5748	3.17	62.1	4.49
6/17/2009	1:15:00	6/17/09 1:15	31.53	7.25	5765	3.18	66.8	4.83
6/17/2009	1:30:00	6/17/09 1:30	31.46	7.22	5769	3.18	63	4.56
6/17/2009	1:45:00	6/17/09 1:45	31.39	7.22	5748	3.17	61.6	4.47
6/17/2009	2:00:00	6/17/09 2:00	31.31	7.17	5711	3.15	54.2	3.94
6/17/2009	2:15:00	6/17/09 2:15	31.18	7.11	5636	3.11	43.6	3.17
6/17/2009	2:30:00	6/17/09 2:30	31.27	7.12	5657	3.12	48.5	3.53
6/17/2009	2:45:00	6/17/09 2:45	31.24	7.16	5649	3.11	54.1	3.93
6/17/2009	3:00:00	6/17/09 3:00	31.19	7.15	5603	3.09	53.3	3.88

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

6/17/2009	3:15:00	6/17/09 3:15	31.12	7.13	5609	3.09	51.1	3.72
6/17/2009	3:30:00	6/17/09 3:30	31.06	7.12	5618	3.1	50	3.65
6/17/2009	3:45:00	6/17/09 3:45	31.06	7.15	5643	3.11	53.7	3.92
6/17/2009	4:00:00	6/17/09 4:00	30.99	7.13	5639	3.11	49.5	3.61
6/17/2009	4:15:00	6/17/09 4:15	30.99	7.15	5721	3.16	57.2	4.18
6/17/2009	4:30:00	6/17/09 4:30	30.97	7.17	5696	3.14	56.5	4.13
6/17/2009	4:45:00	6/17/09 4:45	30.91	7.15	5625	3.1	52.4	3.83
6/17/2009	5:00:00	6/17/09 5:00	30.93	7.13	5606	3.09	49.3	3.61
6/17/2009	5:15:00	6/17/09 5:15	30.91	7.13	5587	3.08	48	3.51
6/17/2009	5:30:00	6/17/09 5:30	30.9	7.13	5564	3.07	48.7	3.57
6/17/2009	5:45:00	6/17/09 5:45	30.85	7.12	5552	3.06	47.4	3.47
6/17/2009	6:00:00	6/17/09 6:00	30.84	7.12	5543	3.05	47.7	3.5
6/17/2009	6:15:00	6/17/09 6:15	30.82	7.12	5560	3.06	47.2	3.46
6/17/2009	6:30:00	6/17/09 6:30	30.79	7.12	5563	3.06	48.3	3.54
6/17/2009	6:45:00	6/17/09 6:45	30.77	7.12	5558	3.06	47.2	3.46
6/17/2009	7:00:00	6/17/09 7:00	30.75	7.12	5544	3.05	46.4	3.41
6/17/2009	7:15:00	6/17/09 7:15	30.72	7.11	5525	3.04	44.2	3.25
6/17/2009	7:30:00	6/17/09 7:30	30.7	7.11	5501	3.03	43.2	3.17
6/17/2009	7:45:00	6/17/09 7:45	30.71	7.1	5500	3.03	42.7	3.13
6/17/2009	8:00:00	6/17/09 8:00	30.72	7.11	5494	3.03	44.6	3.27
6/17/2009	8:15:00	6/17/09 8:15	30.73	7.1	5496	3.03	43.4	3.19
6/17/2009	8:30:00	6/17/09 8:30	30.71	7.1	5502	3.03	43.3	3.18
6/17/2009	8:45:00	6/17/09 8:45	30.73	7.11	5515	3.04	43.8	3.22
6/17/2009	9:00:00	6/17/09 9:00	30.77	7.11	5544	3.05	44.7	3.28
6/17/2009	9:15:00	6/17/09 9:15	30.77	7.11	5600	3.09	46.2	3.39
6/17/2009	9:30:00	6/17/09 9:30	30.73	7.12	5660	3.12	47	3.45
6/17/2009	9:45:00	6/17/09 9:45	30.73	7.11	5721	3.15	44.5	3.27
6/17/2009	10:00:00	6/17/09 10:00	30.75	7.11	5729	3.16	43.3	3.17
6/17/2009	10:15:00	6/17/09 10:15	30.77	7.11	5681	3.13	44.8	3.28
6/17/2009	10:30:00	6/17/09 10:30	30.77	7.11	5662	3.12	45.9	3.37
6/17/2009	10:45:00	6/17/09 10:45	30.7	7.08	5627	3.1	40	2.93
6/17/2009	11:00:00	6/17/09 11:00	30.69	7.07	5638	3.11	36.6	2.69
6/17/2009	11:15:00	6/17/09 11:15	30.73	7.09	5621	3.1	41.3	3.03
6/17/2009	11:30:00	6/17/09 11:30	30.74	7.1	5611	3.09	42.5	3.12

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

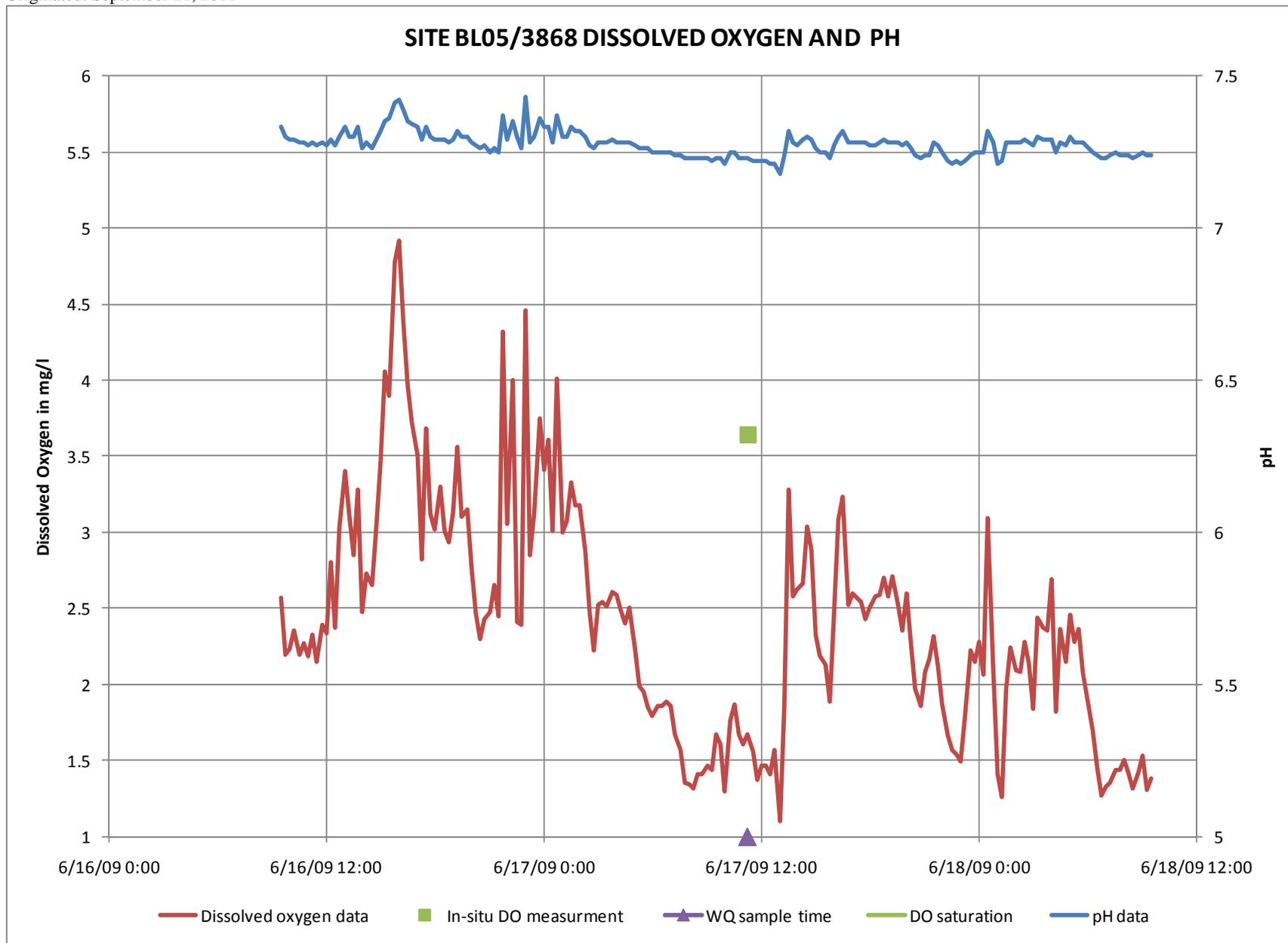
6/17/2009	11:45:00	6/17/09 11:45	30.71	7.07	5636	3.11	36.4	2.67
6/17/2009	12:00:00	6/17/09 12:00	30.69	7.07	5691	3.14	37.5	2.75
6/17/2009	12:15:00	6/17/09 12:15	30.84	7.08	5635	3.11	39.6	2.9
6/17/2009	12:30:00	6/17/09 12:30	30.88	7.09	5823	3.21	40.2	2.94
6/17/2009	12:45:00	6/17/09 12:45	31.07	7.07	5944	3.28	41.6	3.03
6/17/2009	13:00:00	6/17/09 13:00	31.11	7.09	5832	3.22	45.6	3.32
6/17/2009	13:15:00	6/17/09 13:15	31.1	7.08	5923	3.27	43.2	3.14
6/17/2009	13:30:00	6/17/09 13:30	30.98	7.09	5793	3.2	41.3	3.02
6/17/2009	13:45:00	6/17/09 13:45	31	7.09	5796	3.2	44.5	3.25
6/17/2009	14:00:00	6/17/09 14:00	30.91	7.09	5752	3.17	43.4	3.17
6/17/2009	14:15:00	6/17/09 14:15	30.83	7.06	5796	3.2	34.6	2.53
6/17/2009	14:30:00	6/17/09 14:30	30.87	7.08	5763	3.18	38.7	2.83
6/17/2009	14:45:00	6/17/09 14:45	30.76	7.07	5763	3.18	36.7	2.69
6/17/2009	15:00:00	6/17/09 15:00	30.84	7.07	5838	3.22	39.2	2.87
6/17/2009	15:15:00	6/17/09 15:15	30.95	7.09	5848	3.23	41.4	3.02
6/17/2009	15:30:00	6/17/09 15:30	30.93	7.09	5762	3.18	41	3
6/17/2009	15:45:00	6/17/09 15:45	30.93	7.09	5672	3.13	43.3	3.16
6/17/2009	16:00:00	6/17/09 16:00	30.97	7.1	5643	3.11	43.6	3.19
6/17/2009	16:15:00	6/17/09 16:15	30.9	7.1	5618	3.1	43.7	3.2
6/17/2009	16:30:00	6/17/09 16:30	30.91	7.09	5663	3.12	41	3
6/17/2009	16:45:00	6/17/09 16:45	31.08	7.08	5689	3.14	40.3	2.94
6/17/2009	17:00:00	6/17/09 17:00	30.98	7.07	5702	3.14	37.2	2.72
6/17/2009	17:15:00	6/17/09 17:15	31.1	7.1	5533	3.05	43	3.14
6/17/2009	17:30:00	6/17/09 17:30	31.23	7.09	5539	3.05	41.9	3.05
6/17/2009	17:45:00	6/17/09 17:45	31.27	7.09	5510	3.03	42	3.06
6/17/2009	18:00:00	6/17/09 18:00	31.37	7.1	5506	3.03	42.6	3.09
6/17/2009	18:15:00	6/17/09 18:15	31.62	7.13	5515	3.04	46.8	3.38
6/17/2009	18:30:00	6/17/09 18:30	31.61	7.11	5557	3.06	45.9	3.32
6/17/2009	18:45:00	6/17/09 18:45	31.68	7.12	5508	3.03	48.7	3.52
6/17/2009	19:00:00	6/17/09 19:00	32.08	7.13	5603	3.09	53.1	3.81
6/17/2009	19:15:00	6/17/09 19:15	32.62	7.22	5717	3.15	71.2	5.06
6/17/2009	19:30:00	6/17/09 19:30	32.4	7.22	5589	3.08	66.2	4.73
6/17/2009	19:45:00	6/17/09 19:45	32.36	7.22	5630	3.1	63.7	4.55
6/17/2009	20:00:00	6/17/09 20:00	32.82	7.28	5879	3.25	79.5	5.63

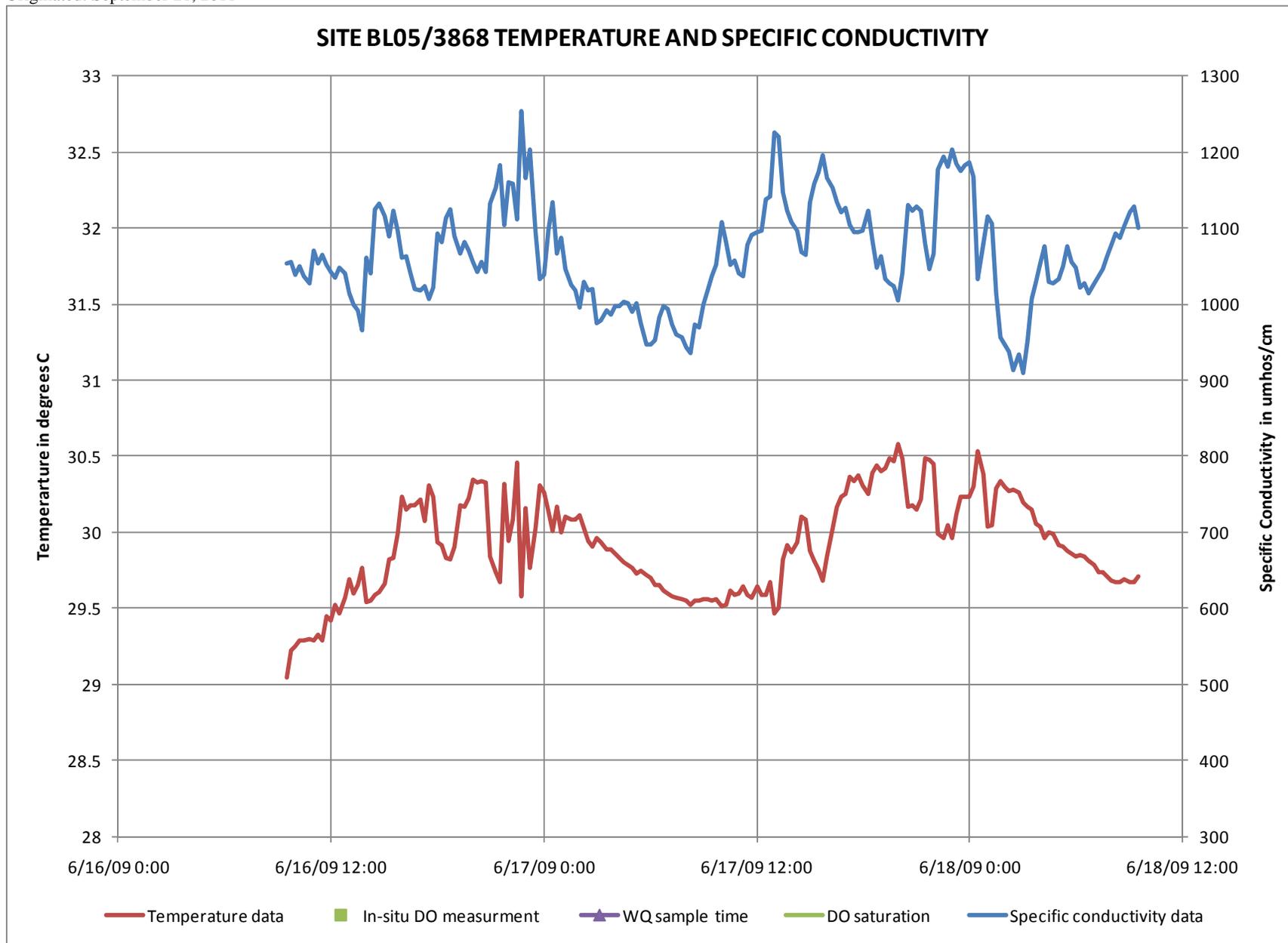
Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

6/17/2009	20:15:00	6/17/09 20:15	33.15	7.34	5918	3.27	86.4	6.08
6/17/2009	20:30:00	6/17/09 20:30	32.94	7.34	5835	3.22	79.5	5.62
6/17/2009	20:45:00	6/17/09 20:45	32.82	7.31	5743	3.17	73.6	5.21
6/17/2009	21:00:00	6/17/09 21:00	32.52	7.22	5575	3.07	55	3.91
6/17/2009	21:15:00	6/17/09 21:15	31.73	7.1	5493	3.03	48.3	3.49
6/17/2009	21:30:00	6/17/09 21:30	32.07	7.11	5487	3.02	43.3	3.11
6/17/2009	21:45:00	6/17/09 21:45	32.44	7.21	5651	3.12	65.9	4.7
6/17/2009	22:00:00	6/17/09 22:00	32.54	7.24	5671	3.13	67.7	4.82
6/17/2009	22:15:00	6/17/09 22:15	32.63	7.28	5727	3.16	72.5	5.15
6/17/2009	22:30:00	6/17/09 22:30	32.52	7.26	5707	3.15	69.5	4.95
6/17/2009	22:45:00	6/17/09 22:45	32.53	7.28	5770	3.18	73.1	5.2
6/17/2009	23:00:00	6/17/09 23:00	32.47	7.3	5722	3.16	71.8	5.12
6/17/2009	23:15:00	6/17/09 23:15	32.5	7.3	5814	3.21	74.7	5.31
6/17/2009	23:30:00	6/17/09 23:30	32.46	7.31	5816	3.21	75.2	5.35
6/17/2009	23:45:00	6/17/09 23:45	32.43	7.32	5839	3.22	76.1	5.43
6/18/2009	0:00:00	6/18/09 0:00	32.33	7.29	5809	3.21	72.1	5.15
6/18/2009	0:15:00	6/18/09 0:15	32.41	7.31	5888	3.25	75.5	5.38
6/18/2009	0:30:00	6/18/09 0:30	32.42	7.32	5896	3.26	75.6	5.38
6/18/2009	0:45:00	6/18/09 0:45	32.28	7.25	5741	3.17	64.5	4.61
6/18/2009	1:00:00	6/18/09 1:00	32.08	7.2	5657	3.12	61.5	4.41
6/18/2009	1:15:00	6/18/09 1:15	31.71	7.12	5665	3.12	47.8	3.45
6/18/2009	1:30:00	6/18/09 1:30	31.2	7.06	5562	3.06	35.8	2.61
6/18/2009	1:45:00	6/18/09 1:45	31.25	7.06	5534	3.05	35.6	2.59
6/18/2009	2:00:00	6/18/09 2:00	31.17	7.05	5504	3.03	32.7	2.39
6/18/2009	2:15:00	6/18/09 2:15	31.12	7.03	5519	3.04	30.5	2.23
6/18/2009	2:30:00	6/18/09 2:30	31.48	7.09	5570	3.07	45.1	3.27
6/18/2009	2:45:00	6/18/09 2:45	31.59	7.15	5581	3.08	52	3.76
6/18/2009	3:00:00	6/18/09 3:00	31.64	7.18	5589	3.08	57.3	4.14
6/18/2009	3:15:00	6/18/09 3:15	31.59	7.15	5612	3.09	50.9	3.68
6/18/2009	3:30:00	6/18/09 3:30	31.65	7.19	5683	3.13	57.7	4.17
6/18/2009	3:45:00	6/18/09 3:45	31.61	7.17	5804	3.2	52.4	3.78
6/18/2009	4:00:00	6/18/09 4:00	31.64	7.18	5897	3.26	56.3	4.07
6/18/2009	4:15:00	6/18/09 4:15	31.6	7.18	5939	3.28	56	4.05
6/18/2009	4:30:00	6/18/09 4:30	31.56	7.18	5967	3.3	55.5	4.01

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

6/18/2009	4:45:00	6/18/09 4:45	31.57	7.16	6025	3.33	52	3.76
6/18/2009	5:00:00	6/18/09 5:00	31.49	7.17	6002	3.32	53.6	3.88
6/18/2009	5:15:00	6/18/09 5:15	31.37	7.15	5955	3.29	50.1	3.63
6/18/2009	5:30:00	6/18/09 5:30	31.45	7.15	6016	3.32	51	3.69
6/18/2009	5:45:00	6/18/09 5:45	31.4	7.16	5963	3.29	52.8	3.83
6/18/2009	6:00:00	6/18/09 6:00	31.44	7.17	5971	3.3	53.2	3.85
6/18/2009	6:15:00	6/18/09 6:15	31.28	7.13	5804	3.2	45.4	3.3
6/18/2009	6:30:00	6/18/09 6:30	31.18	7.1	5736	3.16	41.4	3.01
6/18/2009	6:45:00	6/18/09 6:45	31.18	7.12	5738	3.16	46.2	3.36
6/18/2009	7:00:00	6/18/09 7:00	31.16	7.11	5730	3.16	45.3	3.3
6/18/2009	7:15:00	6/18/09 7:15	31.15	7.12	5762	3.18	45.6	3.32
6/18/2009	7:30:00	6/18/09 7:30	31.19	7.13	5811	3.21	49	3.57
6/18/2009	7:45:00	6/18/09 7:45	31.19	7.15	5864	3.24	50.7	3.69
6/18/2009	8:00:00	6/18/09 8:00	31.2	7.16	5916	3.27	52.8	3.84
6/18/2009	8:15:00	6/18/09 8:15	31.27	7.15	6022	3.33	49	3.56
6/18/2009	8:30:00	6/18/09 8:30	31.29	7.13	6060	3.35	46.5	3.38
6/18/2009	8:45:00	6/18/09 8:45	31.3	7.13	6053	3.35	47.5	3.45
6/18/2009	9:00:00	6/18/09 9:00	31.32	7.13	6078	3.36	47.3	3.43
6/18/2009	9:15:00	6/18/09 9:15	31.33	7.15	6030	3.33	49.5	3.59
6/18/2009	9:30:00	6/18/09 9:30	31.38	7.16	6040	3.34	51.8	3.75
6/18/2009	9:45:00	6/18/09 9:45	31.42	7.16	6044	3.34	52.1	3.77
6/18/2009	10:00:00	6/18/09 10:00	31.47	7.16	6068	3.35	52.5	3.8
6/18/2009	10:15:00	6/18/09 10:15	31.66	7.18	5990	3.31	57.9	4.18





Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

Date M/D/YYYY	Time HH:MM:SS	Date/Time	TEMP °C	pH Units	Cond uS/cm	Sal ppt	LDO% Sat	LDO mg/l
6/16/2009	9:30:00	6/16/09 9:30	29.05	7.33	1054	0.55	33.6	2.57
6/16/2009	9:45:00	6/16/09 9:45	29.22	7.3	1055	0.55	28.8	2.2
6/16/2009	10:00:00	6/16/09 10:00	29.25	7.29	1039	0.54	29.1	2.23
6/16/2009	10:15:00	6/16/09 10:15	29.29	7.29	1049	0.55	30.8	2.35
6/16/2009	10:30:00	6/16/09 10:30	29.29	7.28	1037	0.54	28.9	2.2
6/16/2009	10:45:00	6/16/09 10:45	29.3	7.28	1027	0.54	29.8	2.27
6/16/2009	11:00:00	6/16/09 11:00	29.29	7.27	1070	0.56	28.7	2.19
6/16/2009	11:15:00	6/16/09 11:15	29.33	7.28	1054	0.55	30.6	2.33
6/16/2009	11:30:00	6/16/09 11:30	29.29	7.27	1065	0.56	28.2	2.15
6/16/2009	11:45:00	6/16/09 11:45	29.45	7.28	1051	0.55	31.4	2.39
6/16/2009	12:00:00	6/16/09 12:00	29.42	7.27	1042	0.55	30.7	2.34
6/16/2009	12:15:00	6/16/09 12:15	29.52	7.29	1034	0.54	36.9	2.8
6/16/2009	12:30:00	6/16/09 12:30	29.47	7.27	1047	0.55	31.1	2.37
6/16/2009	12:45:00	6/16/09 12:45	29.57	7.3	1040	0.54	39.9	3.03
6/16/2009	13:00:00	6/16/09 13:00	29.69	7.33	1014	0.53	44.9	3.4
6/16/2009	13:15:00	6/16/09 13:15	29.6	7.3	1000	0.52	41	3.11
6/16/2009	13:30:00	6/16/09 13:30	29.65	7.3	992	0.52	37.6	2.85
6/16/2009	13:45:00	6/16/09 13:45	29.77	7.33	966	0.51	43.4	3.28
6/16/2009	14:00:00	6/16/09 14:00	29.54	7.26	1060	0.56	32.7	2.48
6/16/2009	14:15:00	6/16/09 14:15	29.55	7.28	1040	0.54	35.9	2.73
6/16/2009	14:30:00	6/16/09 14:30	29.59	7.26	1125	0.59	34.9	2.65
6/16/2009	14:45:00	6/16/09 14:45	29.61	7.29	1132	0.59	40.1	3.04
6/16/2009	15:00:00	6/16/09 15:00	29.66	7.32	1115	0.59	45.8	3.47
6/16/2009	15:15:00	6/16/09 15:15	29.82	7.35	1088	0.57	53.7	4.06
6/16/2009	15:30:00	6/16/09 15:30	29.83	7.36	1122	0.59	51.7	3.9
6/16/2009	15:45:00	6/16/09 15:45	29.99	7.41	1097	0.58	63.5	4.78
6/16/2009	16:00:00	6/16/09 16:00	30.23	7.42	1060	0.56	65.5	4.92
6/16/2009	16:15:00	6/16/09 16:15	30.15	7.39	1062	0.56	58.2	4.38
6/16/2009	16:30:00	6/16/09 16:30	30.18	7.35	1040	0.54	52.9	3.97
6/16/2009	16:45:00	6/16/09 16:45	30.18	7.34	1020	0.53	49.5	3.72
6/16/2009	17:00:00	6/16/09 17:00	30.21	7.33	1017	0.53	46.7	3.5
6/16/2009	17:15:00	6/16/09 17:15	30.07	7.29	1023	0.54	37.4	2.82

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

6/16/2009	17:30:00	6/16/09 17:30	30.31	7.33	1006	0.53	49.1	3.68
6/16/2009	17:45:00	6/16/09 17:45	30.23	7.3	1021	0.53	41.5	3.12
6/16/2009	18:00:00	6/16/09 18:00	29.93	7.29	1092	0.57	40	3.02
6/16/2009	18:15:00	6/16/09 18:15	29.92	7.29	1081	0.57	43.7	3.3
6/16/2009	18:30:00	6/16/09 18:30	29.83	7.29	1113	0.58	39.8	3.01
6/16/2009	18:45:00	6/16/09 18:45	29.82	7.28	1124	0.59	38.8	2.93
6/16/2009	19:00:00	6/16/09 19:00	29.91	7.29	1088	0.57	41.5	3.13
6/16/2009	19:15:00	6/16/09 19:15	30.18	7.32	1066	0.56	47.4	3.56
6/16/2009	19:30:00	6/16/09 19:30	30.17	7.3	1081	0.57	41.3	3.1
6/16/2009	19:45:00	6/16/09 19:45	30.22	7.3	1070	0.56	42	3.15
6/16/2009	20:00:00	6/16/09 20:00	30.35	7.28	1055	0.55	36.9	2.77
6/16/2009	20:15:00	6/16/09 20:15	30.33	7.27	1042	0.55	32.9	2.47
6/16/2009	20:30:00	6/16/09 20:30	30.34	7.26	1055	0.55	30.6	2.3
6/16/2009	20:45:00	6/16/09 20:45	30.33	7.27	1042	0.55	32.5	2.43
6/16/2009	21:00:00	6/16/09 21:00	29.84	7.25	1131	0.59	32.9	2.48
6/16/2009	21:15:00	6/16/09 21:15	29.74	7.26	1152	0.61	35	2.65
6/16/2009	21:30:00	6/16/09 21:30	29.67	7.25	1183	0.62	32.3	2.45
6/16/2009	21:45:00	6/16/09 21:45	30.32	7.37	1103	0.58	57.7	4.32
6/16/2009	22:00:00	6/16/09 22:00	29.94	7.29	1159	0.61	40.6	3.06
6/16/2009	22:15:00	6/16/09 22:15	30.08	7.35	1158	0.61	53.2	4
6/16/2009	22:30:00	6/16/09 22:30	30.46	7.3	1111	0.58	32.2	2.41
6/16/2009	22:45:00	6/16/09 22:45	29.58	7.26	1254	0.66	31.5	2.39
6/16/2009	23:00:00	6/16/09 23:00	30.16	7.43	1166	0.61	59.4	4.46
6/16/2009	23:15:00	6/16/09 23:15	29.77	7.28	1203	0.63	37.7	2.85
6/16/2009	23:30:00	6/16/09 23:30	30.03	7.3	1094	0.57	41.4	3.12
6/16/2009	23:45:00	6/16/09 23:45	30.31	7.36	1033	0.54	50.1	3.75
6/17/2009	0:00:00	6/17/09 0:00	30.26	7.33	1039	0.54	45.4	3.41
6/17/2009	0:15:00	6/17/09 0:15	30.14	7.33	1097	0.58	48	3.61
6/17/2009	0:30:00	6/17/09 0:30	30.01	7.28	1133	0.6	39.9	3.01
6/17/2009	0:45:00	6/17/09 0:45	30.17	7.37	1066	0.56	53.4	4.01
6/17/2009	1:00:00	6/17/09 1:00	30	7.3	1087	0.57	39.8	3
6/17/2009	1:15:00	6/17/09 1:15	30.1	7.3	1045	0.55	40.9	3.07
6/17/2009	1:30:00	6/17/09 1:30	30.08	7.33	1025	0.54	44.3	3.33
6/17/2009	1:45:00	6/17/09 1:45	30.08	7.32	1018	0.53	42.3	3.18

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

6/17/2009	2:00:00	6/17/09 2:00	30.11	7.32	996	0.52	42.3	3.18
6/17/2009	2:15:00	6/17/09 2:15	30.03	7.3	1029	0.54	38.2	2.88
6/17/2009	2:30:00	6/17/09 2:30	29.94	7.27	1018	0.53	32.9	2.48
6/17/2009	2:45:00	6/17/09 2:45	29.91	7.26	1019	0.53	29.5	2.22
6/17/2009	3:00:00	6/17/09 3:00	29.96	7.28	974	0.51	33.4	2.52
6/17/2009	3:15:00	6/17/09 3:15	29.93	7.28	979	0.51	33.7	2.54
6/17/2009	3:30:00	6/17/09 3:30	29.89	7.28	992	0.52	33.2	2.51
6/17/2009	3:45:00	6/17/09 3:45	29.89	7.29	986	0.52	34.5	2.61
6/17/2009	4:00:00	6/17/09 4:00	29.86	7.28	998	0.52	34.3	2.59
6/17/2009	4:15:00	6/17/09 4:15	29.83	7.28	998	0.52	32.9	2.49
6/17/2009	4:30:00	6/17/09 4:30	29.8	7.28	1002	0.52	31.8	2.4
6/17/2009	4:45:00	6/17/09 4:45	29.78	7.28	1001	0.52	33	2.5
6/17/2009	5:00:00	6/17/09 5:00	29.77	7.27	989	0.52	29.5	2.23
6/17/2009	5:15:00	6/17/09 5:15	29.73	7.26	1001	0.52	26.3	1.99
6/17/2009	5:30:00	6/17/09 5:30	29.75	7.26	975	0.51	25.7	1.95
6/17/2009	5:45:00	6/17/09 5:45	29.72	7.26	947	0.49	24.4	1.85
6/17/2009	6:00:00	6/17/09 6:00	29.7	7.25	946	0.49	23.7	1.79
6/17/2009	6:15:00	6/17/09 6:15	29.65	7.25	952	0.5	24.5	1.86
6/17/2009	6:30:00	6/17/09 6:30	29.65	7.25	982	0.51	24.5	1.86
6/17/2009	6:45:00	6/17/09 6:45	29.62	7.25	997	0.52	25	1.89
6/17/2009	7:00:00	6/17/09 7:00	29.6	7.25	994	0.52	24.5	1.86
6/17/2009	7:15:00	6/17/09 7:15	29.58	7.24	973	0.51	22	1.67
6/17/2009	7:30:00	6/17/09 7:30	29.57	7.24	960	0.5	20.7	1.57
6/17/2009	7:45:00	6/17/09 7:45	29.56	7.23	957	0.5	17.7	1.35
6/17/2009	8:00:00	6/17/09 8:00	29.55	7.23	943	0.49	17.6	1.34
6/17/2009	8:15:00	6/17/09 8:15	29.52	7.23	935	0.49	17.4	1.32
6/17/2009	8:30:00	6/17/09 8:30	29.55	7.23	973	0.51	18.6	1.41
6/17/2009	8:45:00	6/17/09 8:45	29.55	7.23	969	0.51	18.6	1.41
6/17/2009	9:00:00	6/17/09 9:00	29.56	7.23	999	0.52	19.4	1.47
6/17/2009	9:15:00	6/17/09 9:15	29.56	7.22	1017	0.53	18.9	1.44
6/17/2009	9:30:00	6/17/09 9:30	29.55	7.23	1036	0.54	22	1.67
6/17/2009	9:45:00	6/17/09 9:45	29.56	7.23	1052	0.55	21.2	1.61
6/17/2009	10:00:00	6/17/09 10:00	29.51	7.21	1108	0.58	17.2	1.3
6/17/2009	10:15:00	6/17/09 10:15	29.52	7.25	1082	0.57	23.3	1.77

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

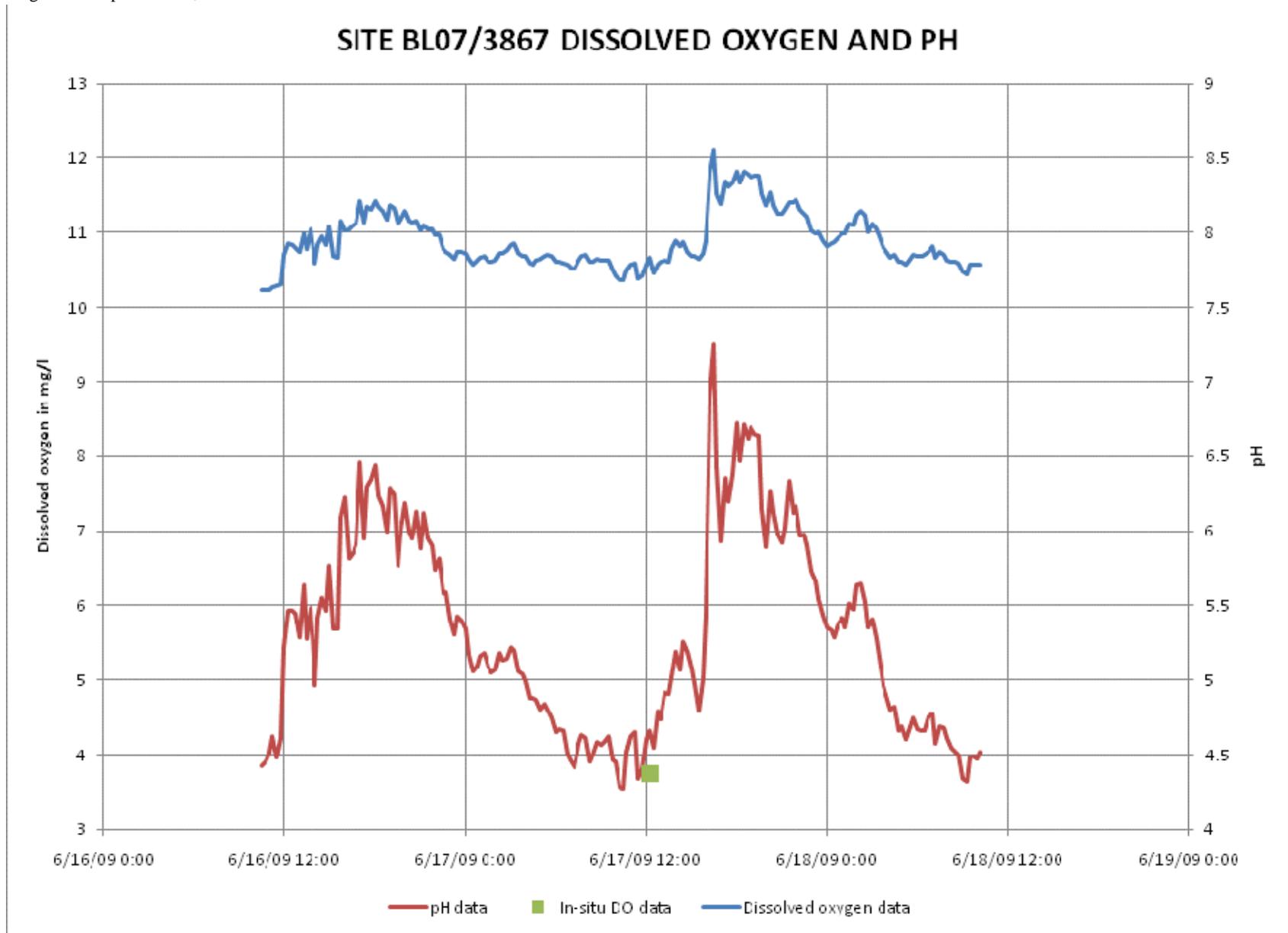
6/17/2009	10:30:00	6/17/09 10:30	29.62	7.25	1052	0.55	24.6	1.87
6/17/2009	10:45:00	6/17/09 10:45	29.59	7.23	1058	0.55	22	1.67
6/17/2009	11:00:00	6/17/09 11:00	29.6	7.23	1041	0.55	21.2	1.61
6/17/2009	11:15:00	6/17/09 11:15	29.64	7.23	1037	0.54	22	1.67
6/17/2009	11:30:00	6/17/09 11:30	29.59	7.22	1077	0.57	20.6	1.56
6/17/2009	11:45:00	6/17/09 11:45	29.57	7.22	1091	0.57	18.1	1.37
6/17/2009	12:00:00	6/17/09 12:00	29.64	7.22	1095	0.57	19.4	1.47
6/17/2009	12:15:00	6/17/09 12:15	29.59	7.22	1097	0.58	19.3	1.47
6/17/2009	12:30:00	6/17/09 12:30	29.59	7.21	1137	0.6	18.6	1.41
6/17/2009	12:45:00	6/17/09 12:45	29.67	7.21	1141	0.6	20.7	1.57
6/17/2009	13:00:00	6/17/09 13:00	29.47	7.18	1225	0.65	14.5	1.1
6/17/2009	13:15:00	6/17/09 13:15	29.5	7.24	1219	0.64	24.7	1.87
6/17/2009	13:30:00	6/17/09 13:30	29.82	7.32	1147	0.6	43.4	3.28
6/17/2009	13:45:00	6/17/09 13:45	29.92	7.28	1122	0.59	34.2	2.58
6/17/2009	14:00:00	6/17/09 14:00	29.87	7.27	1108	0.58	34.8	2.63
6/17/2009	14:15:00	6/17/09 14:15	29.93	7.29	1097	0.58	35.3	2.66
6/17/2009	14:30:00	6/17/09 14:30	30.1	7.3	1068	0.56	40.5	3.04
6/17/2009	14:45:00	6/17/09 14:45	30.08	7.29	1064	0.56	38.4	2.89
6/17/2009	15:00:00	6/17/09 15:00	29.88	7.26	1133	0.6	30.8	2.33
6/17/2009	15:15:00	6/17/09 15:15	29.81	7.25	1158	0.61	29	2.19
6/17/2009	15:30:00	6/17/09 15:30	29.76	7.25	1173	0.62	28.1	2.13
6/17/2009	15:45:00	6/17/09 15:45	29.68	7.23	1195	0.63	24.9	1.89
6/17/2009	16:00:00	6/17/09 16:00	29.84	7.27	1166	0.61	32.9	2.48
6/17/2009	16:15:00	6/17/09 16:15	30.03	7.3	1152	0.61	41	3.08
6/17/2009	16:30:00	6/17/09 16:30	30.17	7.32	1134	0.6	43.1	3.23
6/17/2009	16:45:00	6/17/09 16:45	30.23	7.28	1120	0.59	33.5	2.52
6/17/2009	17:00:00	6/17/09 17:00	30.25	7.28	1126	0.59	34.6	2.6
6/17/2009	17:15:00	6/17/09 17:15	30.36	7.28	1104	0.58	34.4	2.57
6/17/2009	17:30:00	6/17/09 17:30	30.34	7.28	1095	0.57	34	2.54
6/17/2009	17:45:00	6/17/09 17:45	30.37	7.28	1095	0.57	32.5	2.43
6/17/2009	18:00:00	6/17/09 18:00	30.31	7.27	1096	0.58	33.3	2.5
6/17/2009	18:15:00	6/17/09 18:15	30.25	7.27	1122	0.59	34.5	2.58
6/17/2009	18:30:00	6/17/09 18:30	30.39	7.28	1084	0.57	34.6	2.59
6/17/2009	18:45:00	6/17/09 18:45	30.44	7.29	1047	0.55	36.1	2.7

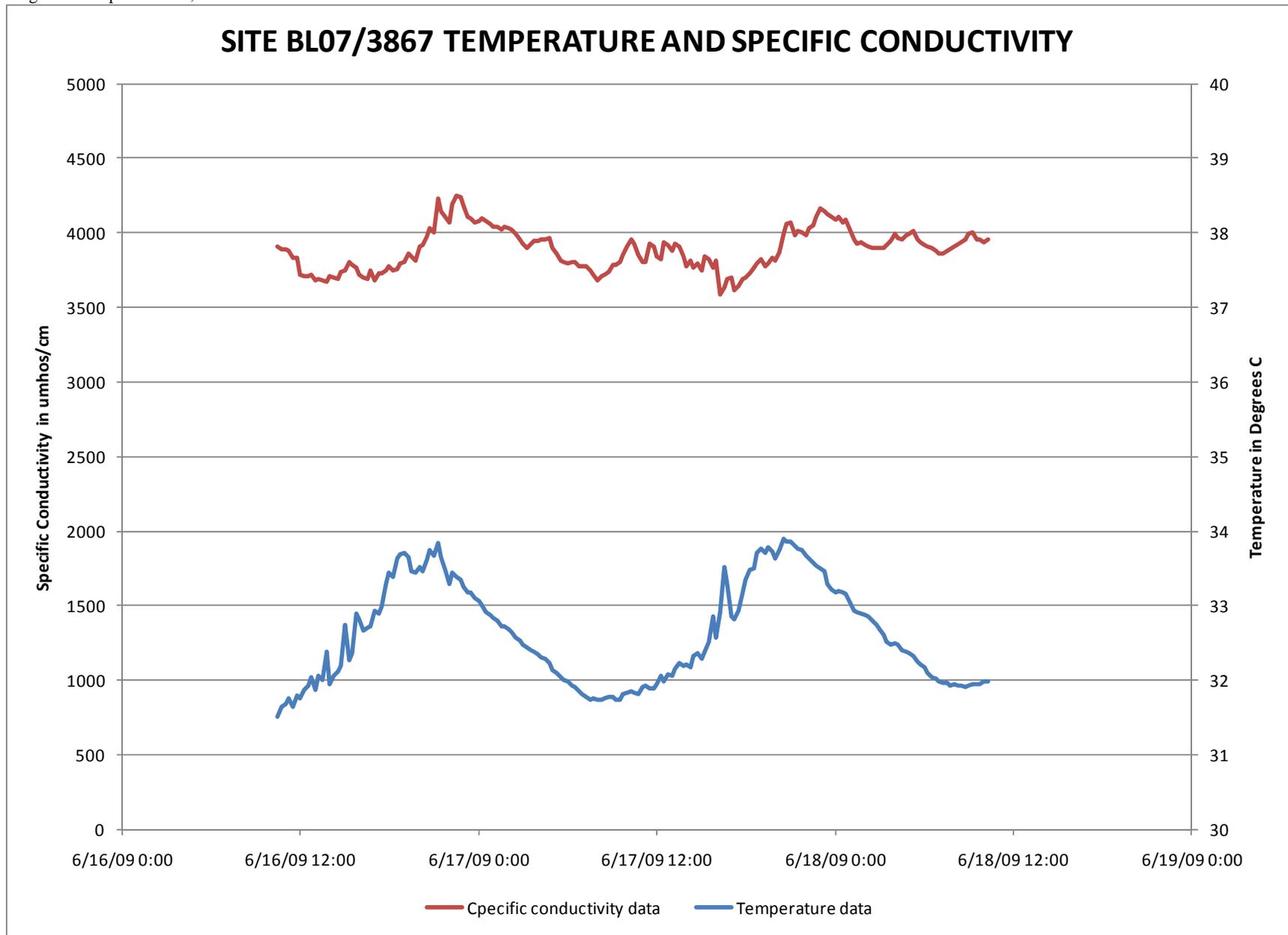
Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

6/17/2009	19:00:00	6/17/09 19:00	30.4	7.28	1062	0.56	34.5	2.58
6/17/2009	19:15:00	6/17/09 19:15	30.42	7.28	1032	0.54	36.2	2.71
6/17/2009	19:30:00	6/17/09 19:30	30.49	7.28	1028	0.54	33.7	2.52
6/17/2009	19:45:00	6/17/09 19:45	30.47	7.27	1023	0.54	31.5	2.35
6/17/2009	20:00:00	6/17/09 20:00	30.58	7.28	1004	0.53	34.8	2.6
6/17/2009	20:15:00	6/17/09 20:15	30.49	7.26	1041	0.55	30.4	2.27
6/17/2009	20:30:00	6/17/09 20:30	30.17	7.24	1130	0.59	26.2	1.97
6/17/2009	20:45:00	6/17/09 20:45	30.18	7.23	1122	0.59	24.8	1.86
6/17/2009	21:00:00	6/17/09 21:00	30.15	7.24	1129	0.59	27.6	2.08
6/17/2009	21:15:00	6/17/09 21:15	30.21	7.24	1122	0.59	28.9	2.17
6/17/2009	21:30:00	6/17/09 21:30	30.49	7.28	1079	0.57	31.1	2.32
6/17/2009	21:45:00	6/17/09 21:45	30.48	7.27	1045	0.55	28.3	2.12
6/17/2009	22:00:00	6/17/09 22:00	30.45	7.25	1066	0.56	25	1.87
6/17/2009	22:15:00	6/17/09 22:15	29.99	7.22	1177	0.62	22	1.66
6/17/2009	22:30:00	6/17/09 22:30	29.96	7.21	1193	0.63	20.8	1.57
6/17/2009	22:45:00	6/17/09 22:45	30.05	7.22	1180	0.62	20.4	1.54
6/17/2009	23:00:00	6/17/09 23:00	29.96	7.21	1203	0.63	19.8	1.49
6/17/2009	23:15:00	6/17/09 23:15	30.12	7.22	1185	0.62	23.7	1.78
6/17/2009	23:30:00	6/17/09 23:30	30.23	7.24	1174	0.62	29.6	2.22
6/17/2009	23:45:00	6/17/09 23:45	30.23	7.25	1183	0.62	28.7	2.15
6/18/2009	0:00:00	6/18/09 0:00	30.23	7.25	1186	0.62	30.4	2.28
6/18/2009	0:15:00	6/18/09 0:15	30.3	7.25	1167	0.61	27.4	2.06
6/18/2009	0:30:00	6/18/09 0:30	30.53	7.32	1032	0.54	41.4	3.09
6/18/2009	0:45:00	6/18/09 0:45	30.38	7.28	1080	0.57	27.7	2.08
6/18/2009	1:00:00	6/18/09 1:00	30.04	7.21	1115	0.59	18.7	1.41
6/18/2009	1:15:00	6/18/09 1:15	30.05	7.22	1105	0.58	16.7	1.26
6/18/2009	1:30:00	6/18/09 1:30	30.29	7.28	1014	0.53	26.3	1.97
6/18/2009	1:45:00	6/18/09 1:45	30.34	7.28	957	0.5	29.8	2.24
6/18/2009	2:00:00	6/18/09 2:00	30.3	7.28	947	0.49	27.8	2.09
6/18/2009	2:15:00	6/18/09 2:15	30.27	7.28	938	0.49	27.7	2.08
6/18/2009	2:30:00	6/18/09 2:30	30.28	7.29	914	0.48	30.4	2.28
6/18/2009	2:45:00	6/18/09 2:45	30.26	7.28	934	0.49	28.6	2.14
6/18/2009	3:00:00	6/18/09 3:00	30.2	7.27	909	0.47	24.4	1.84
6/18/2009	3:15:00	6/18/09 3:15	30.17	7.3	951	0.5	32.4	2.44

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

6/18/2009	3:30:00	6/18/09 3:30	30.15	7.29	1007	0.53	31.5	2.37
6/18/2009	3:45:00	6/18/09 3:45	30.06	7.29	1029	0.54	31.2	2.35
6/18/2009	4:00:00	6/18/09 4:00	30.04	7.29	1053	0.55	35.7	2.69
6/18/2009	4:15:00	6/18/09 4:15	29.96	7.25	1075	0.56	24.1	1.82
6/18/2009	4:30:00	6/18/09 4:30	30	7.28	1029	0.54	31.3	2.36
6/18/2009	4:45:00	6/18/09 4:45	29.99	7.27	1028	0.54	28.5	2.15
6/18/2009	5:00:00	6/18/09 5:00	29.92	7.3	1032	0.54	32.6	2.46
6/18/2009	5:15:00	6/18/09 5:15	29.91	7.28	1049	0.55	30.2	2.28
6/18/2009	5:30:00	6/18/09 5:30	29.88	7.28	1076	0.56	31.3	2.36
6/18/2009	5:45:00	6/18/09 5:45	29.86	7.28	1055	0.55	27.3	2.07
6/18/2009	6:00:00	6/18/09 6:00	29.84	7.26	1047	0.55	24.7	1.86
6/18/2009	6:15:00	6/18/09 6:15	29.85	7.25	1022	0.54	22.3	1.69
6/18/2009	6:30:00	6/18/09 6:30	29.84	7.24	1027	0.54	19.3	1.46
6/18/2009	6:45:00	6/18/09 6:45	29.81	7.23	1015	0.53	16.8	1.27
6/18/2009	7:00:00	6/18/09 7:00	29.78	7.23	1028	0.54	17.6	1.33
6/18/2009	7:15:00	6/18/09 7:15	29.74	7.24	1036	0.54	17.8	1.35
6/18/2009	7:30:00	6/18/09 7:30	29.74	7.25	1045	0.55	19	1.44
6/18/2009	7:45:00	6/18/09 7:45	29.71	7.24	1062	0.56	19	1.44
6/18/2009	8:00:00	6/18/09 8:00	29.68	7.24	1077	0.56	19.9	1.5
6/18/2009	8:15:00	6/18/09 8:15	29.67	7.24	1092	0.57	18.7	1.42
6/18/2009	8:30:00	6/18/09 8:30	29.67	7.23	1087	0.57	17.4	1.32
6/18/2009	8:45:00	6/18/09 8:45	29.69	7.24	1102	0.58	18.7	1.42
6/18/2009	9:00:00	6/18/09 9:00	29.67	7.25	1120	0.59	20.2	1.53
6/18/2009	9:15:00	6/18/09 9:15	29.67	7.24	1129	0.59	17.3	1.31
6/18/2009	9:30:00	6/18/09 9:30	29.71	7.24	1101	0.58	18.3	1.38





Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

Date M/D/YYYY	Time HH:MM:SS	Date/Time	TEMP °C	pH Units	Cond uS/cm	Sal ppt	LDO% Sat	LDO mg/l
6/16/2009	10:30:00	6/16/09 10:30	31.51	7.61	3909	2.13	52.7	3.84
6/16/2009	10:45:00	6/16/09 10:45	31.65	7.61	3893	2.12	53.7	3.9
6/16/2009	11:00:00	6/16/09 11:00	31.68	7.61	3887	2.12	55.4	4.03
6/16/2009	11:15:00	6/16/09 11:15	31.75	7.63	3884	2.11	58.4	4.24
6/16/2009	11:30:00	6/16/09 11:30	31.64	7.64	3834	2.09	54.6	3.97
6/16/2009	11:45:00	6/16/09 11:45	31.79	7.65	3834	2.09	58.3	4.23
6/16/2009	12:00:00	6/16/09 12:00	31.76	7.85	3723	2.02	74.9	5.44
6/16/2009	12:15:00	6/16/09 12:15	31.87	7.93	3708	2.02	82.1	5.94
6/16/2009	12:30:00	6/16/09 12:30	31.92	7.92	3706	2.01	82	5.93
6/16/2009	12:45:00	6/16/09 12:45	32.04	7.9	3721	2.02	81.8	5.9
6/16/2009	13:00:00	6/16/09 13:00	31.88	7.87	3682	2	76.9	5.57
6/16/2009	13:15:00	6/16/09 13:15	32.07	7.99	3689	2.01	87	6.28
6/16/2009	13:30:00	6/16/09 13:30	32.01	7.89	3678	2	77	5.56
6/16/2009	13:45:00	6/16/09 13:45	32.39	8.02	3670	1.99	83.1	5.96
6/16/2009	14:00:00	6/16/09 14:00	31.94	7.79	3712	2.02	68.2	4.93
6/16/2009	14:15:00	6/16/09 14:15	32.06	7.92	3699	2.01	80.8	5.84
6/16/2009	14:30:00	6/16/09 14:30	32.12	7.97	3692	2.01	84.5	6.1
6/16/2009	14:45:00	6/16/09 14:45	32.19	7.92	3741	2.03	82.3	5.93
6/16/2009	15:00:00	6/16/09 15:00	32.75	8.04	3750	2.04	91.5	6.53
6/16/2009	15:15:00	6/16/09 15:15	32.27	7.84	3808	2.07	79	5.68
6/16/2009	15:30:00	6/16/09 15:30	32.36	7.83	3787	2.06	79.1	5.68
6/16/2009	15:45:00	6/16/09 15:45	32.9	8.08	3762	2.05	100.8	7.18
6/16/2009	16:00:00	6/16/09 16:00	32.81	8.01	3721	2.02	104.4	7.44
6/16/2009	16:15:00	6/16/09 16:15	32.67	8.02	3701	2.01	92.9	6.64
6/16/2009	16:30:00	6/16/09 16:30	32.7	8.05	3688	2	93.8	6.7
6/16/2009	16:45:00	6/16/09 16:45	32.73	8.06	3751	2.04	95.7	6.83
6/16/2009	17:00:00	6/16/09 17:00	32.93	8.21	3677	2	111.2	7.91
6/16/2009	17:15:00	6/16/09 17:15	32.89	8.07	3729	2.03	96.7	6.89
6/16/2009	17:30:00	6/16/09 17:30	32.98	8.17	3728	2.03	106.8	7.59
6/16/2009	17:45:00	6/16/09 17:45	33.3	8.15	3745	2.04	108.9	7.7
6/16/2009	18:00:00	6/16/09 18:00	33.45	8.21	3772	2.05	111.8	7.88
6/16/2009	18:15:00	6/16/09 18:15	33.39	8.17	3750	2.04	105.8	7.47

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

6/16/2009	18:30:00	6/16/09 18:30	33.64	8.14	3753	2.04	104.2	7.33
6/16/2009	18:45:00	6/16/09 18:45	33.68	8.09	3796	2.06	99.6	6.99
6/16/2009	19:00:00	6/16/09 19:00	33.71	8.18	3806	2.07	108	7.58
6/16/2009	19:15:00	6/16/09 19:15	33.65	8.16	3861	2.1	106.5	7.48
6/16/2009	19:30:00	6/16/09 19:30	33.47	8.06	3846	2.09	92.6	6.53
6/16/2009	19:45:00	6/16/09 19:45	33.45	8.09	3812	2.07	99.6	7.02
6/16/2009	20:00:00	6/16/09 20:00	33.52	8.14	3906	2.13	104.7	7.37
6/16/2009	20:15:00	6/16/09 20:15	33.46	8.08	3917	2.13	99.3	7
6/16/2009	20:30:00	6/16/09 20:30	33.61	8.07	3978	2.17	98.2	6.9
6/16/2009	20:45:00	6/16/09 20:45	33.75	8.08	4034	2.2	103.4	7.25
6/16/2009	21:00:00	6/16/09 21:00	33.67	8.01	3999	2.18	96.3	6.76
6/16/2009	21:15:00	6/16/09 21:15	33.84	8.05	4229	2.31	103.5	7.24
6/16/2009	21:30:00	6/16/09 21:30	33.65	8.02	4140	2.26	98.3	6.9
6/16/2009	21:45:00	6/16/09 21:45	33.49	8.02	4108	2.24	96.8	6.81
6/16/2009	22:00:00	6/16/09 22:00	33.3	7.98	4071	2.22	91.9	6.49
6/16/2009	22:15:00	6/16/09 22:15	33.44	7.98	4188	2.28	94.2	6.64
6/16/2009	22:30:00	6/16/09 22:30	33.38	7.89	4244	2.32	87.2	6.15
6/16/2009	22:45:00	6/16/09 22:45	33.35	7.87	4242	2.32	87.5	6.17
6/16/2009	23:00:00	6/16/09 23:00	33.25	7.85	4180	2.28	82.2	5.81
6/16/2009	23:15:00	6/16/09 23:15	33.17	7.82	4102	2.24	79.3	5.61
6/16/2009	23:30:00	6/16/09 23:30	33.17	7.87	4100	2.24	82.8	5.86
6/16/2009	23:45:00	6/16/09 23:45	33.1	7.87	4066	2.22	81.7	5.79
6/17/2009	0:00:00	6/17/09 0:00	33.06	7.86	4079	2.22	80.2	5.69
6/17/2009	0:15:00	6/17/09 0:15	33	7.82	4094	2.23	75.4	5.35
6/17/2009	0:30:00	6/17/09 0:30	32.92	7.78	4074	2.22	71.9	5.11
6/17/2009	0:45:00	6/17/09 0:45	32.87	7.81	4059	2.21	73	5.19
6/17/2009	1:00:00	6/17/09 1:00	32.83	7.83	4041	2.2	74.9	5.33
6/17/2009	1:15:00	6/17/09 1:15	32.8	7.84	4039	2.2	75.5	5.37
6/17/2009	1:30:00	6/17/09 1:30	32.72	7.8	4021	2.19	72.6	5.18
6/17/2009	1:45:00	6/17/09 1:45	32.72	7.8	4037	2.2	71.4	5.09
6/17/2009	2:00:00	6/17/09 2:00	32.69	7.81	4034	2.2	71.9	5.13
6/17/2009	2:15:00	6/17/09 2:15	32.64	7.86	4026	2.19	75.1	5.36
6/17/2009	2:30:00	6/17/09 2:30	32.57	7.86	3995	2.18	73.7	5.27
6/17/2009	2:45:00	6/17/09 2:45	32.53	7.88	3953	2.15	73.9	5.29

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

6/17/2009	3:00:00	6/17/09 3:00	32.47	7.92	3924	2.14	75.8	5.43
6/17/2009	3:15:00	6/17/09 3:15	32.44	7.93	3903	2.12	75.5	5.41
6/17/2009	3:30:00	6/17/09 3:30	32.41	7.86	3926	2.14	71.4	5.12
6/17/2009	3:45:00	6/17/09 3:45	32.38	7.84	3945	2.15	70.8	5.08
6/17/2009	4:00:00	6/17/09 4:00	32.35	7.84	3950	2.15	69.3	4.98
6/17/2009	4:15:00	6/17/09 4:15	32.31	7.79	3951	2.15	66.1	4.75
6/17/2009	4:30:00	6/17/09 4:30	32.28	7.78	3952	2.15	66.2	4.76
6/17/2009	4:45:00	6/17/09 4:45	32.23	7.81	3969	2.16	65.9	4.74
6/17/2009	5:00:00	6/17/09 5:00	32.14	7.82	3900	2.12	63.9	4.6
6/17/2009	5:15:00	6/17/09 5:15	32.1	7.84	3864	2.1	64.9	4.68
6/17/2009	5:30:00	6/17/09 5:30	32.05	7.85	3812	2.07	63.8	4.6
6/17/2009	5:45:00	6/17/09 5:45	32	7.84	3800	2.07	62.3	4.5
6/17/2009	6:00:00	6/17/09 6:00	31.98	7.8	3792	2.06	59.5	4.3
6/17/2009	6:15:00	6/17/09 6:15	31.93	7.8	3804	2.07	60.1	4.35
6/17/2009	6:30:00	6/17/09 6:30	31.91	7.79	3799	2.07	59.8	4.32
6/17/2009	6:45:00	6/17/09 6:45	31.86	7.78	3779	2.06	55.3	4
6/17/2009	7:00:00	6/17/09 7:00	31.82	7.77	3772	2.05	54.2	3.93
6/17/2009	7:15:00	6/17/09 7:15	31.77	7.76	3777	2.05	52.8	3.83
6/17/2009	7:30:00	6/17/09 7:30	31.74	7.81	3750	2.04	57.4	4.16
6/17/2009	7:45:00	6/17/09 7:45	31.75	7.84	3716	2.02	58.9	4.27
6/17/2009	8:00:00	6/17/09 8:00	31.74	7.85	3685	2	58.2	4.22
6/17/2009	8:15:00	6/17/09 8:15	31.74	7.8	3713	2.02	53.8	3.9
6/17/2009	8:30:00	6/17/09 8:30	31.76	7.8	3721	2.02	55.3	4.01
6/17/2009	8:45:00	6/17/09 8:45	31.78	7.82	3733	2.03	57.5	4.17
6/17/2009	9:00:00	6/17/09 9:00	31.78	7.81	3780	2.06	57.1	4.14
6/17/2009	9:15:00	6/17/09 9:15	31.74	7.81	3789	2.06	57.6	4.18
6/17/2009	9:30:00	6/17/09 9:30	31.74	7.81	3801	2.07	58.5	4.24
6/17/2009	9:45:00	6/17/09 9:45	31.81	7.75	3851	2.1	54.2	3.93
6/17/2009	10:00:00	6/17/09 10:00	31.84	7.71	3904	2.13	53.9	3.9
6/17/2009	10:15:00	6/17/09 10:15	31.85	7.68	3952	2.15	49.2	3.56
6/17/2009	10:30:00	6/17/09 10:30	31.84	7.68	3927	2.14	49.1	3.55
6/17/2009	10:45:00	6/17/09 10:45	31.82	7.75	3854	2.1	55.8	4.04
6/17/2009	11:00:00	6/17/09 11:00	31.9	7.78	3807	2.07	58.5	4.24
6/17/2009	11:15:00	6/17/09 11:15	31.92	7.79	3807	2.07	59.4	4.3

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

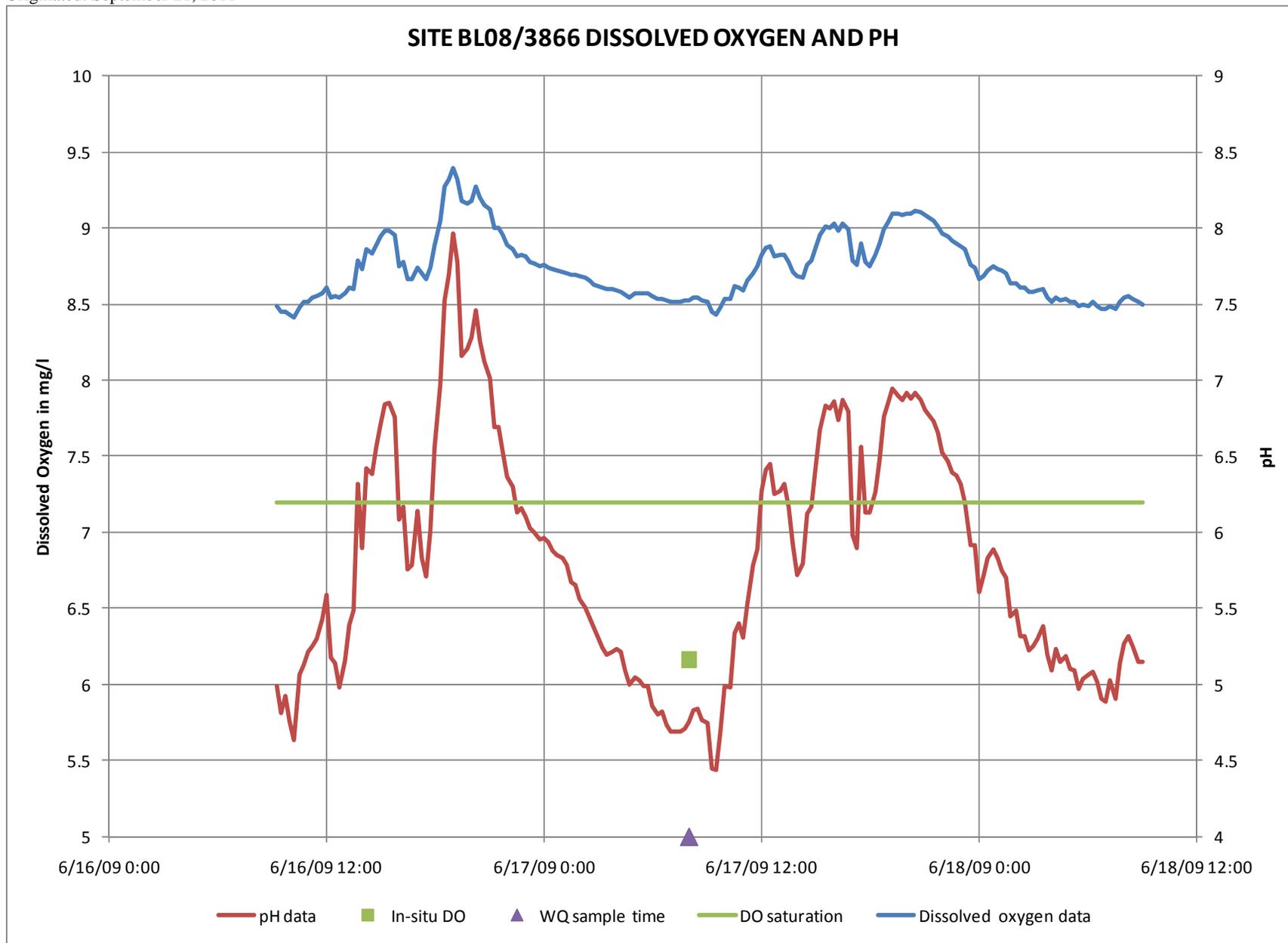
6/17/2009	11:30:00	6/17/09 11:30	31.89	7.69	3924	2.14	50.7	3.67
6/17/2009	11:45:00	6/17/09 11:45	31.89	7.71	3911	2.13	52.8	3.82
6/17/2009	12:00:00	6/17/09 12:00	31.95	7.78	3844	2.09	58.1	4.2
6/17/2009	12:15:00	6/17/09 12:15	32.07	7.83	3818	2.08	59.9	4.32
6/17/2009	12:30:00	6/17/09 12:30	31.99	7.73	3939	2.14	56.8	4.1
6/17/2009	12:45:00	6/17/09 12:45	32.08	7.78	3919	2.13	63.5	4.58
6/17/2009	13:00:00	6/17/09 13:00	32.06	7.8	3876	2.11	62.1	4.48
6/17/2009	13:15:00	6/17/09 13:15	32.15	7.81	3922	2.14	67.2	4.84
6/17/2009	13:30:00	6/17/09 13:30	32.23	7.8	3911	2.13	67.1	4.82
6/17/2009	13:45:00	6/17/09 13:45	32.19	7.89	3840	2.09	70.1	5.04
6/17/2009	14:00:00	6/17/09 14:00	32.22	7.95	3772	2.05	74.9	5.39
6/17/2009	14:15:00	6/17/09 14:15	32.17	7.91	3810	2.07	71.3	5.13
6/17/2009	14:30:00	6/17/09 14:30	32.33	7.94	3765	2.05	76.7	5.51
6/17/2009	14:45:00	6/17/09 14:45	32.37	7.87	3796	2.06	75.1	5.39
6/17/2009	15:00:00	6/17/09 15:00	32.28	7.84	3747	2.04	71.6	5.15
6/17/2009	15:15:00	6/17/09 15:15	32.39	7.84	3838	2.09	69	4.95
6/17/2009	15:30:00	6/17/09 15:30	32.51	7.82	3821	2.08	64	4.58
6/17/2009	15:45:00	6/17/09 15:45	32.85	7.86	3770	2.05	70.6	5.03
6/17/2009	16:00:00	6/17/09 16:00	32.57	7.95	3817	2.08	82.4	5.9
6/17/2009	16:15:00	6/17/09 16:15	32.91	8.4	3585	1.95	123.8	8.81
6/17/2009	16:30:00	6/17/09 16:30	33.52	8.55	3632	1.97	134.9	9.5
6/17/2009	16:45:00	6/17/09 16:45	33.29	8.26	3689	2	111.1	7.86
6/17/2009	17:00:00	6/17/09 17:00	32.86	8.19	3703	2.01	96.2	6.85
6/17/2009	17:15:00	6/17/09 17:15	32.82	8.34	3617	1.96	108.2	7.71
6/17/2009	17:30:00	6/17/09 17:30	32.94	8.31	3642	1.98	103.7	7.38
6/17/2009	17:45:00	6/17/09 17:45	33.17	8.33	3686	2	109.7	7.77
6/17/2009	18:00:00	6/17/09 18:00	33.35	8.41	3695	2.01	119.5	8.44
6/17/2009	18:15:00	6/17/09 18:15	33.48	8.33	3732	2.03	112.6	7.94
6/17/2009	18:30:00	6/17/09 18:30	33.5	8.41	3768	2.05	119.6	8.43
6/17/2009	18:45:00	6/17/09 18:45	33.71	8.39	3793	2.06	117.5	8.25
6/17/2009	19:00:00	6/17/09 19:00	33.77	8.37	3819	2.08	119.6	8.39
6/17/2009	19:15:00	6/17/09 19:15	33.71	8.38	3774	2.05	118.1	8.29
6/17/2009	19:30:00	6/17/09 19:30	33.79	8.38	3798	2.07	118	8.27
6/17/2009	19:45:00	6/17/09 19:45	33.72	8.26	3833	2.09	104	7.3

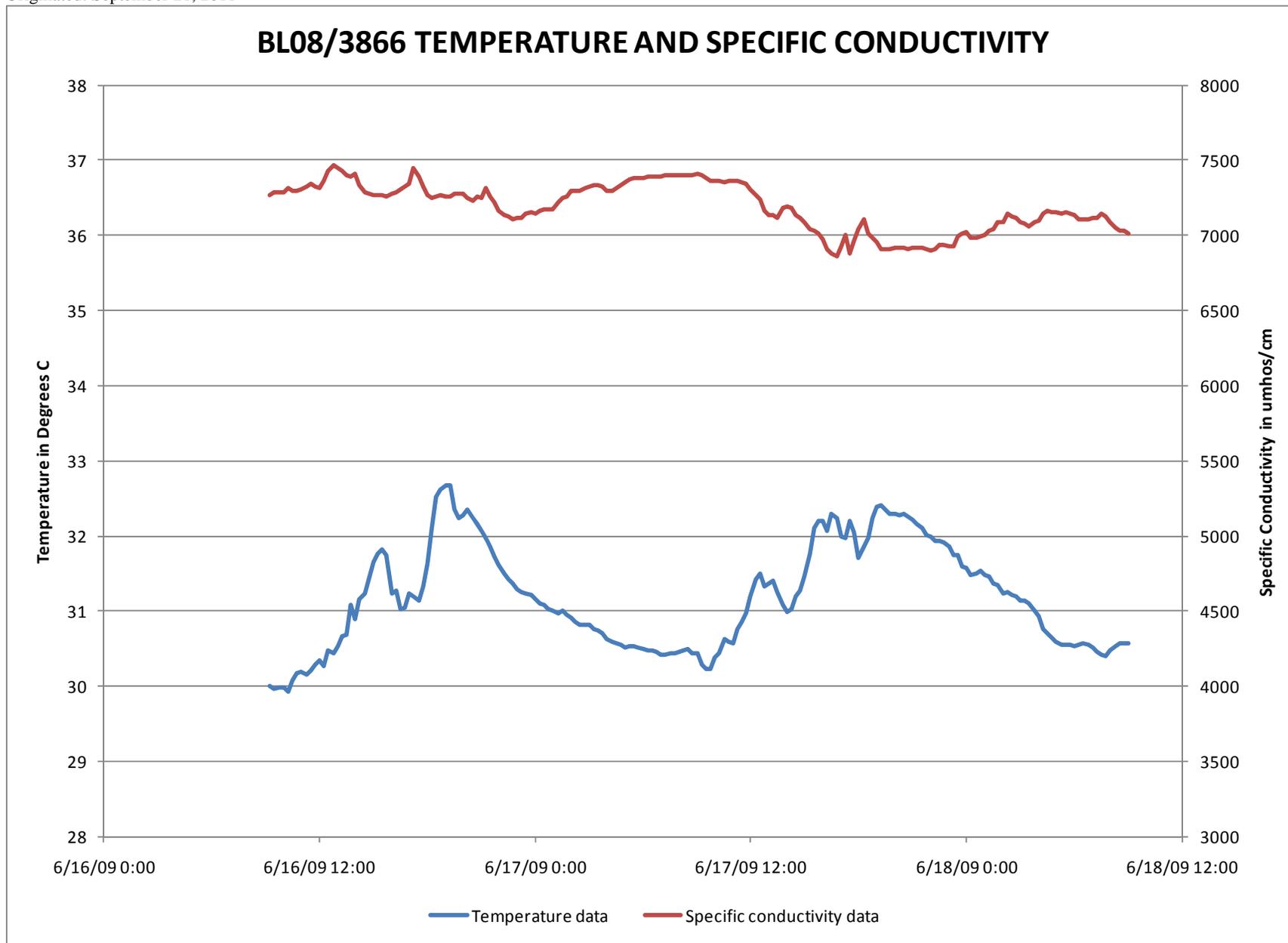
Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

6/17/2009	20:00:00	6/17/09 20:00	33.64	8.18	3817	2.08	96.5	6.78
6/17/2009	20:15:00	6/17/09 20:15	33.75	8.27	3867	2.1	107.5	7.54
6/17/2009	20:30:00	6/17/09 20:30	33.89	8.18	3991	2.17	103.4	7.23
6/17/2009	20:45:00	6/17/09 20:45	33.85	8.13	4063	2.21	99.5	6.96
6/17/2009	21:00:00	6/17/09 21:00	33.85	8.13	4071	2.22	97.8	6.84
6/17/2009	21:15:00	6/17/09 21:15	33.81	8.15	3985	2.17	100.6	7.05
6/17/2009	21:30:00	6/17/09 21:30	33.77	8.2	4009	2.18	109.4	7.67
6/17/2009	21:45:00	6/17/09 21:45	33.75	8.2	4005	2.18	103.3	7.24
6/17/2009	22:00:00	6/17/09 22:00	33.67	8.22	3985	2.17	104.6	7.34
6/17/2009	22:15:00	6/17/09 22:15	33.63	8.15	4033	2.2	98.8	6.94
6/17/2009	22:30:00	6/17/09 22:30	33.57	8.13	4052	2.21	98.9	6.96
6/17/2009	22:45:00	6/17/09 22:45	33.53	8.11	4102	2.24	96.8	6.81
6/17/2009	23:00:00	6/17/09 23:00	33.5	8.01	4164	2.27	91.9	6.47
6/17/2009	23:15:00	6/17/09 23:15	33.46	7.99	4141	2.26	89.7	6.32
6/17/2009	23:30:00	6/17/09 23:30	33.3	8	4128	2.25	86.1	6.08
6/17/2009	23:45:00	6/17/09 23:45	33.22	7.95	4102	2.24	83	5.87
6/18/2009	0:00:00	6/18/09 0:00	33.17	7.91	4092	2.23	80.6	5.71
6/18/2009	0:15:00	6/18/09 0:15	33.19	7.93	4103	2.24	80	5.66
6/18/2009	0:30:00	6/18/09 0:30	33.17	7.94	4072	2.22	78.7	5.57
6/18/2009	0:45:00	6/18/09 0:45	33.16	7.96	4087	2.23	81.6	5.77
6/18/2009	1:00:00	6/18/09 1:00	33.05	7.99	4019	2.19	82.4	5.84
6/18/2009	1:15:00	6/18/09 1:15	32.94	7.99	3958	2.16	80.2	5.7
6/18/2009	1:30:00	6/18/09 1:30	32.92	8.06	3931	2.14	84.7	6.02
6/18/2009	1:45:00	6/18/09 1:45	32.89	8.05	3934	2.14	83.6	5.95
6/18/2009	2:00:00	6/18/09 2:00	32.87	8.12	3918	2.13	88.3	6.28
6/18/2009	2:15:00	6/18/09 2:15	32.85	8.14	3906	2.13	88.3	6.29
6/18/2009	2:30:00	6/18/09 2:30	32.79	8.12	3895	2.12	84.8	6.04
6/18/2009	2:45:00	6/18/09 2:45	32.75	8	3899	2.12	80	5.7
6/18/2009	3:00:00	6/18/09 3:00	32.68	8.06	3900	2.12	81.5	5.82
6/18/2009	3:15:00	6/18/09 3:15	32.61	8.02	3903	2.12	77.8	5.56
6/18/2009	3:30:00	6/18/09 3:30	32.52	7.97	3920	2.13	74	5.3
6/18/2009	3:45:00	6/18/09 3:45	32.48	7.9	3950	2.15	68.8	4.93
6/18/2009	4:00:00	6/18/09 4:00	32.49	7.86	3992	2.17	66.1	4.73
6/18/2009	4:15:00	6/18/09 4:15	32.47	7.83	3967	2.16	64.3	4.6

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

6/18/2009	4:30:00	6/18/09 4:30	32.4	7.85	3958	2.16	64.8	4.65
6/18/2009	4:45:00	6/18/09 4:45	32.38	7.8	3983	2.17	60.2	4.32
6/18/2009	5:00:00	6/18/09 5:00	32.36	7.8	3995	2.18	61.1	4.38
6/18/2009	5:15:00	6/18/09 5:15	32.32	7.78	4016	2.19	58.6	4.21
6/18/2009	5:30:00	6/18/09 5:30	32.25	7.82	3959	2.16	60.9	4.38
6/18/2009	5:45:00	6/18/09 5:45	32.21	7.85	3940	2.15	62.5	4.5
6/18/2009	6:00:00	6/18/09 6:00	32.17	7.84	3921	2.13	60.2	4.34
6/18/2009	6:15:00	6/18/09 6:15	32.1	7.84	3909	2.13	60.1	4.33
6/18/2009	6:30:00	6/18/09 6:30	32.05	7.85	3898	2.12	59.9	4.32
6/18/2009	6:45:00	6/18/09 6:45	32.03	7.87	3882	2.11	62.5	4.51
6/18/2009	7:00:00	6/18/09 7:00	31.99	7.91	3864	2.1	62.9	4.55
6/18/2009	7:15:00	6/18/09 7:15	31.97	7.83	3864	2.1	57.4	4.15
6/18/2009	7:30:00	6/18/09 7:30	31.96	7.87	3881	2.11	60.4	4.37
6/18/2009	7:45:00	6/18/09 7:45	31.93	7.85	3892	2.12	60.2	4.36
6/18/2009	8:00:00	6/18/09 8:00	31.95	7.81	3904	2.13	58.4	4.22
6/18/2009	8:15:00	6/18/09 8:15	31.93	7.8	3922	2.14	56.5	4.09
6/18/2009	8:30:00	6/18/09 8:30	31.92	7.8	3932	2.14	55.9	4.04
6/18/2009	8:45:00	6/18/09 8:45	31.91	7.79	3953	2.15	55.3	4
6/18/2009	9:00:00	6/18/09 9:00	31.92	7.74	3992	2.18	50.9	3.68
6/18/2009	9:15:00	6/18/09 9:15	31.95	7.72	4004	2.18	50.5	3.65
6/18/2009	9:30:00	6/18/09 9:30	31.95	7.78	3956	2.15	54.8	3.96
6/18/2009	9:45:00	6/18/09 9:45	31.95	7.78	3954	2.15	55.2	3.99
6/18/2009	10:00:00	6/18/09 10:00	31.99	7.78	3939	2.14	54.6	3.94
6/18/2009	10:15:00	6/18/09 10:15	31.98	7.78	3952	2.15	55.9	4.04





Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

Date M/D/YYYY	Time HH:MM:SS	Date/Time	TEMP °C	pH Units	Cond uS/cm	Sal ppt	LDO% Sat	LDO mg/l
6/16/2009	9:15:00	6/16/09 9:15 30	7.49	7271	4.05	81.1	5.99	
6/16/2009	9:30:00	6/16/09 9:30 29.96	7.45	7282	4.06	78.6	5.81	
6/16/2009	9:45:00	6/16/09 9:45 29.98	7.45	7290	4.06	80.1	5.92	
6/16/2009	10:00:00	6/16/09 10:00 29.99	7.43	7290	4.06	77.9	5.76	
6/16/2009	10:15:00	6/16/09 10:15 29.93	7.41	7311	4.07	76.1	5.63	
6/16/2009	10:30:00	6/16/09 10:30 30.08	7.48	7298	4.07	82	6.06	
6/16/2009	10:45:00	6/16/09 10:45 30.17	7.51	7299	4.07	83.2	6.13	
6/16/2009	11:00:00	6/16/09 11:00 30.2	7.51	7301	4.07	84.3	6.21	
6/16/2009	11:15:00	6/16/09 11:15 30.15	7.54	7326	4.08	84.7	6.25	
6/16/2009	11:30:00	6/16/09 11:30 30.22	7.55	7343	4.09	85.6	6.3	
6/16/2009	11:45:00	6/16/09 11:45 30.29	7.57	7321	4.08	87.5	6.43	
6/16/2009	12:00:00	6/16/09 12:00 30.34	7.61	7319	4.08	89.7	6.59	
6/16/2009	12:15:00	6/16/09 12:15 30.26	7.54	7359	4.1	84	6.18	
6/16/2009	12:30:00	6/16/09 12:30 30.48	7.55	7433	4.14	83.8	6.14	
6/16/2009	12:45:00	6/16/09 12:45 30.44	7.54	7462	4.16	81.6	5.98	
6/16/2009	13:00:00	6/16/09 13:00 30.54	7.57	7450	4.15	84.2	6.16	
6/16/2009	13:15:00	6/16/09 13:15 30.66	7.61	7426	4.14	87.4	6.39	
6/16/2009	13:30:00	6/16/09 13:30 30.69	7.6	7403	4.13	88.8	6.49	
6/16/2009	13:45:00	6/16/09 13:45 31.09	7.79	7394	4.12	101	7.32	
6/16/2009	14:00:00	6/16/09 14:00 30.89	7.73	7413	4.13	94.8	6.9	
6/16/2009	14:15:00	6/16/09 14:15 31.15	7.86	7336	4.09	102.4	7.42	
6/16/2009	14:30:00	6/16/09 14:30 31.23	7.83	7289	4.06	102	7.38	
6/16/2009	14:45:00	6/16/09 14:45 31.44	7.89	7276	4.05	104.8	7.56	
6/16/2009	15:00:00	6/16/09 15:00 31.66	7.94	7271	4.05	107.3	7.71	
6/16/2009	15:15:00	6/16/09 15:15 31.76	7.98	7265	4.05	109.2	7.84	
6/16/2009	15:30:00	6/16/09 15:30 31.82	7.98	7263	4.04	109.5	7.85	
6/16/2009	15:45:00	6/16/09 15:45 31.75	7.95	7255	4.04	108.1	7.76	
6/16/2009	16:00:00	6/16/09 16:00 31.24	7.75	7279	4.05	97.9	7.08	
6/16/2009	16:15:00	6/16/09 16:15 31.28	7.78	7290	4.06	99.2	7.17	
6/16/2009	16:30:00	6/16/09 16:30 31.03	7.66	7310	4.07	93.1	6.76	
6/16/2009	16:45:00	6/16/09 16:45 31.04	7.66	7322	4.08	93.4	6.78	
6/16/2009	17:00:00	6/16/09 17:00 31.24	7.74	7344	4.09	98.6	7.14	

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

6/16/2009	17:15:00	6/16/09 17:15	31.2	7.7	7445	4.15	94.3	6.83
6/16/2009	17:30:00	6/16/09 17:30	31.14	7.66	7390	4.12	92.6	6.71
6/16/2009	17:45:00	6/16/09 17:45	31.33	7.74	7328	4.08	97	7.01
6/16/2009	18:00:00	6/16/09 18:00	31.64	7.89	7264	4.05	105.2	7.56
6/16/2009	18:15:00	6/16/09 18:15	32.11	8.05	7252	4.04	111.7	7.97
6/16/2009	18:30:00	6/16/09 18:30	32.52	8.27	7257	4.04	120.2	8.52
6/16/2009	18:45:00	6/16/09 18:45	32.62	8.32	7265	4.05	122.9	8.69
6/16/2009	19:00:00	6/16/09 19:00	32.68	8.39	7260	4.04	126.8	8.96
6/16/2009	19:15:00	6/16/09 19:15	32.67	8.32	7257	4.04	124.2	8.78
6/16/2009	19:30:00	6/16/09 19:30	32.36	8.18	7274	4.05	114.8	8.16
6/16/2009	19:45:00	6/16/09 19:45	32.24	8.16	7279	4.05	115.4	8.21
6/16/2009	20:00:00	6/16/09 20:00	32.28	8.18	7276	4.05	116.5	8.28
6/16/2009	20:15:00	6/16/09 20:15	32.36	8.27	7253	4.04	119.1	8.46
6/16/2009	20:30:00	6/16/09 20:30	32.23	8.2	7226	4.02	115.8	8.25
6/16/2009	20:45:00	6/16/09 20:45	32.16	8.15	7256	4.04	113.9	8.12
6/16/2009	21:00:00	6/16/09 21:00	32.06	8.12	7250	4.04	112.1	8.01
6/16/2009	21:15:00	6/16/09 21:15	31.98	8	7315	4.08	107.6	7.69
6/16/2009	21:30:00	6/16/09 21:30	31.85	8	7258	4.04	107.4	7.69
6/16/2009	21:45:00	6/16/09 21:45	31.73	7.95	7222	4.02	104.8	7.52
6/16/2009	22:00:00	6/16/09 22:00	31.61	7.89	7166	3.99	102.2	7.36
6/16/2009	22:15:00	6/16/09 22:15	31.5	7.86	7136	3.97	101.2	7.3
6/16/2009	22:30:00	6/16/09 22:30	31.43	7.81	7126	3.97	98.8	7.13
6/16/2009	22:45:00	6/16/09 22:45	31.37	7.82	7109	3.96	99.1	7.16
6/16/2009	23:00:00	6/16/09 23:00	31.3	7.81	7114	3.96	98.2	7.1
6/16/2009	23:15:00	6/16/09 23:15	31.26	7.78	7115	3.96	97	7.03
6/16/2009	23:30:00	6/16/09 23:30	31.23	7.77	7144	3.98	96.7	7
6/16/2009	23:45:00	6/16/09 23:45	31.22	7.75	7158	3.98	95.9	6.95
6/17/2009	0:00:00	6/17/09 0:00	31.15	7.76	7147	3.98	95.9	6.96
6/17/2009	0:15:00	6/17/09 0:15	31.1	7.74	7166	3.99	95.4	6.93
6/17/2009	0:30:00	6/17/09 0:30	31.08	7.73	7172	3.99	94.7	6.88
6/17/2009	0:45:00	6/17/09 0:45	31.03	7.72	7175	3.99	94.3	6.85
6/17/2009	1:00:00	6/17/09 1:00	31	7.71	7176	3.99	93.9	6.83
6/17/2009	1:15:00	6/17/09 1:15	30.97	7.7	7216	4.02	93.2	6.78
6/17/2009	1:30:00	6/17/09 1:30	31	7.69	7248	4.04	91.8	6.67

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

6/17/2009	1:45:00	6/17/09 1:45	30.95	7.69	7261	4.04	91.5	6.65
6/17/2009	2:00:00	6/17/09 2:00	30.92	7.68	7292	4.06	90.1	6.56
6/17/2009	2:15:00	6/17/09 2:15	30.85	7.67	7298	4.07	89.3	6.5
6/17/2009	2:30:00	6/17/09 2:30	30.82	7.65	7298	4.07	88.3	6.44
6/17/2009	2:45:00	6/17/09 2:45	30.82	7.63	7318	4.08	87.4	6.37
6/17/2009	3:00:00	6/17/09 3:00	30.81	7.62	7327	4.08	86.6	6.31
6/17/2009	3:15:00	6/17/09 3:15	30.77	7.61	7329	4.08	85.6	6.24
6/17/2009	3:30:00	6/17/09 3:30	30.74	7.6	7329	4.08	84.9	6.2
6/17/2009	3:45:00	6/17/09 3:45	30.7	7.6	7321	4.08	85	6.21
6/17/2009	4:00:00	6/17/09 4:00	30.63	7.59	7295	4.06	85.2	6.23
6/17/2009	4:15:00	6/17/09 4:15	30.6	7.58	7298	4.07	84.9	6.21
6/17/2009	4:30:00	6/17/09 4:30	30.57	7.56	7315	4.08	83.3	6.09
6/17/2009	4:45:00	6/17/09 4:45	30.55	7.54	7335	4.09	81.9	6
6/17/2009	5:00:00	6/17/09 5:00	30.51	7.57	7350	4.1	82.6	6.05
6/17/2009	5:15:00	6/17/09 5:15	30.53	7.57	7371	4.11	82.4	6.03
6/17/2009	5:30:00	6/17/09 5:30	30.53	7.57	7379	4.11	81.7	5.99
6/17/2009	5:45:00	6/17/09 5:45	30.52	7.57	7379	4.11	81.8	5.99
6/17/2009	6:00:00	6/17/09 6:00	30.5	7.55	7380	4.11	80	5.86
6/17/2009	6:15:00	6/17/09 6:15	30.48	7.53	7386	4.12	79.2	5.8
6/17/2009	6:30:00	6/17/09 6:30	30.47	7.53	7388	4.12	79.4	5.82
6/17/2009	6:45:00	6/17/09 6:45	30.45	7.52	7388	4.12	78.3	5.74
6/17/2009	7:00:00	6/17/09 7:00	30.42	7.51	7391	4.12	77.5	5.69
6/17/2009	7:15:00	6/17/09 7:15	30.42	7.51	7396	4.12	77.6	5.69
6/17/2009	7:30:00	6/17/09 7:30	30.44	7.51	7400	4.12	77.6	5.69
6/17/2009	7:45:00	6/17/09 7:45	30.43	7.52	7401	4.13	77.9	5.71
6/17/2009	8:00:00	6/17/09 8:00	30.45	7.52	7402	4.13	78.5	5.76
6/17/2009	8:15:00	6/17/09 8:15	30.48	7.54	7403	4.13	79.6	5.83
6/17/2009	8:30:00	6/17/09 8:30	30.49	7.54	7404	4.13	79.7	5.84
6/17/2009	8:45:00	6/17/09 8:45	30.44	7.52	7404	4.13	78.7	5.77
6/17/2009	9:00:00	6/17/09 9:00	30.44	7.51	7405	4.13	78.5	5.75
6/17/2009	9:15:00	6/17/09 9:15	30.29	7.45	7400	4.12	74.1	5.45
6/17/2009	9:30:00	6/17/09 9:30	30.23	7.43	7381	4.11	73.9	5.44
6/17/2009	9:45:00	6/17/09 9:45	30.24	7.48	7364	4.1	77.3	5.69
6/17/2009	10:00:00	6/17/09 10:00	30.38	7.53	7359	4.1	81.6	5.99

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

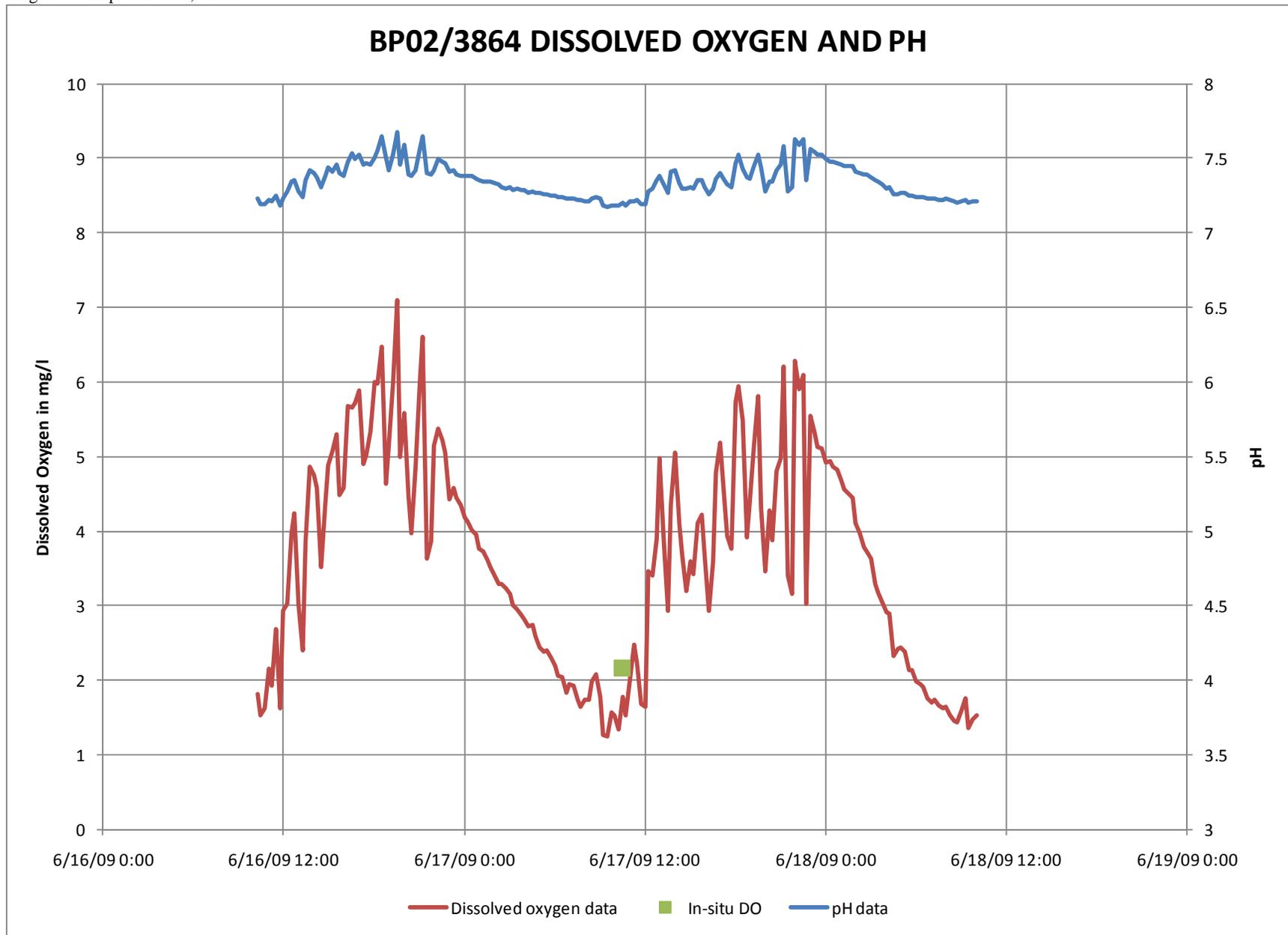
6/17/2009	10:15:00	6/17/09 10:15	30.43	7.53	7360	4.1	81.4	5.98
6/17/2009	10:30:00	6/17/09 10:30	30.62	7.62	7355	4.1	86.7	6.34
6/17/2009	10:45:00	6/17/09 10:45	30.6	7.61	7359	4.1	87.5	6.4
6/17/2009	11:00:00	6/17/09 11:00	30.57	7.59	7362	4.1	86.2	6.31
6/17/2009	11:15:00	6/17/09 11:15	30.76	7.65	7360	4.1	89.5	6.53
6/17/2009	11:30:00	6/17/09 11:30	30.85	7.7	7349	4.1	93.1	6.78
6/17/2009	11:45:00	6/17/09 11:45	30.96	7.75	7347	4.09	94.8	6.89
6/17/2009	12:00:00	6/17/09 12:00	31.2	7.82	7302	4.07	100.4	7.27
6/17/2009	12:15:00	6/17/09 12:15	31.42	7.87	7267	4.05	102.7	7.41
6/17/2009	12:30:00	6/17/09 12:30	31.5	7.88	7238	4.03	103.4	7.45
6/17/2009	12:45:00	6/17/09 12:45	31.33	7.81	7167	3.99	100.3	7.25
6/17/2009	13:00:00	6/17/09 13:00	31.37	7.82	7138	3.97	100.6	7.27
6/17/2009	13:15:00	6/17/09 13:15	31.41	7.82	7134	3.97	101.3	7.32
6/17/2009	13:30:00	6/17/09 13:30	31.26	7.78	7112	3.96	99.1	7.17
6/17/2009	13:45:00	6/17/09 13:45	31.09	7.71	7182	4	95.4	6.92
6/17/2009	14:00:00	6/17/09 14:00	30.99	7.68	7194	4	92.4	6.72
6/17/2009	14:15:00	6/17/09 14:15	31.03	7.67	7180	4	93.5	6.79
6/17/2009	14:30:00	6/17/09 14:30	31.19	7.76	7135	3.97	98.2	7.12
6/17/2009	14:45:00	6/17/09 14:45	31.27	7.79	7115	3.96	99.1	7.17
6/17/2009	15:00:00	6/17/09 15:00	31.47	7.87	7086	3.94	102.9	7.43
6/17/2009	15:15:00	6/17/09 15:15	31.76	7.95	7037	3.91	106.8	7.67
6/17/2009	15:30:00	6/17/09 15:30	32.1	8.01	7028	3.91	109.7	7.83
6/17/2009	15:45:00	6/17/09 15:45	32.2	8	7016	3.9	109.6	7.81
6/17/2009	16:00:00	6/17/09 16:00	32.2	8.03	6970	3.87	110.2	7.86
6/17/2009	16:15:00	6/17/09 16:15	32.06	7.98	6907	3.84	108.3	7.74
6/17/2009	16:30:00	6/17/09 16:30	32.29	8.03	6882	3.82	110.6	7.87
6/17/2009	16:45:00	6/17/09 16:45	32.23	7.99	6864	3.81	109.3	7.79
6/17/2009	17:00:00	6/17/09 17:00	32	7.79	6925	3.85	97.5	6.98
6/17/2009	17:15:00	6/17/09 17:15	31.98	7.76	7001	3.89	96.5	6.9
6/17/2009	17:30:00	6/17/09 17:30	32.2	7.9	6881	3.82	106.1	7.56
6/17/2009	17:45:00	6/17/09 17:45	32.04	7.78	6965	3.87	99.7	7.13
6/17/2009	18:00:00	6/17/09 18:00	31.7	7.75	7043	3.92	99.2	7.13
6/17/2009	18:15:00	6/17/09 18:15	31.85	7.82	7105	3.95	101.3	7.26
6/17/2009	18:30:00	6/17/09 18:30	31.97	7.9	7009	3.9	104.5	7.48

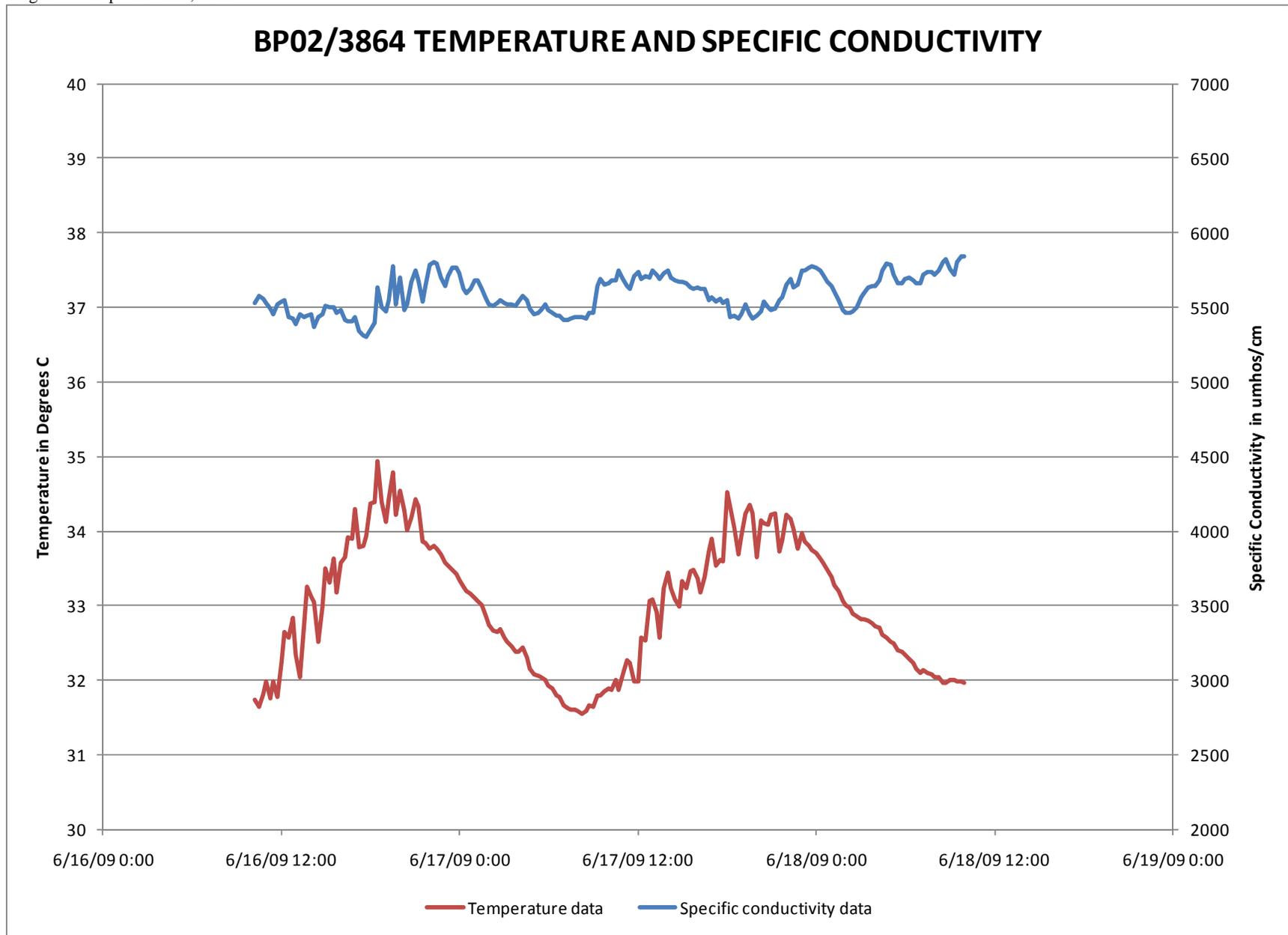
Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

6/17/2009	18:45:00	6/17/09 18:45	32.23	7.99	6983	3.88	108.9	7.76
6/17/2009	19:00:00	6/17/09 19:00	32.38	8.04	6954	3.87	110.4	7.85
6/17/2009	19:15:00	6/17/09 19:15	32.41	8.09	6909	3.84	111.7	7.94
6/17/2009	19:30:00	6/17/09 19:30	32.35	8.09	6907	3.84	111.1	7.9
6/17/2009	19:45:00	6/17/09 19:45	32.3	8.08	6905	3.84	110.5	7.87
6/17/2009	20:00:00	6/17/09 20:00	32.29	8.09	6916	3.84	111.2	7.92
6/17/2009	20:15:00	6/17/09 20:15	32.27	8.09	6920	3.85	110.7	7.88
6/17/2009	20:30:00	6/17/09 20:30	32.29	8.11	6916	3.84	111.3	7.92
6/17/2009	20:45:00	6/17/09 20:45	32.26	8.1	6912	3.84	110.4	7.87
6/17/2009	21:00:00	6/17/09 21:00	32.21	8.08	6914	3.84	109.4	7.8
6/17/2009	21:15:00	6/17/09 21:15	32.16	8.07	6918	3.84	109	7.77
6/17/2009	21:30:00	6/17/09 21:30	32.1	8.05	6920	3.85	108.3	7.73
6/17/2009	21:45:00	6/17/09 21:45	32.02	8.01	6907	3.84	106.9	7.65
6/17/2009	22:00:00	6/17/09 22:00	31.99	7.96	6903	3.84	105.1	7.52
6/17/2009	22:15:00	6/17/09 22:15	31.93	7.94	6907	3.84	104.3	7.47
6/17/2009	22:30:00	6/17/09 22:30	31.94	7.92	6938	3.86	103.2	7.39
6/17/2009	22:45:00	6/17/09 22:45	31.91	7.9	6938	3.86	102.8	7.37
6/17/2009	23:00:00	6/17/09 23:00	31.86	7.88	6930	3.85	102.1	7.32
6/17/2009	23:15:00	6/17/09 23:15	31.75	7.86	6925	3.85	100.2	7.2
6/17/2009	23:30:00	6/17/09 23:30	31.75	7.76	6992	3.89	96.3	6.92
6/17/2009	23:45:00	6/17/09 23:45	31.6	7.74	7009	3.9	96.1	6.92
6/18/2009	0:00:00	6/18/09 0:00	31.58	7.66	7024	3.91	91.8	6.61
6/18/2009	0:15:00	6/18/09 0:15	31.48	7.68	6984	3.88	93	6.71
6/18/2009	0:30:00	6/18/09 0:30	31.5	7.72	6981	3.88	94.7	6.83
6/18/2009	0:45:00	6/18/09 0:45	31.54	7.75	6991	3.89	95.6	6.89
6/18/2009	1:00:00	6/18/09 1:00	31.49	7.73	7004	3.89	94.6	6.83
6/18/2009	1:15:00	6/18/09 1:15	31.46	7.72	7035	3.91	93.5	6.75
6/18/2009	1:30:00	6/18/09 1:30	31.37	7.7	7039	3.91	92.6	6.7
6/18/2009	1:45:00	6/18/09 1:45	31.34	7.64	7089	3.94	89.2	6.45
6/18/2009	2:00:00	6/18/09 2:00	31.24	7.64	7083	3.94	89.6	6.49
6/18/2009	2:15:00	6/18/09 2:15	31.26	7.61	7147	3.98	87.4	6.32
6/18/2009	2:30:00	6/18/09 2:30	31.21	7.61	7124	3.96	87.3	6.32
6/18/2009	2:45:00	6/18/09 2:45	31.2	7.58	7118	3.96	85.8	6.22
6/18/2009	3:00:00	6/18/09 3:00	31.14	7.58	7085	3.94	86.2	6.25

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

6/18/2009	3:15:00	6/18/09 3:15	31.14	7.59	7079	3.94	86.8	6.3
6/18/2009	3:30:00	6/18/09 3:30	31.1	7.6	7059	3.93	87.9	6.38
6/18/2009	3:45:00	6/18/09 3:45	31.01	7.54	7086	3.94	85.3	6.2
6/18/2009	4:00:00	6/18/09 4:00	30.93	7.51	7096	3.95	83.7	6.09
6/18/2009	4:15:00	6/18/09 4:15	30.77	7.54	7141	3.97	85.3	6.23
6/18/2009	4:30:00	6/18/09 4:30	30.71	7.52	7163	3.99	84.2	6.15
6/18/2009	4:45:00	6/18/09 4:45	30.64	7.53	7151	3.98	84.6	6.19
6/18/2009	5:00:00	6/18/09 5:00	30.6	7.51	7151	3.98	83.4	6.1
6/18/2009	5:15:00	6/18/09 5:15	30.55	7.51	7142	3.97	83.1	6.09
6/18/2009	5:30:00	6/18/09 5:30	30.56	7.49	7152	3.98	81.6	5.97
6/18/2009	5:45:00	6/18/09 5:45	30.55	7.5	7148	3.98	82.4	6.04
6/18/2009	6:00:00	6/18/09 6:00	30.53	7.49	7139	3.97	82.8	6.06
6/18/2009	6:15:00	6/18/09 6:15	30.55	7.51	7111	3.96	83	6.08
6/18/2009	6:30:00	6/18/09 6:30	30.57	7.49	7110	3.96	82.1	6.02
6/18/2009	6:45:00	6/18/09 6:45	30.56	7.47	7105	3.95	80.6	5.91
6/18/2009	7:00:00	6/18/09 7:00	30.51	7.47	7113	3.96	80.3	5.89
6/18/2009	7:15:00	6/18/09 7:15	30.45	7.49	7119	3.96	82.1	6.03
6/18/2009	7:30:00	6/18/09 7:30	30.42	7.47	7140	3.97	80.5	5.91
6/18/2009	7:45:00	6/18/09 7:45	30.41	7.51	7123	3.96	83.6	6.14
6/18/2009	8:00:00	6/18/09 8:00	30.47	7.54	7092	3.95	85.5	6.27
6/18/2009	8:15:00	6/18/09 8:15	30.53	7.55	7054	3.92	86.2	6.32
6/18/2009	8:30:00	6/18/09 8:30	30.57	7.53	7034	3.91	85.3	6.25
6/18/2009	8:45:00	6/18/09 8:45	30.57	7.51	7027	3.91	83.9	6.15
6/18/2009	9:00:00	6/18/09 9:00	30.57	7.5	7009	3.9	83.9	6.15





Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

Date M/D/YYYY	Time HH:MM:SS	Date/Time	TEMP °C	pH Units	Cond uS/cm	Sal ppt	LDO% Sat	LDO mg/l
6/16/2009	10:15:00	6/16/09 10:15	31.74	7.23	5533	3.05	25.3	1.82
6/16/2009	10:30:00	6/16/09 10:30	31.64	7.19	5572	3.07	21.3	1.54
6/16/2009	10:45:00	6/16/09 10:45	31.81	7.19	5560	3.06	22.7	1.63
6/16/2009	11:00:00	6/16/09 11:00	31.99	7.22	5528	3.04	30	2.15
6/16/2009	11:15:00	6/16/09 11:15	31.75	7.21	5494	3.03	26.6	1.92
6/16/2009	11:30:00	6/16/09 11:30	31.98	7.25	5453	3	37.5	2.69
6/16/2009	11:45:00	6/16/09 11:45	31.78	7.18	5519	3.04	22.6	1.63
6/16/2009	12:00:00	6/16/09 12:00	32.25	7.23	5535	3.05	40.9	2.93
6/16/2009	12:15:00	6/16/09 12:15	32.64	7.28	5552	3.06	42.5	3.02
6/16/2009	12:30:00	6/16/09 12:30	32.58	7.34	5438	2.99	55.8	3.97
6/16/2009	12:45:00	6/16/09 12:45	32.83	7.35	5427	2.99	59.7	4.23
6/16/2009	13:00:00	6/16/09 13:00	32.34	7.28	5387	2.96	42	3
6/16/2009	13:15:00	6/16/09 13:15	32.04	7.24	5450	3	33.6	2.41
6/16/2009	13:30:00	6/16/09 13:30	32.77	7.35	5432	2.99	54.3	3.85
6/16/2009	13:45:00	6/16/09 13:45	33.26	7.42	5441	3	69.1	4.86
6/16/2009	14:00:00	6/16/09 14:00	33.13	7.4	5450	3	67.2	4.74
6/16/2009	14:15:00	6/16/09 14:15	33.04	7.37	5371	2.96	64.7	4.57
6/16/2009	14:30:00	6/16/09 14:30	32.52	7.31	5439	2.99	49.4	3.52
6/16/2009	14:45:00	6/16/09 14:45	32.99	7.38	5458	3	61.8	4.37
6/16/2009	15:00:00	6/16/09 15:00	33.5	7.44	5508	3.03	69.7	4.88
6/16/2009	15:15:00	6/16/09 15:15	33.31	7.41	5501	3.03	72.1	5.07
6/16/2009	15:30:00	6/16/09 15:30	33.63	7.46	5502	3.03	75.8	5.3
6/16/2009	15:45:00	6/16/09 15:45	33.18	7.4	5462	3.01	63.6	4.48
6/16/2009	16:00:00	6/16/09 16:00	33.57	7.38	5484	3.02	65.3	4.57
6/16/2009	16:15:00	6/16/09 16:15	33.65	7.48	5418	2.98	81.1	5.67
6/16/2009	16:30:00	6/16/09 16:30	33.92	7.53	5405	2.97	81.3	5.66
6/16/2009	16:45:00	6/16/09 16:45	33.9	7.49	5407	2.98	82.1	5.72
6/16/2009	17:00:00	6/16/09 17:00	34.3	7.52	5434	2.99	85.1	5.88
6/16/2009	17:15:00	6/16/09 17:15	33.78	7.46	5340	2.94	70.3	4.9
6/16/2009	17:30:00	6/16/09 17:30	33.8	7.47	5310	2.92	71.9	5.02
6/16/2009	17:45:00	6/16/09 17:45	33.94	7.46	5306	2.92	76.6	5.33
6/16/2009	18:00:00	6/16/09 18:00	34.37	7.5	5346	2.94	86.8	6

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

6/16/2009	18:15:00	6/16/09 18:15	34.39	7.55	5401	2.97	86.5	5.98
6/16/2009	18:30:00	6/16/09 18:30	34.94	7.65	5636	3.1	94.5	6.47
6/16/2009	18:45:00	6/16/09 18:45	34.39	7.5	5498	3.03	67	4.63
6/16/2009	19:00:00	6/16/09 19:00	34.12	7.42	5477	3.01	74	5.14
6/16/2009	19:15:00	6/16/09 19:15	34.43	7.52	5545	3.06	86.5	5.97
6/16/2009	19:30:00	6/16/09 19:30	34.79	7.67	5774	3.19	103.4	7.09
6/16/2009	19:45:00	6/16/09 19:45	34.21	7.46	5521	3.04	72	4.99
6/16/2009	20:00:00	6/16/09 20:00	34.54	7.59	5697	3.14	81	5.58
6/16/2009	20:15:00	6/16/09 20:15	34.27	7.39	5482	3.02	64.5	4.47
6/16/2009	20:30:00	6/16/09 20:30	34.01	7.38	5517	3.04	57.3	3.98
6/16/2009	20:45:00	6/16/09 20:45	34.18	7.42	5667	3.12	70.2	4.86
6/16/2009	21:00:00	6/16/09 21:00	34.42	7.56	5743	3.17	86.9	6
6/16/2009	21:15:00	6/16/09 21:15	34.34	7.65	5678	3.13	95.6	6.6
6/16/2009	21:30:00	6/16/09 21:30	33.86	7.4	5535	3.05	52.3	3.64
6/16/2009	21:45:00	6/16/09 21:45	33.84	7.39	5645	3.11	55.3	3.85
6/16/2009	22:00:00	6/16/09 22:00	33.77	7.42	5786	3.19	73.7	5.14
6/16/2009	22:15:00	6/16/09 22:15	33.81	7.49	5802	3.2	77.1	5.37
6/16/2009	22:30:00	6/16/09 22:30	33.76	7.48	5795	3.2	74.9	5.22
6/16/2009	22:45:00	6/16/09 22:45	33.68	7.47	5696	3.14	72.3	5.05
6/16/2009	23:00:00	6/16/09 23:00	33.57	7.41	5643	3.11	63.2	4.42
6/16/2009	23:15:00	6/16/09 23:15	33.53	7.42	5710	3.15	65.4	4.58
6/16/2009	23:30:00	6/16/09 23:30	33.48	7.39	5765	3.18	63.4	4.44
6/16/2009	23:45:00	6/16/09 23:45	33.43	7.38	5766	3.18	62	4.35
6/17/2009	0:00:00	6/17/09 0:00	33.35	7.38	5725	3.16	59.5	4.18
6/17/2009	0:15:00	6/17/09 0:15	33.25	7.38	5620	3.1	58.5	4.12
6/17/2009	0:30:00	6/17/09 0:30	33.19	7.38	5597	3.08	57.1	4.02
6/17/2009	0:45:00	6/17/09 0:45	33.15	7.36	5627	3.1	56	3.95
6/17/2009	1:00:00	6/17/09 1:00	33.1	7.35	5682	3.13	53.5	3.77
6/17/2009	1:15:00	6/17/09 1:15	33.07	7.34	5676	3.13	52.7	3.72
6/17/2009	1:30:00	6/17/09 1:30	33.01	7.34	5626	3.1	51.1	3.61
6/17/2009	1:45:00	6/17/09 1:45	32.85	7.34	5559	3.06	49.6	3.51
6/17/2009	2:00:00	6/17/09 2:00	32.75	7.33	5518	3.04	48.1	3.41
6/17/2009	2:15:00	6/17/09 2:15	32.66	7.32	5506	3.03	46.4	3.3
6/17/2009	2:30:00	6/17/09 2:30	32.65	7.31	5525	3.04	46.4	3.3

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

6/17/2009	2:45:00	6/17/09 2:45	32.69	7.3	5552	3.06	45.4	3.23
6/17/2009	3:00:00	6/17/09 3:00	32.58	7.31	5532	3.05	44.5	3.16
6/17/2009	3:15:00	6/17/09 3:15	32.52	7.29	5523	3.04	42.3	3.01
6/17/2009	3:30:00	6/17/09 3:30	32.45	7.3	5522	3.04	41.4	2.95
6/17/2009	3:45:00	6/17/09 3:45	32.38	7.29	5509	3.03	40.3	2.88
6/17/2009	4:00:00	6/17/09 4:00	32.39	7.29	5536	3.05	39.4	2.81
6/17/2009	4:15:00	6/17/09 4:15	32.44	7.27	5574	3.07	38.2	2.73
6/17/2009	4:30:00	6/17/09 4:30	32.31	7.28	5545	3.06	38.4	2.74
6/17/2009	4:45:00	6/17/09 4:45	32.15	7.27	5491	3.02	36.1	2.59
6/17/2009	5:00:00	6/17/09 5:00	32.08	7.27	5450	3	33.8	2.43
6/17/2009	5:15:00	6/17/09 5:15	32.07	7.26	5467	3.01	33.3	2.39
6/17/2009	5:30:00	6/17/09 5:30	32.04	7.26	5486	3.02	33.4	2.4
6/17/2009	5:45:00	6/17/09 5:45	32	7.25	5516	3.04	32.2	2.31
6/17/2009	6:00:00	6/17/09 6:00	31.93	7.25	5484	3.02	30.5	2.19
6/17/2009	6:15:00	6/17/09 6:15	31.89	7.24	5462	3.01	28.7	2.07
6/17/2009	6:30:00	6/17/09 6:30	31.8	7.24	5443	3	28.3	2.04
6/17/2009	6:45:00	6/17/09 6:45	31.77	7.23	5448	3	25.4	1.83
6/17/2009	7:00:00	6/17/09 7:00	31.66	7.23	5412	2.98	26.8	1.94
6/17/2009	7:15:00	6/17/09 7:15	31.63	7.23	5412	2.98	26.6	1.93
6/17/2009	7:30:00	6/17/09 7:30	31.6	7.22	5424	2.98	23.9	1.73
6/17/2009	7:45:00	6/17/09 7:45	31.6	7.22	5433	2.99	22.8	1.65
6/17/2009	8:00:00	6/17/09 8:00	31.59	7.21	5437	2.99	23.9	1.73
6/17/2009	8:15:00	6/17/09 8:15	31.55	7.21	5436	2.99	23.9	1.73
6/17/2009	8:30:00	6/17/09 8:30	31.59	7.23	5421	2.98	27.5	1.99
6/17/2009	8:45:00	6/17/09 8:45	31.66	7.24	5459	3.01	28.7	2.08
6/17/2009	9:00:00	6/17/09 9:00	31.65	7.23	5461	3.01	24.5	1.77
6/17/2009	9:15:00	6/17/09 9:15	31.8	7.18	5640	3.11	17.5	1.26
6/17/2009	9:30:00	6/17/09 9:30	31.79	7.17	5686	3.14	17.4	1.25
6/17/2009	9:45:00	6/17/09 9:45	31.86	7.18	5649	3.11	21.7	1.57
6/17/2009	10:00:00	6/17/09 10:00	31.89	7.18	5663	3.12	21.4	1.54
6/17/2009	10:15:00	6/17/09 10:15	31.87	7.18	5680	3.13	18.6	1.34
6/17/2009	10:30:00	6/17/09 10:30	32.01	7.2	5685	3.13	24.7	1.78
6/17/2009	10:45:00	6/17/09 10:45	31.88	7.18	5748	3.17	21.4	1.54
6/17/2009	11:00:00	6/17/09 11:00	32.08	7.21	5694	3.14	27.9	2

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

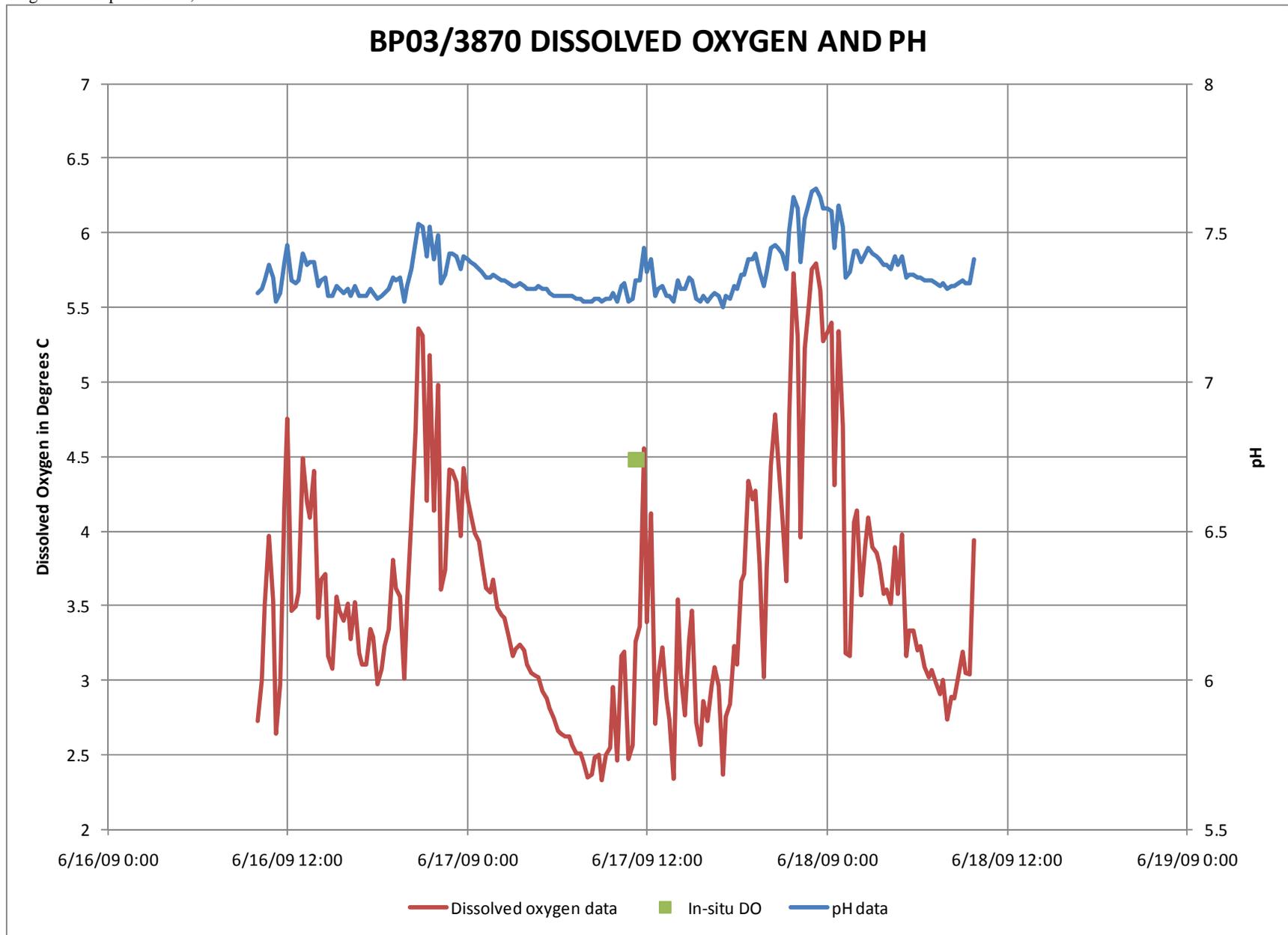
6/17/2009	11:15:00	6/17/09 11:15	32.26	7.21	5642	3.11	34.5	2.47
6/17/2009	11:30:00	6/17/09 11:30	32.23	7.22	5620	3.1	31.4	2.24
6/17/2009	11:45:00	6/17/09 11:45	31.98	7.19	5706	3.15	23.6	1.69
6/17/2009	12:00:00	6/17/09 12:00	31.99	7.19	5735	3.16	23	1.65
6/17/2009	12:15:00	6/17/09 12:15	32.58	7.28	5688	3.14	48.8	3.47
6/17/2009	12:30:00	6/17/09 12:30	32.54	7.3	5705	3.15	47.8	3.4
6/17/2009	12:45:00	6/17/09 12:45	33.06	7.35	5698	3.14	55.2	3.9
6/17/2009	13:00:00	6/17/09 13:00	33.08	7.38	5743	3.17	70.5	4.97
6/17/2009	13:15:00	6/17/09 13:15	32.92	7.32	5717	3.15	54.7	3.87
6/17/2009	13:30:00	6/17/09 13:30	32.57	7.27	5691	3.14	41.1	2.93
6/17/2009	13:45:00	6/17/09 13:45	33.23	7.41	5729	3.16	61.8	4.35
6/17/2009	14:00:00	6/17/09 14:00	33.44	7.42	5743	3.17	72.2	5.06
6/17/2009	14:15:00	6/17/09 14:15	33.23	7.33	5698	3.14	58.4	4.11
6/17/2009	14:30:00	6/17/09 14:30	33.09	7.3	5680	3.13	52.3	3.69
6/17/2009	14:45:00	6/17/09 14:45	32.98	7.3	5671	3.13	45.3	3.2
6/17/2009	15:00:00	6/17/09 15:00	33.32	7.31	5669	3.13	51.1	3.59
6/17/2009	15:15:00	6/17/09 15:15	33.24	7.3	5659	3.12	48.6	3.42
6/17/2009	15:30:00	6/17/09 15:30	33.46	7.35	5630	3.1	58.6	4.11
6/17/2009	15:45:00	6/17/09 15:45	33.49	7.35	5624	3.1	60.1	4.21
6/17/2009	16:00:00	6/17/09 16:00	33.36	7.31	5633	3.11	52.2	3.67
6/17/2009	16:15:00	6/17/09 16:15	33.18	7.26	5625	3.1	41.6	2.93
6/17/2009	16:30:00	6/17/09 16:30	33.38	7.3	5626	3.1	51.2	3.59
6/17/2009	16:45:00	6/17/09 16:45	33.72	7.36	5544	3.05	68.4	4.78
6/17/2009	17:00:00	6/17/09 17:00	33.9	7.4	5566	3.07	74.6	5.19
6/17/2009	17:15:00	6/17/09 17:15	33.54	7.35	5536	3.05	63.3	4.43
6/17/2009	17:30:00	6/17/09 17:30	33.61	7.32	5553	3.06	56.3	3.94
6/17/2009	17:45:00	6/17/09 17:45	33.6	7.31	5526	3.04	53.8	3.77
6/17/2009	18:00:00	6/17/09 18:00	34.53	7.47	5546	3.06	83.3	5.74
6/17/2009	18:15:00	6/17/09 18:15	34.33	7.52	5439	2.99	86	5.94
6/17/2009	18:30:00	6/17/09 18:30	34.05	7.43	5445	3	79	5.49
6/17/2009	18:45:00	6/17/09 18:45	33.69	7.37	5426	2.99	56	3.92
6/17/2009	19:00:00	6/17/09 19:00	33.93	7.36	5453	3	63	4.38
6/17/2009	19:15:00	6/17/09 19:15	34.24	7.45	5521	3.04	74.4	5.15
6/17/2009	19:30:00	6/17/09 19:30	34.35	7.52	5454	3	84.1	5.81

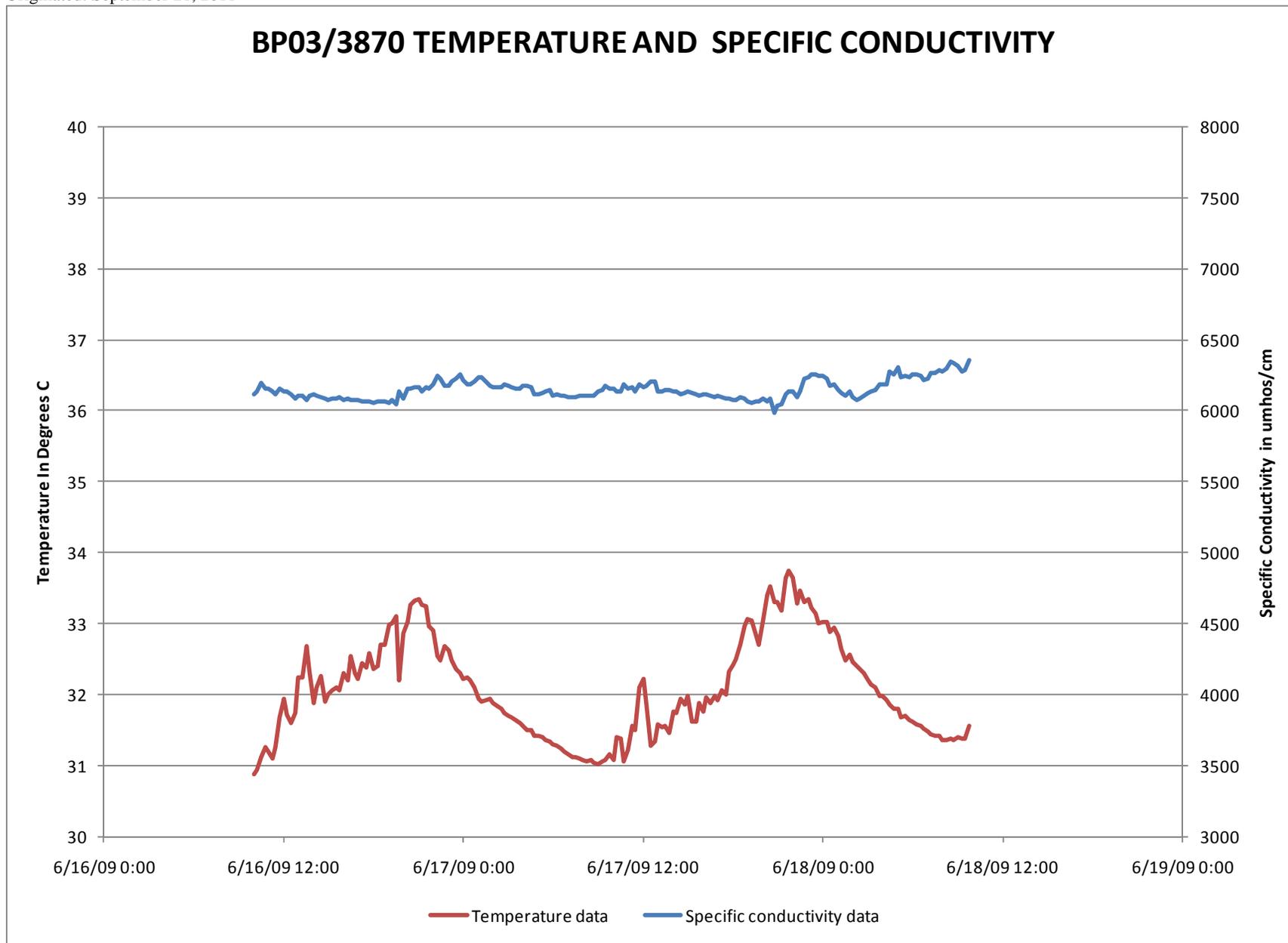
Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

6/17/2009	19:45:00	6/17/09 19:45	34.24	7.44	5427	2.99	62.2	4.31
6/17/2009	20:00:00	6/17/09 20:00	33.65	7.28	5444	3	49.5	3.46
6/17/2009	20:15:00	6/17/09 20:15	34.15	7.34	5476	3.01	61.7	4.28
6/17/2009	20:30:00	6/17/09 20:30	34.11	7.34	5543	3.05	55.7	3.87
6/17/2009	20:45:00	6/17/09 20:45	34.08	7.42	5497	3.03	69.2	4.8
6/17/2009	21:00:00	6/17/09 21:00	34.21	7.46	5482	3.02	71.9	4.98
6/17/2009	21:15:00	6/17/09 21:15	34.24	7.58	5495	3.03	89.6	6.2
6/17/2009	21:30:00	6/17/09 21:30	33.72	7.28	5544	3.05	48.7	3.4
6/17/2009	21:45:00	6/17/09 21:45	33.87	7.31	5568	3.07	45.4	3.16
6/17/2009	22:00:00	6/17/09 22:00	34.21	7.63	5650	3.11	90.7	6.28
6/17/2009	22:15:00	6/17/09 22:15	34.16	7.59	5692	3.14	85.3	5.91
6/17/2009	22:30:00	6/17/09 22:30	34.03	7.63	5635	3.11	87.7	6.09
6/17/2009	22:45:00	6/17/09 22:45	33.77	7.35	5656	3.12	43.4	3.03
6/17/2009	23:00:00	6/17/09 23:00	33.97	7.56	5745	3.17	79.7	5.54
6/17/2009	23:15:00	6/17/09 23:15	33.86	7.54	5749	3.17	76.5	5.32
6/17/2009	23:30:00	6/17/09 23:30	33.8	7.52	5764	3.18	73.7	5.13
6/17/2009	23:45:00	6/17/09 23:45	33.74	7.52	5771	3.18	73.3	5.11
6/18/2009	0:00:00	6/18/09 0:00	33.7	7.49	5766	3.18	70.4	4.92
6/18/2009	0:15:00	6/18/09 0:15	33.64	7.48	5745	3.17	70.5	4.93
6/18/2009	0:30:00	6/18/09 0:30	33.58	7.48	5718	3.15	69.6	4.87
6/18/2009	0:45:00	6/18/09 0:45	33.48	7.47	5667	3.12	69	4.83
6/18/2009	1:00:00	6/18/09 1:00	33.38	7.46	5639	3.11	66.6	4.67
6/18/2009	1:15:00	6/18/09 1:15	33.28	7.45	5609	3.09	64.9	4.56
6/18/2009	1:30:00	6/18/09 1:30	33.19	7.45	5549	3.06	64	4.51
6/18/2009	1:45:00	6/18/09 1:45	33.06	7.45	5481	3.02	62.8	4.44
6/18/2009	2:00:00	6/18/09 2:00	33.01	7.41	5462	3.01	58.1	4.11
6/18/2009	2:15:00	6/18/09 2:15	32.97	7.4	5460	3.01	56.3	3.98
6/18/2009	2:30:00	6/18/09 2:30	32.9	7.39	5473	3.01	53.4	3.78
6/18/2009	2:45:00	6/18/09 2:45	32.85	7.39	5505	3.03	52.5	3.72
6/18/2009	3:00:00	6/18/09 3:00	32.82	7.37	5563	3.06	51.3	3.64
6/18/2009	3:15:00	6/18/09 3:15	32.81	7.35	5597	3.08	46.6	3.3
6/18/2009	3:30:00	6/18/09 3:30	32.8	7.34	5633	3.1	44.8	3.18
6/18/2009	3:45:00	6/18/09 3:45	32.77	7.32	5641	3.11	43	3.05
6/18/2009	4:00:00	6/18/09 4:00	32.73	7.3	5643	3.11	41	2.91

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

6/18/2009	4:15:00	6/18/09 4:15	32.7	7.31	5676	3.13	40.9	2.9
6/18/2009	4:30:00	6/18/09 4:30	32.61	7.26	5751	3.17	32.7	2.32
6/18/2009	4:45:00	6/18/09 4:45	32.57	7.26	5796	3.2	34.1	2.42
6/18/2009	5:00:00	6/18/09 5:00	32.52	7.27	5782	3.19	34.2	2.44
6/18/2009	5:15:00	6/18/09 5:15	32.49	7.27	5716	3.15	33.6	2.39
6/18/2009	5:30:00	6/18/09 5:30	32.4	7.25	5663	3.12	30	2.14
6/18/2009	5:45:00	6/18/09 5:45	32.38	7.25	5666	3.12	29.8	2.13
6/18/2009	6:00:00	6/18/09 6:00	32.34	7.24	5694	3.14	27.9	1.99
6/18/2009	6:15:00	6/18/09 6:15	32.29	7.24	5699	3.14	27.2	1.94
6/18/2009	6:30:00	6/18/09 6:30	32.24	7.24	5678	3.13	26.6	1.91
6/18/2009	6:45:00	6/18/09 6:45	32.15	7.23	5664	3.12	24.5	1.75
6/18/2009	7:00:00	6/18/09 7:00	32.1	7.23	5665	3.12	23.8	1.71
6/18/2009	7:15:00	6/18/09 7:15	32.14	7.23	5716	3.15	24.2	1.73
6/18/2009	7:30:00	6/18/09 7:30	32.1	7.22	5738	3.16	23.2	1.67
6/18/2009	7:45:00	6/18/09 7:45	32.08	7.22	5739	3.16	22.6	1.62
6/18/2009	8:00:00	6/18/09 8:00	32.04	7.23	5722	3.16	23	1.65
6/18/2009	8:15:00	6/18/09 8:15	32.04	7.22	5747	3.17	21.5	1.54
6/18/2009	8:30:00	6/18/09 8:30	31.96	7.21	5806	3.2	20.3	1.46
6/18/2009	8:45:00	6/18/09 8:45	31.96	7.2	5824	3.21	20	1.44
6/18/2009	9:00:00	6/18/09 9:00	32.01	7.21	5760	3.18	22.1	1.58
6/18/2009	9:15:00	6/18/09 9:15	32	7.22	5716	3.15	24.5	1.76
6/18/2009	9:30:00	6/18/09 9:30	31.99	7.2	5803	3.2	19	1.36
6/18/2009	9:45:00	6/18/09 9:45	31.98	7.21	5845	3.23	20.5	1.47
6/18/2009	10:00:00	6/18/09 10:00	31.96	7.21	5837	3.22	21.2	1.53





Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

Date M/D/YYYY	Time HH:MM:SS	Date/Time	TEMP °C	pH Units	Cond uS/cm	Sal ppt	LDO% Sat	LDO mg/l
6/16/2009	10:00:00	6/16/09 10:00	30.87	7.3	6118	3.38	37.3	2.73
6/16/2009	10:15:00	6/16/09 10:15	30.93	7.31	6140	3.4	41.1	3
6/16/2009	10:30:00	6/16/09 10:30	31.12	7.34	6192	3.43	48.1	3.5
6/16/2009	10:45:00	6/16/09 10:45	31.25	7.39	6154	3.4	54.7	3.97
6/16/2009	11:00:00	6/16/09 11:00	31.19	7.35	6158	3.41	48.6	3.53
6/16/2009	11:15:00	6/16/09 11:15	31.1	7.27	6140	3.4	36.3	2.64
6/16/2009	11:30:00	6/16/09 11:30	31.26	7.3	6111	3.38	40.8	2.97
6/16/2009	11:45:00	6/16/09 11:45	31.69	7.4	6152	3.4	58	4.18
6/16/2009	12:00:00	6/16/09 12:00	31.95	7.46	6135	3.39	66.2	4.75
6/16/2009	12:15:00	6/16/09 12:15	31.73	7.34	6131	3.39	48.1	3.47
6/16/2009	12:30:00	6/16/09 12:30	31.6	7.33	6117	3.38	48.3	3.49
6/16/2009	12:45:00	6/16/09 12:45	31.74	7.34	6089	3.37	49.8	3.59
6/16/2009	13:00:00	6/16/09 13:00	32.25	7.43	6109	3.38	62.8	4.49
6/16/2009	13:15:00	6/16/09 13:15	32.24	7.39	6104	3.37	58.7	4.19
6/16/2009	13:30:00	6/16/09 13:30	32.68	7.4	6079	3.36	57.7	4.09
6/16/2009	13:45:00	6/16/09 13:45	32.33	7.4	6107	3.38	61.7	4.4
6/16/2009	14:00:00	6/16/09 14:00	31.88	7.32	6112	3.38	47.6	3.42
6/16/2009	14:15:00	6/16/09 14:15	32.1	7.34	6101	3.37	51.2	3.67
6/16/2009	14:30:00	6/16/09 14:30	32.26	7.35	6091	3.37	52	3.71
6/16/2009	14:45:00	6/16/09 14:45	31.9	7.29	6087	3.37	44	3.16
6/16/2009	15:00:00	6/16/09 15:00	32	7.29	6075	3.36	43	3.08
6/16/2009	15:15:00	6/16/09 15:15	32.07	7.32	6086	3.36	49.7	3.56
6/16/2009	15:30:00	6/16/09 15:30	32.1	7.31	6087	3.37	48.5	3.47
6/16/2009	15:45:00	6/16/09 15:45	32.06	7.3	6091	3.37	47.5	3.4
6/16/2009	16:00:00	6/16/09 16:00	32.31	7.31	6077	3.36	49.1	3.51
6/16/2009	16:15:00	6/16/09 16:15	32.21	7.29	6082	3.36	45.9	3.28
6/16/2009	16:30:00	6/16/09 16:30	32.54	7.32	6071	3.36	49.5	3.52
6/16/2009	16:45:00	6/16/09 16:45	32.3	7.29	6078	3.36	44.5	3.18
6/16/2009	17:00:00	6/16/09 17:00	32.23	7.29	6079	3.36	43.5	3.11
6/16/2009	17:15:00	6/16/09 17:15	32.44	7.29	6067	3.35	43.7	3.11
6/16/2009	17:30:00	6/16/09 17:30	32.39	7.31	6066	3.35	46.8	3.34
6/16/2009	17:45:00	6/16/09 17:45	32.59	7.3	6066	3.35	46.3	3.29

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

6/16/2009	18:00:00	6/16/09 18:00	32.37	7.28	6058	3.35	41.7	2.97
6/16/2009	18:15:00	6/16/09 18:15	32.4	7.29	6065	3.35	43.2	3.08
6/16/2009	18:30:00	6/16/09 18:30	32.7	7.3	6062	3.35	45.6	3.23
6/16/2009	18:45:00	6/16/09 18:45	32.71	7.31	6062	3.35	47.1	3.34
6/16/2009	19:00:00	6/16/09 19:00	32.98	7.35	6057	3.35	54	3.81
6/16/2009	19:15:00	6/16/09 19:15	33.01	7.34	6072	3.36	51.4	3.62
6/16/2009	19:30:00	6/16/09 19:30	33.1	7.35	6048	3.34	50.6	3.56
6/16/2009	19:45:00	6/16/09 19:45	32.21	7.27	6138	3.39	42.1	3.01
6/16/2009	20:00:00	6/16/09 20:00	32.87	7.32	6084	3.36	49.8	3.52
6/16/2009	20:15:00	6/16/09 20:15	33.02	7.38	6154	3.4	57.9	4.08
6/16/2009	20:30:00	6/16/09 20:30	33.27	7.47	6156	3.4	66.7	4.68
6/16/2009	20:45:00	6/16/09 20:45	33.32	7.53	6169	3.41	76.5	5.36
6/16/2009	21:00:00	6/16/09 21:00	33.34	7.52	6166	3.41	75.8	5.31
6/16/2009	21:15:00	6/16/09 21:15	33.27	7.42	6139	3.39	59.8	4.2
6/16/2009	21:30:00	6/16/09 21:30	33.25	7.52	6162	3.41	73.8	5.18
6/16/2009	21:45:00	6/16/09 21:45	32.96	7.41	6155	3.4	58.6	4.14
6/16/2009	22:00:00	6/16/09 22:00	32.91	7.49	6187	3.42	70.5	4.98
6/16/2009	22:15:00	6/16/09 22:15	32.54	7.33	6241	3.45	50.8	3.61
6/16/2009	22:30:00	6/16/09 22:30	32.48	7.36	6228	3.45	52.5	3.74
6/16/2009	22:45:00	6/16/09 22:45	32.68	7.43	6175	3.42	62.3	4.41
6/16/2009	23:00:00	6/16/09 23:00	32.62	7.43	6174	3.42	62	4.4
6/16/2009	23:15:00	6/16/09 23:15	32.48	7.42	6209	3.44	60.9	4.33
6/16/2009	23:30:00	6/16/09 23:30	32.36	7.38	6227	3.45	55.8	3.97
6/16/2009	23:45:00	6/16/09 23:45	32.3	7.42	6260	3.46	62	4.42
6/17/2009	0:00:00	6/17/09 0:00	32.23	7.41	6219	3.44	59	4.21
6/17/2009	0:15:00	6/17/09 0:15	32.25	7.4	6190	3.42	57.8	4.12
6/17/2009	0:30:00	6/17/09 0:30	32.21	7.39	6185	3.42	55.8	3.99
6/17/2009	0:45:00	6/17/09 0:45	32.11	7.38	6205	3.43	54.9	3.93
6/17/2009	1:00:00	6/17/09 1:00	31.95	7.37	6233	3.45	52.9	3.8
6/17/2009	1:15:00	6/17/09 1:15	31.91	7.35	6238	3.45	50.4	3.62
6/17/2009	1:30:00	6/17/09 1:30	31.93	7.35	6203	3.43	50	3.59
6/17/2009	1:45:00	6/17/09 1:45	31.95	7.36	6179	3.42	51.2	3.67
6/17/2009	2:00:00	6/17/09 2:00	31.88	7.35	6167	3.41	48.5	3.48
6/17/2009	2:15:00	6/17/09 2:15	31.85	7.34	6161	3.41	47.8	3.44

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

6/17/2009	2:30:00	6/17/09 2:30	31.8	7.34	6169	3.41	47.6	3.42
6/17/2009	2:45:00	6/17/09 2:45	31.74	7.33	6182	3.42	45.8	3.3
6/17/2009	3:00:00	6/17/09 3:00	31.7	7.32	6175	3.42	43.8	3.16
6/17/2009	3:15:00	6/17/09 3:15	31.68	7.32	6166	3.41	44.6	3.21
6/17/2009	3:30:00	6/17/09 3:30	31.65	7.33	6158	3.41	44.9	3.24
6/17/2009	3:45:00	6/17/09 3:45	31.61	7.32	6155	3.4	44.3	3.2
6/17/2009	4:00:00	6/17/09 4:00	31.56	7.31	6171	3.41	43.1	3.11
6/17/2009	4:15:00	6/17/09 4:15	31.5	7.31	6180	3.42	42.2	3.05
6/17/2009	4:30:00	6/17/09 4:30	31.5	7.31	6167	3.41	42	3.03
6/17/2009	4:45:00	6/17/09 4:45	31.43	7.32	6113	3.38	41.6	3.02
6/17/2009	5:00:00	6/17/09 5:00	31.42	7.31	6114	3.38	40.5	2.93
6/17/2009	5:15:00	6/17/09 5:15	31.41	7.31	6125	3.39	39.8	2.88
6/17/2009	5:30:00	6/17/09 5:30	31.37	7.3	6135	3.39	38.8	2.81
6/17/2009	5:45:00	6/17/09 5:45	31.35	7.29	6144	3.4	37.9	2.75
6/17/2009	6:00:00	6/17/09 6:00	31.29	7.29	6106	3.38	36.6	2.66
6/17/2009	6:15:00	6/17/09 6:15	31.28	7.29	6117	3.38	36.4	2.64
6/17/2009	6:30:00	6/17/09 6:30	31.24	7.29	6108	3.38	36.1	2.62
6/17/2009	6:45:00	6/17/09 6:45	31.2	7.29	6103	3.37	36.1	2.62
6/17/2009	7:00:00	6/17/09 7:00	31.16	7.29	6095	3.37	35.4	2.57
6/17/2009	7:15:00	6/17/09 7:15	31.12	7.28	6095	3.37	34.5	2.51
6/17/2009	7:30:00	6/17/09 7:30	31.12	7.28	6098	3.37	34.5	2.51
6/17/2009	7:45:00	6/17/09 7:45	31.1	7.27	6101	3.37	33.7	2.45
6/17/2009	8:00:00	6/17/09 8:00	31.08	7.27	6106	3.38	32.2	2.35
6/17/2009	8:15:00	6/17/09 8:15	31.05	7.27	6102	3.37	32.5	2.37
6/17/2009	8:30:00	6/17/09 8:30	31.07	7.28	6107	3.38	34	2.48
6/17/2009	8:45:00	6/17/09 8:45	31.04	7.28	6110	3.38	34.3	2.5
6/17/2009	9:00:00	6/17/09 9:00	31.02	7.27	6134	3.39	31.9	2.33
6/17/2009	9:15:00	6/17/09 9:15	31.05	7.28	6145	3.4	34.3	2.5
6/17/2009	9:30:00	6/17/09 9:30	31.07	7.28	6178	3.42	35.1	2.55
6/17/2009	9:45:00	6/17/09 9:45	31.16	7.3	6153	3.4	40.5	2.95
6/17/2009	10:00:00	6/17/09 10:00	31.08	7.27	6153	3.4	33.8	2.46
6/17/2009	10:15:00	6/17/09 10:15	31.41	7.32	6139	3.4	43.6	3.16
6/17/2009	10:30:00	6/17/09 10:30	31.38	7.33	6139	3.4	44.1	3.19
6/17/2009	10:45:00	6/17/09 10:45	31.05	7.27	6187	3.42	33.9	2.47

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

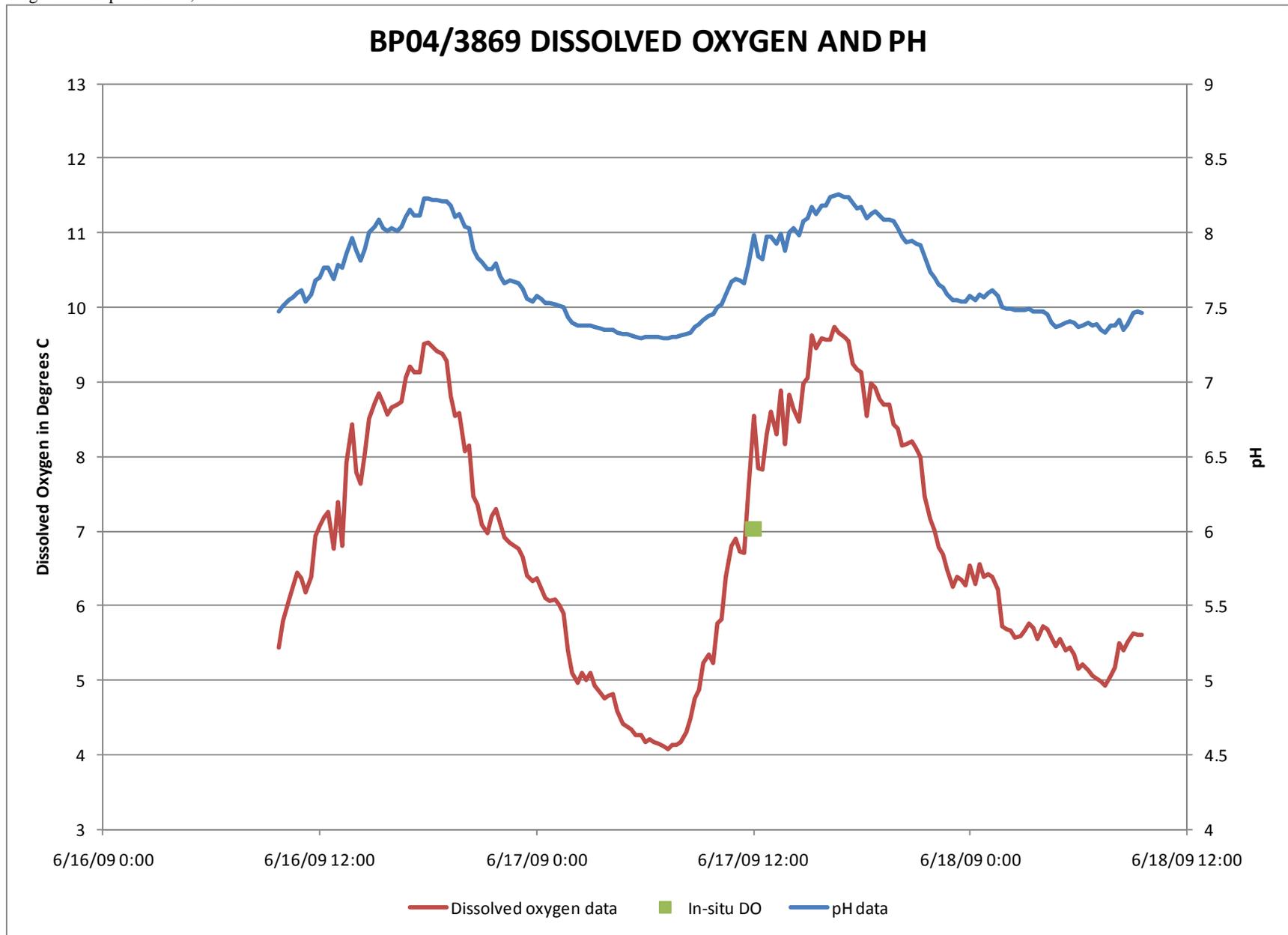
6/17/2009	11:00:00	6/17/09 11:00	31.21	7.28	6155	3.4	35.4	2.57
6/17/2009	11:15:00	6/17/09 11:15	31.57	7.34	6163	3.41	45.1	3.26
6/17/2009	11:30:00	6/17/09 11:30	31.5	7.34	6137	3.39	46.5	3.36
6/17/2009	11:45:00	6/17/09 11:45	32.11	7.45	6185	3.42	63.5	4.55
6/17/2009	12:00:00	6/17/09 12:00	32.23	7.37	6167	3.41	47.5	3.39
6/17/2009	12:15:00	6/17/09 12:15	31.86	7.41	6176	3.42	57.3	4.12
6/17/2009	12:30:00	6/17/09 12:30	31.28	7.29	6205	3.43	37.3	2.71
6/17/2009	12:45:00	6/17/09 12:45	31.34	7.31	6201	3.43	41.7	3.02
6/17/2009	13:00:00	6/17/09 13:00	31.58	7.32	6137	3.39	44.6	3.22
6/17/2009	13:15:00	6/17/09 13:15	31.54	7.29	6132	3.39	39.8	2.88
6/17/2009	13:30:00	6/17/09 13:30	31.56	7.29	6145	3.4	37.9	2.74
6/17/2009	13:45:00	6/17/09 13:45	31.46	7.27	6146	3.4	32.3	2.34
6/17/2009	14:00:00	6/17/09 14:00	31.77	7.34	6139	3.39	49.1	3.54
6/17/2009	14:15:00	6/17/09 14:15	31.74	7.31	6134	3.39	42.3	3.05
6/17/2009	14:30:00	6/17/09 14:30	31.95	7.31	6111	3.38	38.5	2.77
6/17/2009	14:45:00	6/17/09 14:45	31.86	7.35	6123	3.39	45.5	3.27
6/17/2009	15:00:00	6/17/09 15:00	31.99	7.34	6133	3.39	48.4	3.47
6/17/2009	15:15:00	6/17/09 15:15	31.63	7.28	6121	3.38	37.7	2.72
6/17/2009	15:30:00	6/17/09 15:30	31.63	7.27	6112	3.38	35.7	2.57
6/17/2009	15:45:00	6/17/09 15:45	31.88	7.29	6102	3.37	39.7	2.86
6/17/2009	16:00:00	6/17/09 16:00	31.76	7.27	6115	3.38	37.9	2.73
6/17/2009	16:15:00	6/17/09 16:15	31.96	7.29	6114	3.38	41.3	2.96
6/17/2009	16:30:00	6/17/09 16:30	31.89	7.3	6103	3.37	43	3.09
6/17/2009	16:45:00	6/17/09 16:45	31.98	7.29	6093	3.37	41.3	2.96
6/17/2009	17:00:00	6/17/09 17:00	31.92	7.25	6104	3.37	33	2.37
6/17/2009	17:15:00	6/17/09 17:15	32.07	7.29	6093	3.37	38.5	2.76
6/17/2009	17:30:00	6/17/09 17:30	32.01	7.28	6090	3.37	39.7	2.84
6/17/2009	17:45:00	6/17/09 17:45	32.32	7.32	6083	3.36	45.3	3.23
6/17/2009	18:00:00	6/17/09 18:00	32.42	7.31	6076	3.36	43.7	3.11
6/17/2009	18:15:00	6/17/09 18:15	32.5	7.36	6075	3.36	51.4	3.66
6/17/2009	18:30:00	6/17/09 18:30	32.7	7.36	6093	3.37	52.4	3.71
6/17/2009	18:45:00	6/17/09 18:45	32.96	7.41	6090	3.37	61.5	4.34
6/17/2009	19:00:00	6/17/09 19:00	33.07	7.41	6069	3.35	59.7	4.21
6/17/2009	19:15:00	6/17/09 19:15	33.04	7.43	6053	3.35	60.5	4.27

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

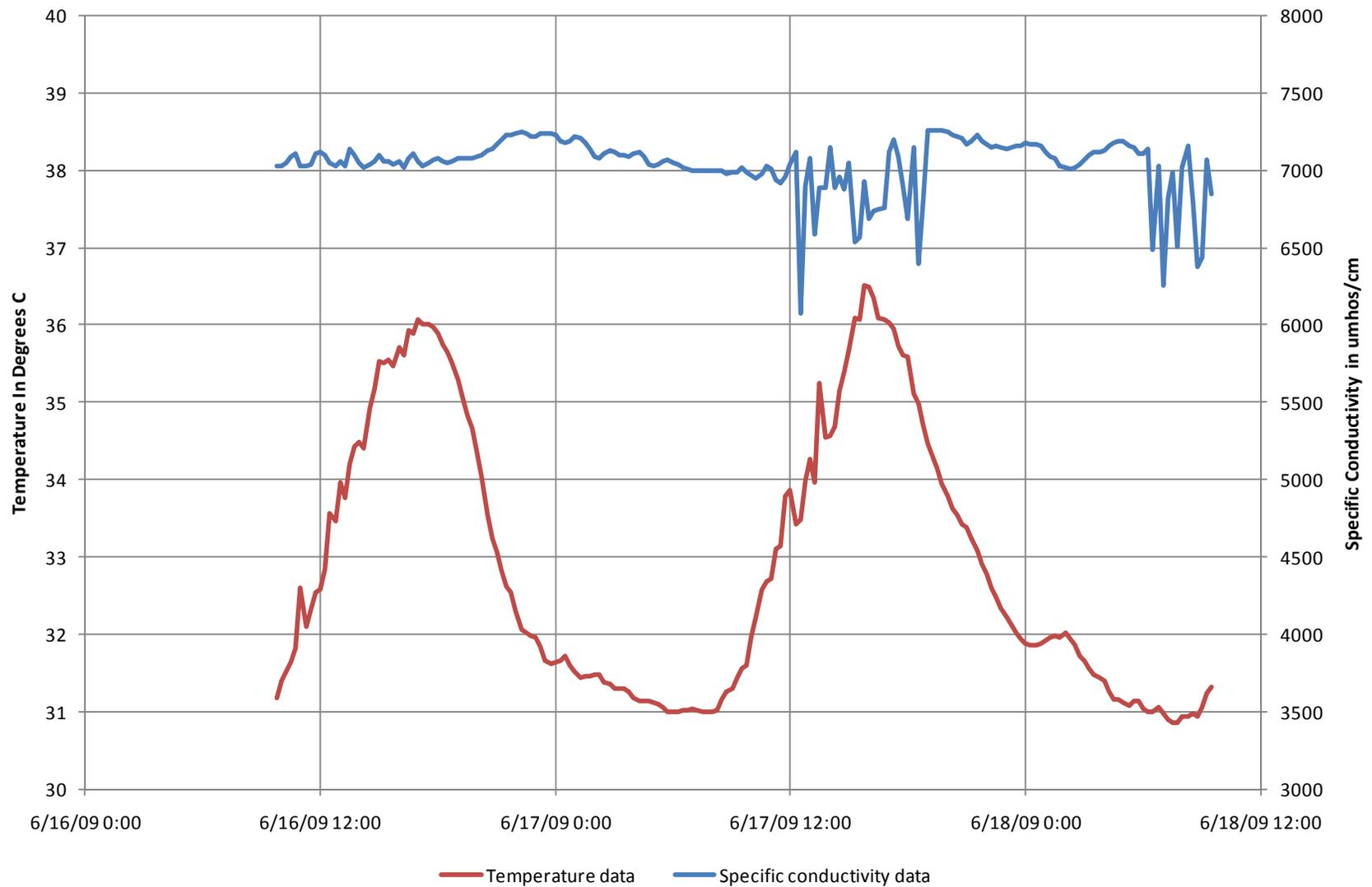
6/17/2009	19:30:00	6/17/09 19:30	32.84	7.37	6067	3.35	53.4	3.78
6/17/2009	19:45:00	6/17/09 19:45	32.71	7.32	6069	3.35	42.6	3.02
6/17/2009	20:00:00	6/17/09 20:00	33.04	7.37	6085	3.36	53	3.74
6/17/2009	20:15:00	6/17/09 20:15	33.41	7.45	6063	3.35	63.4	4.44
6/17/2009	20:30:00	6/17/09 20:30	33.52	7.46	6085	3.36	68.4	4.78
6/17/2009	20:45:00	6/17/09 20:45	33.3	7.45	5989	3.31	64.1	4.5
6/17/2009	21:00:00	6/17/09 21:00	33.31	7.43	6038	3.34	58.5	4.11
6/17/2009	21:15:00	6/17/09 21:15	33.18	7.38	6043	3.34	52.1	3.66
6/17/2009	21:30:00	6/17/09 21:30	33.64	7.51	6120	3.38	68.4	4.77
6/17/2009	21:45:00	6/17/09 21:45	33.74	7.62	6135	3.39	82.3	5.73
6/17/2009	22:00:00	6/17/09 22:00	33.65	7.58	6134	3.39	76	5.3
6/17/2009	22:15:00	6/17/09 22:15	33.28	7.4	6098	3.37	56.4	3.96
6/17/2009	22:30:00	6/17/09 22:30	33.46	7.55	6135	3.39	74.8	5.23
6/17/2009	22:45:00	6/17/09 22:45	33.31	7.6	6221	3.44	78.9	5.53
6/17/2009	23:00:00	6/17/09 23:00	33.34	7.64	6232	3.45	82.1	5.76
6/17/2009	23:15:00	6/17/09 23:15	33.23	7.65	6258	3.46	82.4	5.79
6/17/2009	23:30:00	6/17/09 23:30	33.15	7.62	6255	3.46	79.8	5.61
6/17/2009	23:45:00	6/17/09 23:45	33.01	7.58	6245	3.46	74.8	5.27
6/18/2009	0:00:00	6/18/09 0:00	33.03	7.58	6241	3.45	75.6	5.33
6/18/2009	0:15:00	6/18/09 0:15	33.03	7.57	6228	3.45	76.7	5.4
6/18/2009	0:30:00	6/18/09 0:30	32.88	7.45	6176	3.42	61	4.31
6/18/2009	0:45:00	6/18/09 0:45	32.95	7.59	6187	3.42	75.7	5.34
6/18/2009	1:00:00	6/18/09 1:00	32.83	7.52	6146	3.4	66.6	4.71
6/18/2009	1:15:00	6/18/09 1:15	32.64	7.35	6123	3.39	44.8	3.18
6/18/2009	1:30:00	6/18/09 1:30	32.48	7.37	6108	3.38	44.4	3.16
6/18/2009	1:45:00	6/18/09 1:45	32.56	7.44	6131	3.39	57.1	4.06
6/18/2009	2:00:00	6/18/09 2:00	32.47	7.44	6094	3.37	58.2	4.14
6/18/2009	2:15:00	6/18/09 2:15	32.4	7.4	6078	3.36	50.2	3.57
6/18/2009	2:30:00	6/18/09 2:30	32.37	7.43	6090	3.37	54.8	3.91
6/18/2009	2:45:00	6/18/09 2:45	32.3	7.45	6110	3.38	57.3	4.09
6/18/2009	3:00:00	6/18/09 3:00	32.21	7.43	6124	3.39	54.5	3.89
6/18/2009	3:15:00	6/18/09 3:15	32.15	7.42	6131	3.39	53.8	3.85
6/18/2009	3:30:00	6/18/09 3:30	32.1	7.41	6142	3.4	52.8	3.78
6/18/2009	3:45:00	6/18/09 3:45	31.99	7.39	6184	3.42	49.9	3.58

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

6/18/2009	4:00:00	6/18/09 4:00	31.99	7.39	6185	3.42	50.4	3.61
6/18/2009	4:15:00	6/18/09 4:15	31.93	7.38	6184	3.42	48.9	3.51
6/18/2009	4:30:00	6/18/09 4:30	31.86	7.42	6274	3.47	54.2	3.89
6/18/2009	4:45:00	6/18/09 4:45	31.8	7.39	6253	3.46	49.8	3.58
6/18/2009	5:00:00	6/18/09 5:00	31.8	7.42	6301	3.49	55.4	3.98
6/18/2009	5:15:00	6/18/09 5:15	31.69	7.35	6237	3.45	43.8	3.16
6/18/2009	5:30:00	6/18/09 5:30	31.7	7.36	6241	3.45	46.3	3.33
6/18/2009	5:45:00	6/18/09 5:45	31.65	7.36	6239	3.45	46.2	3.33
6/18/2009	6:00:00	6/18/09 6:00	31.62	7.35	6253	3.46	44.4	3.2
6/18/2009	6:15:00	6/18/09 6:15	31.58	7.35	6251	3.46	44.7	3.23
6/18/2009	6:30:00	6/18/09 6:30	31.56	7.34	6244	3.46	42.7	3.09
6/18/2009	6:45:00	6/18/09 6:45	31.52	7.34	6219	3.44	41.8	3.02
6/18/2009	7:00:00	6/18/09 7:00	31.49	7.34	6225	3.44	42.5	3.07
6/18/2009	7:15:00	6/18/09 7:15	31.44	7.33	6266	3.47	41.1	2.98
6/18/2009	7:30:00	6/18/09 7:30	31.43	7.32	6269	3.47	40.2	2.91
6/18/2009	7:45:00	6/18/09 7:45	31.42	7.33	6285	3.48	41.4	3
6/18/2009	8:00:00	6/18/09 8:00	31.36	7.31	6277	3.47	37.8	2.74
6/18/2009	8:15:00	6/18/09 8:15	31.36	7.32	6300	3.49	39.9	2.89
6/18/2009	8:30:00	6/18/09 8:30	31.39	7.32	6347	3.51	39.8	2.88
6/18/2009	8:45:00	6/18/09 8:45	31.36	7.33	6337	3.51	41.9	3.03
6/18/2009	9:00:00	6/18/09 9:00	31.4	7.34	6318	3.5	44.1	3.19
6/18/2009	9:15:00	6/18/09 9:15	31.38	7.33	6274	3.47	42	3.05
6/18/2009	9:30:00	6/18/09 9:30	31.38	7.33	6283	3.48	42	3.04
6/18/2009	9:45:00	6/18/09 9:45	31.57	7.41	6351	3.52	54.6	3.94



BP04/3869 TEMPERATURE AND SPECIFIC CONDUCTIVITY



Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

Date M/D/YYYY	Time HH:MM:SS	Date/Time	TEMP °C	pH Units	Cond uS/cm	Sal ppt	LDO% Sat	LDO mg/l
6/16/2009	9:45:00	6/16/09 9:45	31.18	7.47	7028	3.91	75.1	5.44
6/16/2009	10:00:00	6/16/09 10:00	31.41	7.51	7029	3.91	80.1	5.79
6/16/2009	10:15:00	6/16/09 10:15	31.52	7.55	7051	3.92	84	6.06
6/16/2009	10:30:00	6/16/09 10:30	31.65	7.57	7090	3.94	87	6.26
6/16/2009	10:45:00	6/16/09 10:45	31.82	7.6	7105	3.95	89.8	6.44
6/16/2009	11:00:00	6/16/09 11:00	32.6	7.61	7025	3.91	89.9	6.36
6/16/2009	11:15:00	6/16/09 11:15	32.11	7.54	7030	3.91	86.6	6.18
6/16/2009	11:30:00	6/16/09 11:30	32.33	7.59	7036	3.91	89.7	6.38
6/16/2009	11:45:00	6/16/09 11:45	32.55	7.68	7106	3.95	97.9	6.93
6/16/2009	12:00:00	6/16/09 12:00	32.58	7.7	7115	3.96	99.8	7.07
6/16/2009	12:15:00	6/16/09 12:15	32.84	7.77	7100	3.95	102	7.19
6/16/2009	12:30:00	6/16/09 12:30	33.57	7.77	7045	3.92	104	7.25
6/16/2009	12:45:00	6/16/09 12:45	33.46	7.69	7029	3.91	97	6.77
6/16/2009	13:00:00	6/16/09 13:00	33.96	7.78	7060	3.93	106.7	7.38
6/16/2009	13:15:00	6/16/09 13:15	33.76	7.77	7032	3.91	98	6.8
6/16/2009	13:30:00	6/16/09 13:30	34.21	7.86	7141	3.97	114.8	7.91
6/16/2009	13:45:00	6/16/09 13:45	34.43	7.96	7096	3.95	122.7	8.43
6/16/2009	14:00:00	6/16/09 14:00	34.48	7.88	7047	3.92	113.5	7.79
6/16/2009	14:15:00	6/16/09 14:15	34.41	7.81	7020	3.9	111.1	7.63
6/16/2009	14:30:00	6/16/09 14:30	34.93	7.89	7040	3.92	118.1	8.04
6/16/2009	14:45:00	6/16/09 14:45	35.17	8	7059	3.93	125.3	8.5
6/16/2009	15:00:00	6/16/09 15:00	35.53	8.04	7093	3.95	129.1	8.71
6/16/2009	15:15:00	6/16/09 15:15	35.5	8.09	7062	3.93	131	8.84
6/16/2009	15:30:00	6/16/09 15:30	35.54	8.03	7061	3.93	129.2	8.71
6/16/2009	15:45:00	6/16/09 15:45	35.47	8.01	7035	3.91	126.8	8.56
6/16/2009	16:00:00	6/16/09 16:00	35.71	8.03	7057	3.93	128.6	8.65
6/16/2009	16:15:00	6/16/09 16:15	35.6	8.01	7019	3.9	129	8.7
6/16/2009	16:30:00	6/16/09 16:30	35.92	8.04	7073	3.93	130.4	8.74
6/16/2009	16:45:00	6/16/09 16:45	35.89	8.11	7109	3.96	134.9	9.05
6/16/2009	17:00:00	6/16/09 17:00	36.07	8.15	7059	3.93	137.5	9.2
6/16/2009	17:15:00	6/16/09 17:15	36	8.12	7025	3.91	136.4	9.13
6/16/2009	17:30:00	6/16/09 17:30	36.01	8.12	7047	3.92	136.6	9.14

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

6/16/2009	17:45:00	6/16/09 17:45	35.96	8.23	7064	3.93	141.9	9.5
6/16/2009	18:00:00	6/16/09 18:00	35.88	8.23	7079	3.94	142	9.52
6/16/2009	18:15:00	6/16/09 18:15	35.74	8.22	7059	3.93	140.9	9.48
6/16/2009	18:30:00	6/16/09 18:30	35.65	8.22	7051	3.92	139.9	9.42
6/16/2009	18:45:00	6/16/09 18:45	35.5	8.21	7056	3.92	139	9.38
6/16/2009	19:00:00	6/16/09 19:00	35.29	8.21	7073	3.93	137.1	9.29
6/16/2009	19:15:00	6/16/09 19:15	35.05	8.18	7077	3.94	129.6	8.81
6/16/2009	19:30:00	6/16/09 19:30	34.83	8.11	7080	3.94	125.2	8.55
6/16/2009	19:45:00	6/16/09 19:45	34.67	8.13	7080	3.94	125.4	8.58
6/16/2009	20:00:00	6/16/09 20:00	34.37	8.04	7087	3.94	117.6	8.08
6/16/2009	20:15:00	6/16/09 20:15	34.04	8.03	7095	3.95	117.9	8.15
6/16/2009	20:30:00	6/16/09 20:30	33.55	7.89	7130	3.97	107	7.46
6/16/2009	20:45:00	6/16/09 20:45	33.25	7.83	7140	3.97	105	7.35
6/16/2009	21:00:00	6/16/09 21:00	33.06	7.8	7165	3.99	100.7	7.08
6/16/2009	21:15:00	6/16/09 21:15	32.82	7.76	7195	4.01	99	6.98
6/16/2009	21:30:00	6/16/09 21:30	32.63	7.76	7228	4.02	101.8	7.2
6/16/2009	21:45:00	6/16/09 21:45	32.55	7.79	7225	4.02	103.1	7.3
6/16/2009	22:00:00	6/16/09 22:00	32.3	7.71	7240	4.03	99.9	7.1
6/16/2009	22:15:00	6/16/09 22:15	32.07	7.66	7247	4.04	97	6.92
6/16/2009	22:30:00	6/16/09 22:30	32.03	7.68	7234	4.03	95.8	6.84
6/16/2009	22:45:00	6/16/09 22:45	31.99	7.67	7217	4.02	95.3	6.81
6/16/2009	23:00:00	6/16/09 23:00	31.97	7.66	7215	4.02	94.5	6.76
6/16/2009	23:15:00	6/16/09 23:15	31.84	7.62	7233	4.03	92.8	6.65
6/16/2009	23:30:00	6/16/09 23:30	31.67	7.56	7238	4.03	89.2	6.41
6/16/2009	23:45:00	6/16/09 23:45	31.63	7.54	7239	4.03	88	6.33
6/17/2009	0:00:00	6/17/09 0:00	31.64	7.58	7225	4.02	88.6	6.37
6/17/2009	0:15:00	6/17/09 0:15	31.67	7.56	7190	4	86.6	6.23
6/17/2009	0:30:00	6/17/09 0:30	31.72	7.53	7177	4	85.1	6.11
6/17/2009	0:45:00	6/17/09 0:45	31.61	7.53	7190	4	84.2	6.06
6/17/2009	1:00:00	6/17/09 1:00	31.52	7.52	7214	4.02	84.4	6.08
6/17/2009	1:15:00	6/17/09 1:15	31.44	7.51	7206	4.01	83.3	6.01
6/17/2009	1:30:00	6/17/09 1:30	31.46	7.5	7176	3.99	81.7	5.89
6/17/2009	1:45:00	6/17/09 1:45	31.46	7.43	7138	3.97	75	5.41
6/17/2009	2:00:00	6/17/09 2:00	31.48	7.4	7089	3.94	70.5	5.09

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

6/17/2009	2:15:00	6/17/09 2:15	31.49	7.38	7077	3.94	68.9	4.97
6/17/2009	2:30:00	6/17/09 2:30	31.38	7.38	7112	3.96	70.5	5.09
6/17/2009	2:45:00	6/17/09 2:45	31.36	7.38	7123	3.96	69.2	5
6/17/2009	3:00:00	6/17/09 3:00	31.31	7.38	7120	3.96	70.4	5.09
6/17/2009	3:15:00	6/17/09 3:15	31.31	7.37	7100	3.95	68	4.92
6/17/2009	3:30:00	6/17/09 3:30	31.29	7.36	7096	3.95	66.9	4.84
6/17/2009	3:45:00	6/17/09 3:45	31.26	7.35	7088	3.94	65.6	4.75
6/17/2009	4:00:00	6/17/09 4:00	31.17	7.35	7106	3.95	66.2	4.8
6/17/2009	4:15:00	6/17/09 4:15	31.14	7.35	7118	3.96	66.3	4.81
6/17/2009	4:30:00	6/17/09 4:30	31.13	7.33	7087	3.94	63.1	4.58
6/17/2009	4:45:00	6/17/09 4:45	31.13	7.32	7036	3.91	60.9	4.42
6/17/2009	5:00:00	6/17/09 5:00	31.12	7.32	7025	3.91	60.2	4.37
6/17/2009	5:15:00	6/17/09 5:15	31.1	7.31	7040	3.92	59.9	4.35
6/17/2009	5:30:00	6/17/09 5:30	31.06	7.3	7059	3.93	58.7	4.27
6/17/2009	5:45:00	6/17/09 5:45	31	7.29	7070	3.93	58.7	4.27
6/17/2009	6:00:00	6/17/09 6:00	30.99	7.3	7045	3.92	57.4	4.17
6/17/2009	6:15:00	6/17/09 6:15	30.99	7.3	7036	3.91	57.7	4.2
6/17/2009	6:30:00	6/17/09 6:30	31.01	7.3	7019	3.9	57.4	4.18
6/17/2009	6:45:00	6/17/09 6:45	31.02	7.3	7009	3.9	57.2	4.16
6/17/2009	7:00:00	6/17/09 7:00	31.03	7.29	6999	3.89	56.6	4.12
6/17/2009	7:15:00	6/17/09 7:15	31.02	7.29	7001	3.89	56	4.07
6/17/2009	7:30:00	6/17/09 7:30	30.99	7.3	6999	3.89	56.9	4.14
6/17/2009	7:45:00	6/17/09 7:45	31	7.3	7000	3.89	57	4.14
6/17/2009	8:00:00	6/17/09 8:00	30.99	7.31	6994	3.89	57.3	4.17
6/17/2009	8:15:00	6/17/09 8:15	31.01	7.32	6994	3.89	59.3	4.31
6/17/2009	8:30:00	6/17/09 8:30	31.15	7.33	6994	3.89	61.8	4.49
6/17/2009	8:45:00	6/17/09 8:45	31.26	7.37	6980	3.88	65.6	4.75
6/17/2009	9:00:00	6/17/09 9:00	31.31	7.39	6987	3.88	67.4	4.87
6/17/2009	9:15:00	6/17/09 9:15	31.45	7.42	6991	3.89	72.4	5.23
6/17/2009	9:30:00	6/17/09 9:30	31.56	7.44	7013	3.9	74.1	5.34
6/17/2009	9:45:00	6/17/09 9:45	31.6	7.45	6991	3.89	72.6	5.23
6/17/2009	10:00:00	6/17/09 10:00	31.96	7.5	6966	3.87	80.5	5.76
6/17/2009	10:15:00	6/17/09 10:15	32.23	7.52	6947	3.86	81.6	5.81
6/17/2009	10:30:00	6/17/09 10:30	32.58	7.59	6978	3.88	90.1	6.38

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

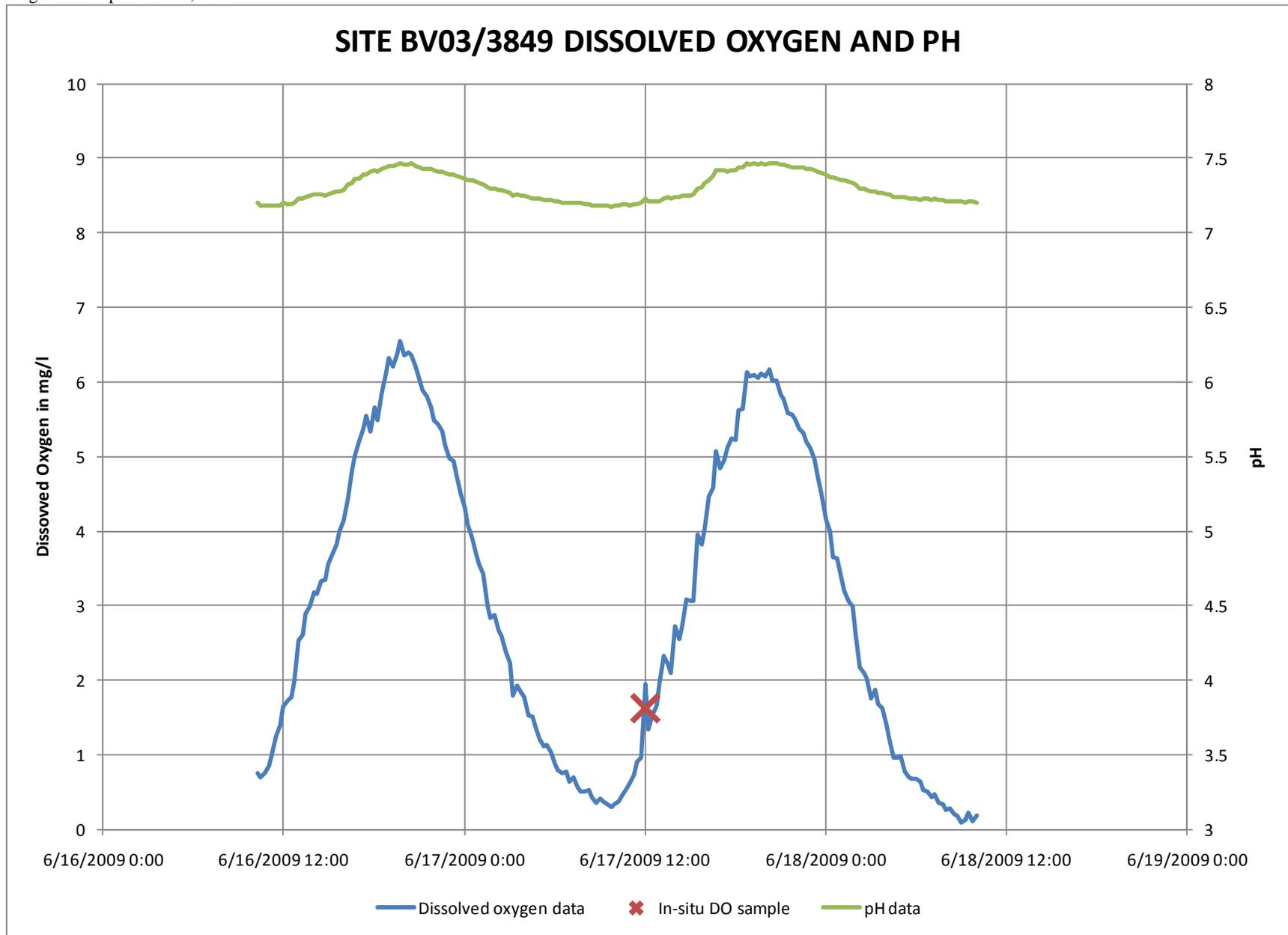
6/17/2009	10:45:00	6/17/09 10:45	32.68	7.67	7032	3.91	96.3	6.81
6/17/2009	11:00:00	6/17/09 11:00	32.73	7.69	7002	3.89	97.7	6.9
6/17/2009	11:15:00	6/17/09 11:15	33.11	7.68	6933	3.85	95.9	6.73
6/17/2009	11:30:00	6/17/09 11:30	33.14	7.66	6919	3.85	95.6	6.71
6/17/2009	11:45:00	6/17/09 11:45	33.79	7.78	6961	3.87	108.6	7.54
6/17/2009	12:00:00	6/17/09 12:00	33.87	7.98	7035	3.91	123.4	8.55
6/17/2009	12:15:00	6/17/09 12:15	33.42	7.84	7116	3.96	112.2	7.84
6/17/2009	12:30:00	6/17/09 12:30	33.49	7.82	6072	3.36	111.8	7.82
6/17/2009	12:45:00	6/17/09 12:45	33.98	7.97	6897	3.83	119.8	8.29
6/17/2009	13:00:00	6/17/09 13:00	34.26	7.97	7073	3.93	125	8.61
6/17/2009	13:15:00	6/17/09 13:15	33.97	7.93	6588	3.65	119.8	8.3
6/17/2009	13:30:00	6/17/09 13:30	35.24	7.99	6885	3.83	131.1	8.89
6/17/2009	13:45:00	6/17/09 13:45	34.55	7.88	6885	3.83	119	8.16
6/17/2009	14:00:00	6/17/09 14:00	34.56	8	7146	3.98	128.8	8.83
6/17/2009	14:15:00	6/17/09 14:15	34.69	8.03	6887	3.83	126.1	8.63
6/17/2009	14:30:00	6/17/09 14:30	35.14	7.98	6960	3.87	124.7	8.47
6/17/2009	14:45:00	6/17/09 14:45	35.39	8.08	6876	3.82	132.8	8.98
6/17/2009	15:00:00	6/17/09 15:00	35.67	8.1	7046	3.92	134.6	9.06
6/17/2009	15:15:00	6/17/09 15:15	36.08	8.17	6533	3.62	143.6	9.62
6/17/2009	15:30:00	6/17/09 15:30	36.07	8.13	6571	3.64	141.2	9.46
6/17/2009	15:45:00	6/17/09 15:45	36.52	8.18	6928	3.85	144.2	9.58
6/17/2009	16:00:00	6/17/09 16:00	36.5	8.18	6683	3.71	143.8	9.56
6/17/2009	16:15:00	6/17/09 16:15	36.35	8.24	6738	3.74	143.5	9.57
6/17/2009	16:30:00	6/17/09 16:30	36.09	8.25	6742	3.74	145.3	9.73
6/17/2009	16:45:00	6/17/09 16:45	36.06	8.26	6760	3.75	144.4	9.67
6/17/2009	17:00:00	6/17/09 17:00	36.03	8.24	7113	3.96	143.6	9.61
6/17/2009	17:15:00	6/17/09 17:15	35.95	8.24	7198	4.01	142.5	9.55
6/17/2009	17:30:00	6/17/09 17:30	35.72	8.2	7086	3.94	137.3	9.24
6/17/2009	17:45:00	6/17/09 17:45	35.61	8.16	6900	3.83	136	9.17
6/17/2009	18:00:00	6/17/09 18:00	35.58	8.17	6691	3.71	135.3	9.13
6/17/2009	18:15:00	6/17/09 18:15	35.1	8.1	7145	3.98	125.7	8.54
6/17/2009	18:30:00	6/17/09 18:30	34.99	8.13	6394	3.54	131.6	8.97
6/17/2009	18:45:00	6/17/09 18:45	34.71	8.14	6800	3.78	130.4	8.92
6/17/2009	19:00:00	6/17/09 19:00	34.47	8.12	7255	4.04	128	8.78

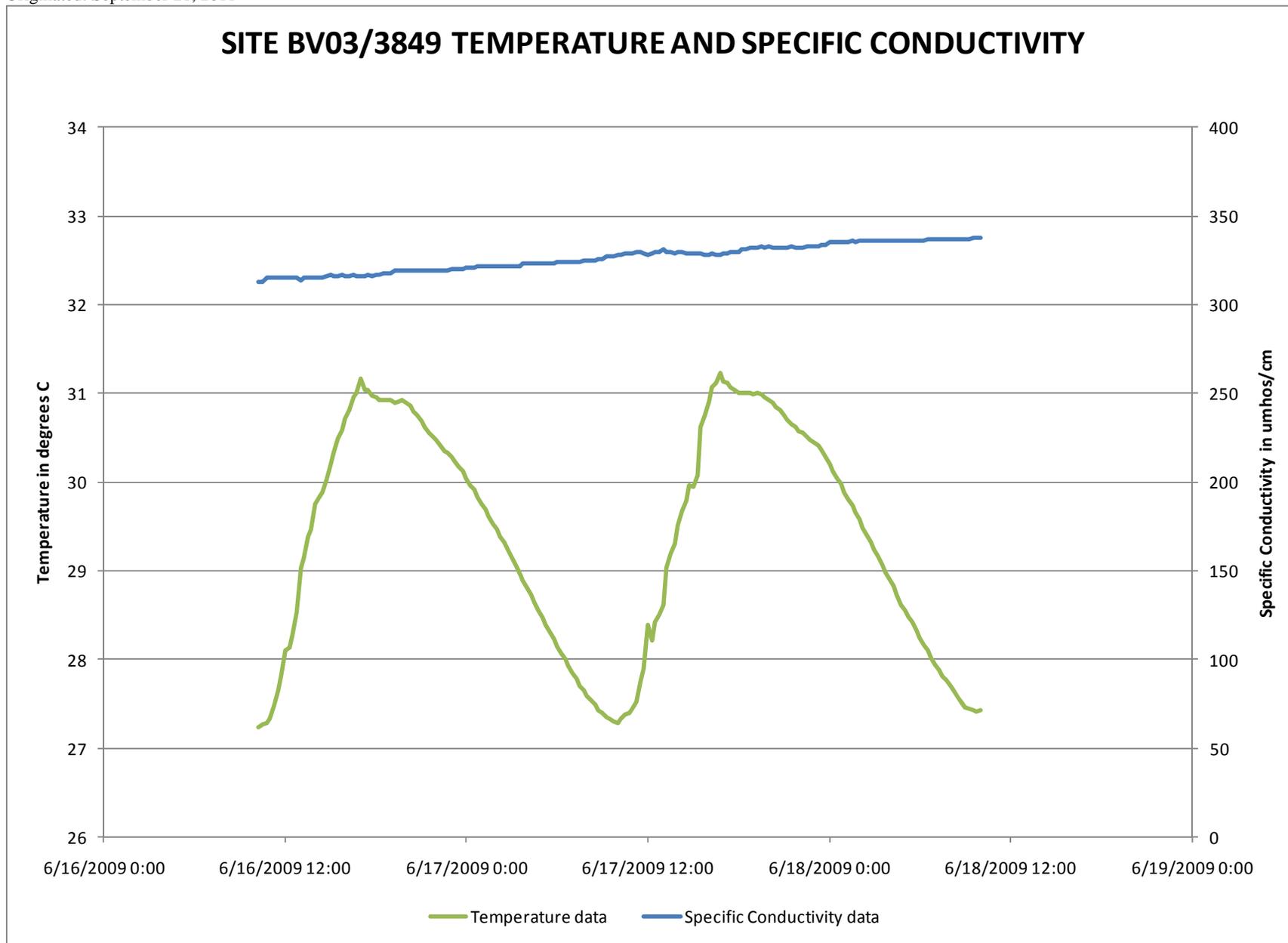
Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

6/17/2009	19:15:00	6/17/09 19:15	34.31	8.09	7255	4.04	126.4	8.69
6/17/2009	19:30:00	6/17/09 19:30	34.14	8.09	7253	4.04	126.2	8.7
6/17/2009	19:45:00	6/17/09 19:45	33.95	8.08	7260	4.04	121.8	8.43
6/17/2009	20:00:00	6/17/09 20:00	33.79	8.03	7245	4.03	120.8	8.38
6/17/2009	20:15:00	6/17/09 20:15	33.63	7.97	7230	4.03	117	8.14
6/17/2009	20:30:00	6/17/09 20:30	33.54	7.94	7219	4.02	117.1	8.16
6/17/2009	20:45:00	6/17/09 20:45	33.43	7.95	7204	4.01	117.6	8.21
6/17/2009	21:00:00	6/17/09 21:00	33.39	7.93	7171	3.99	116.1	8.11
6/17/2009	21:15:00	6/17/09 21:15	33.25	7.92	7183	4	114.1	7.99
6/17/2009	21:30:00	6/17/09 21:30	33.08	7.84	7227	4.02	106.2	7.46
6/17/2009	21:45:00	6/17/09 21:45	32.9	7.74	7184	4	101.7	7.16
6/17/2009	22:00:00	6/17/09 22:00	32.78	7.7	7166	3.99	99.5	7.02
6/17/2009	22:15:00	6/17/09 22:15	32.6	7.65	7149	3.98	95.7	6.78
6/17/2009	22:30:00	6/17/09 22:30	32.48	7.63	7155	3.98	94.3	6.69
6/17/2009	22:45:00	6/17/09 22:45	32.34	7.59	7143	3.98	91.3	6.49
6/17/2009	23:00:00	6/17/09 23:00	32.23	7.55	7135	3.97	87.9	6.26
6/17/2009	23:15:00	6/17/09 23:15	32.13	7.55	7147	3.98	89.6	6.39
6/17/2009	23:30:00	6/17/09 23:30	32.03	7.54	7153	3.98	88.9	6.35
6/17/2009	23:45:00	6/17/09 23:45	31.94	7.54	7156	3.98	87.7	6.28
6/18/2009	0:00:00	6/18/09 0:00	31.89	7.58	7178	4	91.3	6.54
6/18/2009	0:15:00	6/18/09 0:15	31.87	7.55	7163	3.99	87.9	6.3
6/18/2009	0:30:00	6/18/09 0:30	31.86	7.59	7172	3.99	91.5	6.55
6/18/2009	0:45:00	6/18/09 0:45	31.88	7.57	7159	3.98	89.2	6.39
6/18/2009	1:00:00	6/18/09 1:00	31.93	7.6	7122	3.96	89.8	6.43
6/18/2009	1:15:00	6/18/09 1:15	31.97	7.61	7091	3.95	89.2	6.38
6/18/2009	1:30:00	6/18/09 1:30	31.98	7.58	7074	3.94	86.9	6.22
6/18/2009	1:45:00	6/18/09 1:45	31.97	7.5	7023	3.91	79.9	5.72
6/18/2009	2:00:00	6/18/09 2:00	32.02	7.49	7013	3.9	79.6	5.69
6/18/2009	2:15:00	6/18/09 2:15	31.95	7.49	7009	3.9	79.2	5.67
6/18/2009	2:30:00	6/18/09 2:30	31.86	7.48	7018	3.9	77.6	5.57
6/18/2009	2:45:00	6/18/09 2:45	31.73	7.48	7042	3.92	77.8	5.59
6/18/2009	3:00:00	6/18/09 3:00	31.67	7.48	7071	3.93	78.7	5.66
6/18/2009	3:15:00	6/18/09 3:15	31.56	7.49	7099	3.95	79.9	5.76
6/18/2009	3:30:00	6/18/09 3:30	31.48	7.47	7115	3.96	79	5.7

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

6/18/2009	3:45:00	6/18/09 3:45	31.45	7.47	7117	3.96	76.9	5.55
6/18/2009	4:00:00	6/18/09 4:00	31.41	7.47	7127	3.97	79.4	5.73
6/18/2009	4:15:00	6/18/09 4:15	31.25	7.45	7158	3.98	78.6	5.69
6/18/2009	4:30:00	6/18/09 4:30	31.15	7.4	7181	4	76.8	5.57
6/18/2009	4:45:00	6/18/09 4:45	31.15	7.37	7186	4	75.3	5.46
6/18/2009	5:00:00	6/18/09 5:00	31.11	7.38	7183	4	76.5	5.55
6/18/2009	5:15:00	6/18/09 5:15	31.08	7.4	7156	3.98	74.5	5.41
6/18/2009	5:30:00	6/18/09 5:30	31.13	7.41	7143	3.98	74.9	5.43
6/18/2009	5:45:00	6/18/09 5:45	31.13	7.4	7107	3.95	73.5	5.34
6/18/2009	6:00:00	6/18/09 6:00	31.04	7.37	7107	3.95	70.8	5.15
6/18/2009	6:15:00	6/18/09 6:15	31	7.38	7138	3.97	71.8	5.22
6/18/2009	6:30:00	6/18/09 6:30	31	7.4	6482	3.59	70.5	5.14
6/18/2009	6:45:00	6/18/09 6:45	31.05	7.38	7030	3.91	69.8	5.07
6/18/2009	7:00:00	6/18/09 7:00	30.98	7.39	6255	3.46	69	5.03
6/18/2009	7:15:00	6/18/09 7:15	30.9	7.35	6814	3.78	68.3	4.98
6/18/2009	7:30:00	6/18/09 7:30	30.85	7.33	6983	3.88	67.6	4.93
6/18/2009	7:45:00	6/18/09 7:45	30.85	7.38	6508	3.61	69.3	5.06
6/18/2009	8:00:00	6/18/09 8:00	30.94	7.38	7012	3.9	71	5.17
6/18/2009	8:15:00	6/18/09 8:15	30.94	7.42	7160	3.99	75.5	5.49
6/18/2009	8:30:00	6/18/09 8:30	30.97	7.35	6805	3.78	74.1	5.4
6/18/2009	8:45:00	6/18/09 8:45	30.94	7.39	6372	3.53	75.6	5.52
6/18/2009	9:00:00	6/18/09 9:00	31.05	7.46	6440	3.57	77.4	5.63
6/18/2009	9:15:00	6/18/09 9:15	31.24	7.47	7071	3.93	77.4	5.61
6/18/2009	9:30:00	6/18/09 9:30	31.33	7.46	6843	3.8	77.5	5.61





Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

Date M/D/YYYY	Time HH:MM:SS	Date/Time	TEMP °C	pH Units	Cond uS/cm	Sal ppt	LDO% Sat	LDO mg/l
6/16/2009	10:15:00	6/16/2009 10:15	27.24	7.2	313	0.15	9.5	0.75
6/16/2009	10:30:00	6/16/2009 10:30	27.27	7.18	313	0.15	8.7	0.69
6/16/2009	10:45:00	6/16/2009 10:45	27.29	7.18	315	0.15	9.6	0.76
6/16/2009	11:00:00	6/16/2009 11:00	27.34	7.18	315	0.15	10.6	0.84
6/16/2009	11:15:00	6/16/2009 11:15	27.48	7.18	315	0.15	12.7	1
6/16/2009	11:30:00	6/16/2009 11:30	27.66	7.18	315	0.15	15.7	1.24
6/16/2009	11:45:00	6/16/2009 11:45	27.82	7.18	315	0.15	17.7	1.39
6/16/2009	12:00:00	6/16/2009 12:00	28.11	7.2	315	0.15	21.1	1.64
6/16/2009	12:15:00	6/16/2009 12:15	28.14	7.19	315	0.15	22	1.72
6/16/2009	12:30:00	6/16/2009 12:30	28.28	7.19	315	0.15	22.7	1.77
6/16/2009	12:45:00	6/16/2009 12:45	28.53	7.2	315	0.15	25.7	1.99
6/16/2009	13:00:00	6/16/2009 13:00	29.03	7.23	314	0.15	33	2.53
6/16/2009	13:15:00	6/16/2009 13:15	29.14	7.23	315	0.15	34.1	2.61
6/16/2009	13:30:00	6/16/2009 13:30	29.39	7.24	315	0.15	38	2.9
6/16/2009	13:45:00	6/16/2009 13:45	29.47	7.25	315	0.15	39.2	2.99
6/16/2009	14:00:00	6/16/2009 14:00	29.75	7.26	315	0.15	41.8	3.17
6/16/2009	14:15:00	6/16/2009 14:15	29.84	7.26	315	0.15	41.7	3.16
6/16/2009	14:30:00	6/16/2009 14:30	29.89	7.26	315	0.15	43.8	3.32
6/16/2009	14:45:00	6/16/2009 14:45	30.02	7.25	316	0.15	44.3	3.34
6/16/2009	15:00:00	6/16/2009 15:00	30.2	7.26	317	0.15	47.3	3.56
6/16/2009	15:15:00	6/16/2009 15:15	30.33	7.27	316	0.15	49.2	3.69
6/16/2009	15:30:00	6/16/2009 15:30	30.49	7.28	316	0.15	51.1	3.82
6/16/2009	15:45:00	6/16/2009 15:45	30.59	7.28	317	0.15	53.5	4
6/16/2009	16:00:00	6/16/2009 16:00	30.71	7.29	316	0.15	55.7	4.15
6/16/2009	16:15:00	6/16/2009 16:15	30.82	7.32	316	0.15	59.5	4.43
6/16/2009	16:30:00	6/16/2009 16:30	30.96	7.33	317	0.15	65	4.83
6/16/2009	16:45:00	6/16/2009 16:45	31.01	7.36	316	0.15	67.5	5.01
6/16/2009	17:00:00	6/16/2009 17:00	31.17	7.36	316	0.15	70.3	5.2
6/16/2009	17:15:00	6/16/2009 17:15	31.04	7.39	316	0.15	72.3	5.37
6/16/2009	17:30:00	6/16/2009 17:30	31.03	7.39	317	0.15	74.7	5.54
6/16/2009	17:45:00	6/16/2009 17:45	30.98	7.41	316	0.15	71.8	5.33
6/16/2009	18:00:00	6/16/2009 18:00	30.96	7.42	317	0.15	76	5.65

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

6/16/2009	18:15:00	6/16/2009 18:15	30.93	7.41	317	0.15	73.9	5.49
6/16/2009	18:30:00	6/16/2009 18:30	30.93	7.43	318	0.15	78.8	5.85
6/16/2009	18:45:00	6/16/2009 18:45	30.93	7.44	318	0.16	82.2	6.11
6/16/2009	19:00:00	6/16/2009 19:00	30.93	7.45	318	0.16	85	6.32
6/16/2009	19:15:00	6/16/2009 19:15	30.9	7.45	319	0.16	83.3	6.2
6/16/2009	19:30:00	6/16/2009 19:30	30.91	7.46	319	0.16	85.9	6.38
6/16/2009	19:45:00	6/16/2009 19:45	30.92	7.47	319	0.16	88.1	6.55
6/16/2009	20:00:00	6/16/2009 20:00	30.89	7.46	319	0.16	85.5	6.36
6/16/2009	20:15:00	6/16/2009 20:15	30.86	7.46	319	0.16	86.1	6.4
6/16/2009	20:30:00	6/16/2009 20:30	30.8	7.47	319	0.16	85.2	6.35
6/16/2009	20:45:00	6/16/2009 20:45	30.75	7.45	319	0.16	83.2	6.2
6/16/2009	21:00:00	6/16/2009 21:00	30.69	7.44	319	0.16	80.6	6.02
6/16/2009	21:15:00	6/16/2009 21:15	30.62	7.43	319	0.16	78.7	5.88
6/16/2009	21:30:00	6/16/2009 21:30	30.55	7.43	319	0.16	77.5	5.8
6/16/2009	21:45:00	6/16/2009 21:45	30.51	7.43	319	0.16	75.7	5.66
6/16/2009	22:00:00	6/16/2009 22:00	30.47	7.42	319	0.16	73.2	5.48
6/16/2009	22:15:00	6/16/2009 22:15	30.41	7.41	319	0.16	72.4	5.43
6/16/2009	22:30:00	6/16/2009 22:30	30.35	7.41	319	0.16	71	5.33
6/16/2009	22:45:00	6/16/2009 22:45	30.34	7.4	319	0.16	68.6	5.15
6/16/2009	23:00:00	6/16/2009 23:00	30.29	7.39	320	0.16	66.1	4.97
6/16/2009	23:15:00	6/16/2009 23:15	30.24	7.39	320	0.16	65.7	4.94
6/16/2009	23:30:00	6/16/2009 23:30	30.18	7.38	320	0.16	63	4.74
6/16/2009	23:45:00	6/16/2009 23:45	30.12	7.37	320	0.16	59.9	4.51
6/17/2009	0:00:00	6/17/2009 0:00	30.05	7.36	321	0.16	57.3	4.32
6/17/2009	0:15:00	6/17/2009 0:15	29.97	7.35	321	0.16	54.1	4.09
6/17/2009	0:30:00	6/17/2009 0:30	29.91	7.35	321	0.16	51.8	3.92
6/17/2009	0:45:00	6/17/2009 0:45	29.83	7.34	322	0.16	48.7	3.69
6/17/2009	1:00:00	6/17/2009 1:00	29.76	7.33	322	0.16	46.9	3.56
6/17/2009	1:15:00	6/17/2009 1:15	29.69	7.32	322	0.16	45.1	3.42
6/17/2009	1:30:00	6/17/2009 1:30	29.61	7.31	322	0.16	39.6	3.01
6/17/2009	1:45:00	6/17/2009 1:45	29.53	7.3	322	0.16	37.2	2.84
6/17/2009	2:00:00	6/17/2009 2:00	29.46	7.3	322	0.16	37.6	2.87
6/17/2009	2:15:00	6/17/2009 2:15	29.39	7.29	322	0.16	35	2.67
6/17/2009	2:30:00	6/17/2009 2:30	29.32	7.29	322	0.16	34.1	2.6

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

6/17/2009	2:45:00	6/17/2009 2:45	29.23	7.28	322	0.16	31.1	2.38
6/17/2009	3:00:00	6/17/2009 3:00	29.16	7.27	322	0.16	29.1	2.23
6/17/2009	3:15:00	6/17/2009 3:15	29.06	7.25	322	0.16	23.3	1.79
6/17/2009	3:30:00	6/17/2009 3:30	28.97	7.26	322	0.16	24.9	1.92
6/17/2009	3:45:00	6/17/2009 3:45	28.89	7.25	323	0.16	23.7	1.83
6/17/2009	4:00:00	6/17/2009 4:00	28.81	7.25	323	0.16	23.1	1.78
6/17/2009	4:15:00	6/17/2009 4:15	28.73	7.24	323	0.16	19.8	1.53
6/17/2009	4:30:00	6/17/2009 4:30	28.65	7.23	323	0.16	19.7	1.52
6/17/2009	4:45:00	6/17/2009 4:45	28.56	7.23	323	0.16	17.7	1.37
6/17/2009	5:00:00	6/17/2009 5:00	28.47	7.23	323	0.16	15.5	1.2
6/17/2009	5:15:00	6/17/2009 5:15	28.4	7.22	323	0.16	14.4	1.12
6/17/2009	5:30:00	6/17/2009 5:30	28.31	7.22	323	0.16	14.5	1.13
6/17/2009	5:45:00	6/17/2009 5:45	28.23	7.22	323	0.16	13.3	1.04
6/17/2009	6:00:00	6/17/2009 6:00	28.15	7.21	324	0.16	11.1	0.87
6/17/2009	6:15:00	6/17/2009 6:15	28.07	7.21	324	0.16	10.2	0.8
6/17/2009	6:30:00	6/17/2009 6:30	28	7.2	324	0.16	9.8	0.76
6/17/2009	6:45:00	6/17/2009 6:45	27.92	7.2	324	0.16	9.8	0.77
6/17/2009	7:00:00	6/17/2009 7:00	27.85	7.2	324	0.16	8.3	0.65
6/17/2009	7:15:00	6/17/2009 7:15	27.78	7.2	324	0.16	8.9	0.7
6/17/2009	7:30:00	6/17/2009 7:30	27.71	7.2	324	0.16	7.1	0.56
6/17/2009	7:45:00	6/17/2009 7:45	27.66	7.2	325	0.16	6.5	0.51
6/17/2009	8:00:00	6/17/2009 8:00	27.59	7.19	325	0.16	6.3	0.5
6/17/2009	8:15:00	6/17/2009 8:15	27.54	7.19	325	0.16	6.6	0.52
6/17/2009	8:30:00	6/17/2009 8:30	27.5	7.18	325	0.16	5.5	0.43
6/17/2009	8:45:00	6/17/2009 8:45	27.43	7.18	326	0.16	4.6	0.36
6/17/2009	9:00:00	6/17/2009 9:00	27.4	7.18	326	0.16	5.1	0.41
6/17/2009	9:15:00	6/17/2009 9:15	27.35	7.18	327	0.16	4.6	0.37
6/17/2009	9:30:00	6/17/2009 9:30	27.33	7.18	327	0.16	4.3	0.34
6/17/2009	9:45:00	6/17/2009 9:45	27.31	7.17	327	0.16	3.8	0.3
6/17/2009	10:00:00	6/17/2009 10:00	27.29	7.18	328	0.16	4.3	0.34
6/17/2009	10:15:00	6/17/2009 10:15	27.34	7.18	328	0.16	4.8	0.38
6/17/2009	10:30:00	6/17/2009 10:30	27.38	7.19	329	0.16	5.9	0.47
6/17/2009	10:45:00	6/17/2009 10:45	27.4	7.19	329	0.16	6.8	0.53
6/17/2009	11:00:00	6/17/2009 11:00	27.45	7.18	329	0.16	8	0.63

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

6/17/2009	11:15:00	6/17/2009 11:15	27.52	7.19	330	0.16	9.4	0.74
6/17/2009	11:30:00	6/17/2009 11:30	27.76	7.19	330	0.16	11.5	0.9
6/17/2009	11:45:00	6/17/2009 11:45	27.89	7.2	329	0.16	12.4	0.97
6/17/2009	12:00:00	6/17/2009 12:00	28.39	7.23	328	0.16	25	1.94
6/17/2009	12:15:00	6/17/2009 12:15	28.22	7.21	329	0.16	17.2	1.34
6/17/2009	12:30:00	6/17/2009 12:30	28.42	7.21	330	0.16	19.9	1.54
6/17/2009	12:45:00	6/17/2009 12:45	28.51	7.21	330	0.16	21.5	1.66
6/17/2009	13:00:00	6/17/2009 13:00	28.62	7.21	331	0.16	25.4	1.96
6/17/2009	13:15:00	6/17/2009 13:15	29.04	7.23	330	0.16	30.2	2.32
6/17/2009	13:30:00	6/17/2009 13:30	29.19	7.24	330	0.16	28.8	2.21
6/17/2009	13:45:00	6/17/2009 13:45	29.31	7.23	329	0.16	27.5	2.1
6/17/2009	14:00:00	6/17/2009 14:00	29.51	7.24	330	0.16	35.7	2.72
6/17/2009	14:15:00	6/17/2009 14:15	29.67	7.24	330	0.16	33.7	2.56
6/17/2009	14:30:00	6/17/2009 14:30	29.79	7.25	329	0.16	36	2.73
6/17/2009	14:45:00	6/17/2009 14:45	29.96	7.25	329	0.16	40.8	3.08
6/17/2009	15:00:00	6/17/2009 15:00	29.95	7.25	329	0.16	40.4	3.06
6/17/2009	15:15:00	6/17/2009 15:15	30.08	7.26	329	0.16	40.6	3.06
6/17/2009	15:30:00	6/17/2009 15:30	30.62	7.3	329	0.16	53	3.96
6/17/2009	15:45:00	6/17/2009 15:45	30.75	7.31	328	0.16	51.4	3.83
6/17/2009	16:00:00	6/17/2009 16:00	30.91	7.33	328	0.16	54.2	4.03
6/17/2009	16:15:00	6/17/2009 16:15	31.07	7.35	329	0.16	60.1	4.46
6/17/2009	16:30:00	6/17/2009 16:30	31.11	7.38	328	0.16	61.7	4.57
6/17/2009	16:45:00	6/17/2009 16:45	31.23	7.42	328	0.16	68.6	5.07
6/17/2009	17:00:00	6/17/2009 17:00	31.14	7.42	329	0.16	65.5	4.85
6/17/2009	17:15:00	6/17/2009 17:15	31.11	7.42	329	0.16	66.9	4.96
6/17/2009	17:30:00	6/17/2009 17:30	31.07	7.41	330	0.16	68.9	5.11
6/17/2009	17:45:00	6/17/2009 17:45	31.03	7.42	330	0.16	70.8	5.25
6/17/2009	18:00:00	6/17/2009 18:00	31.01	7.42	330	0.16	70.3	5.22
6/17/2009	18:15:00	6/17/2009 18:15	31	7.44	331	0.16	75.8	5.62
6/17/2009	18:30:00	6/17/2009 18:30	31	7.44	331	0.16	75.9	5.64
6/17/2009	18:45:00	6/17/2009 18:45	31	7.47	332	0.16	82.6	6.13
6/17/2009	19:00:00	6/17/2009 19:00	30.99	7.46	332	0.16	81.7	6.07
6/17/2009	19:15:00	6/17/2009 19:15	31	7.47	332	0.16	82.2	6.1
6/17/2009	19:30:00	6/17/2009 19:30	30.99	7.46	333	0.16	81.4	6.05

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

6/17/2009	19:45:00	6/17/2009 19:45	30.96	7.47	332	0.16	82.2	6.11
6/17/2009	20:00:00	6/17/2009 20:00	30.93	7.46	333	0.16	81.7	6.07
6/17/2009	20:15:00	6/17/2009 20:15	30.89	7.47	332	0.16	83	6.17
6/17/2009	20:30:00	6/17/2009 20:30	30.85	7.47	332	0.16	80.9	6.02
6/17/2009	20:45:00	6/17/2009 20:45	30.81	7.47	332	0.16	80.6	6.01
6/17/2009	21:00:00	6/17/2009 21:00	30.75	7.46	332	0.16	78.2	5.83
6/17/2009	21:15:00	6/17/2009 21:15	30.7	7.46	332	0.16	77.4	5.78
6/17/2009	21:30:00	6/17/2009 21:30	30.65	7.45	333	0.16	74.8	5.59
6/17/2009	21:45:00	6/17/2009 21:45	30.62	7.44	332	0.16	74.5	5.57
6/17/2009	22:00:00	6/17/2009 22:00	30.57	7.44	332	0.16	73.6	5.51
6/17/2009	22:15:00	6/17/2009 22:15	30.55	7.44	332	0.16	71.8	5.37
6/17/2009	22:30:00	6/17/2009 22:30	30.51	7.44	333	0.16	70.9	5.31
6/17/2009	22:45:00	6/17/2009 22:45	30.48	7.43	333	0.16	69.6	5.21
6/17/2009	23:00:00	6/17/2009 23:00	30.44	7.43	333	0.16	68.1	5.11
6/17/2009	23:15:00	6/17/2009 23:15	30.41	7.42	333	0.16	66	4.95
6/17/2009	23:30:00	6/17/2009 23:30	30.37	7.41	334	0.16	63.2	4.74
6/17/2009	23:45:00	6/17/2009 23:45	30.29	7.4	334	0.16	59.6	4.48
6/18/2009	0:00:00	6/18/2009 0:00	30.21	7.39	335	0.16	55.3	4.16
6/18/2009	0:15:00	6/18/2009 0:15	30.13	7.37	335	0.16	53	3.99
6/18/2009	0:30:00	6/18/2009 0:30	30.05	7.37	335	0.16	48.5	3.66
6/18/2009	0:45:00	6/18/2009 0:45	29.98	7.36	335	0.16	48	3.63
6/18/2009	1:00:00	6/18/2009 1:00	29.88	7.35	335	0.16	44.5	3.37
6/18/2009	1:15:00	6/18/2009 1:15	29.81	7.35	335	0.16	42.3	3.2
6/18/2009	1:30:00	6/18/2009 1:30	29.74	7.34	336	0.16	40.4	3.06
6/18/2009	1:45:00	6/18/2009 1:45	29.66	7.33	335	0.16	39.3	2.99
6/18/2009	2:00:00	6/18/2009 2:00	29.58	7.32	336	0.16	34.6	2.63
6/18/2009	2:15:00	6/18/2009 2:15	29.49	7.3	336	0.16	28.5	2.17
6/18/2009	2:30:00	6/18/2009 2:30	29.41	7.3	336	0.16	27.4	2.09
6/18/2009	2:45:00	6/18/2009 2:45	29.32	7.29	336	0.16	26.5	2.02
6/18/2009	3:00:00	6/18/2009 3:00	29.24	7.28	336	0.16	23	1.76
6/18/2009	3:15:00	6/18/2009 3:15	29.16	7.28	336	0.16	24.6	1.88
6/18/2009	3:30:00	6/18/2009 3:30	29.07	7.27	336	0.16	22	1.69
6/18/2009	3:45:00	6/18/2009 3:45	28.98	7.27	336	0.16	21	1.62
6/18/2009	4:00:00	6/18/2009 4:00	28.9	7.26	336	0.16	18.1	1.39

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

6/18/2009	4:15:00	6/18/2009 4:15	28.82	7.26	336	0.16	15.8	1.21
6/18/2009	4:30:00	6/18/2009 4:30	28.73	7.24	336	0.16	12.4	0.96
6/18/2009	4:45:00	6/18/2009 4:45	28.62	7.24	336	0.16	12.4	0.96
6/18/2009	5:00:00	6/18/2009 5:00	28.56	7.24	336	0.16	12.7	0.99
6/18/2009	5:15:00	6/18/2009 5:15	28.49	7.24	336	0.16	9.9	0.77
6/18/2009	5:30:00	6/18/2009 5:30	28.42	7.23	336	0.16	8.9	0.69
6/18/2009	5:45:00	6/18/2009 5:45	28.33	7.23	336	0.17	8.6	0.67
6/18/2009	6:00:00	6/18/2009 6:00	28.25	7.23	336	0.16	8.7	0.68
6/18/2009	6:15:00	6/18/2009 6:15	28.17	7.22	336	0.16	8.3	0.65
6/18/2009	6:30:00	6/18/2009 6:30	28.1	7.23	337	0.17	6.8	0.53
6/18/2009	6:45:00	6/18/2009 6:45	28.03	7.23	337	0.17	6.5	0.51
6/18/2009	7:00:00	6/18/2009 7:00	27.95	7.22	337	0.17	5.6	0.44
6/18/2009	7:15:00	6/18/2009 7:15	27.88	7.23	337	0.17	6.1	0.47
6/18/2009	7:30:00	6/18/2009 7:30	27.81	7.22	337	0.17	4.6	0.36
6/18/2009	7:45:00	6/18/2009 7:45	27.76	7.22	337	0.17	4.2	0.33
6/18/2009	8:00:00	6/18/2009 8:00	27.7	7.21	337	0.17	3.3	0.26
6/18/2009	8:15:00	6/18/2009 8:15	27.65	7.21	337	0.17	3.6	0.28
6/18/2009	8:30:00	6/18/2009 8:30	27.58	7.21	337	0.17	2.6	0.21
6/18/2009	8:45:00	6/18/2009 8:45	27.51	7.21	337	0.17	2.3	0.18
6/18/2009	9:00:00	6/18/2009 9:00	27.47	7.21	337	0.17	1.3	0.1
6/18/2009	9:15:00	6/18/2009 9:15	27.45	7.2	337	0.17	1.7	0.13
6/18/2009	9:30:00	6/18/2009 9:30	27.43	7.21	338	0.17	2.9	0.23
6/18/2009	9:45:00	6/18/2009 9:45	27.42	7.21	338	0.17	1.5	0.12
6/18/2009	10:00:00	6/18/2009 10:00	27.43	7.2	338	0.17	2.3	0.18

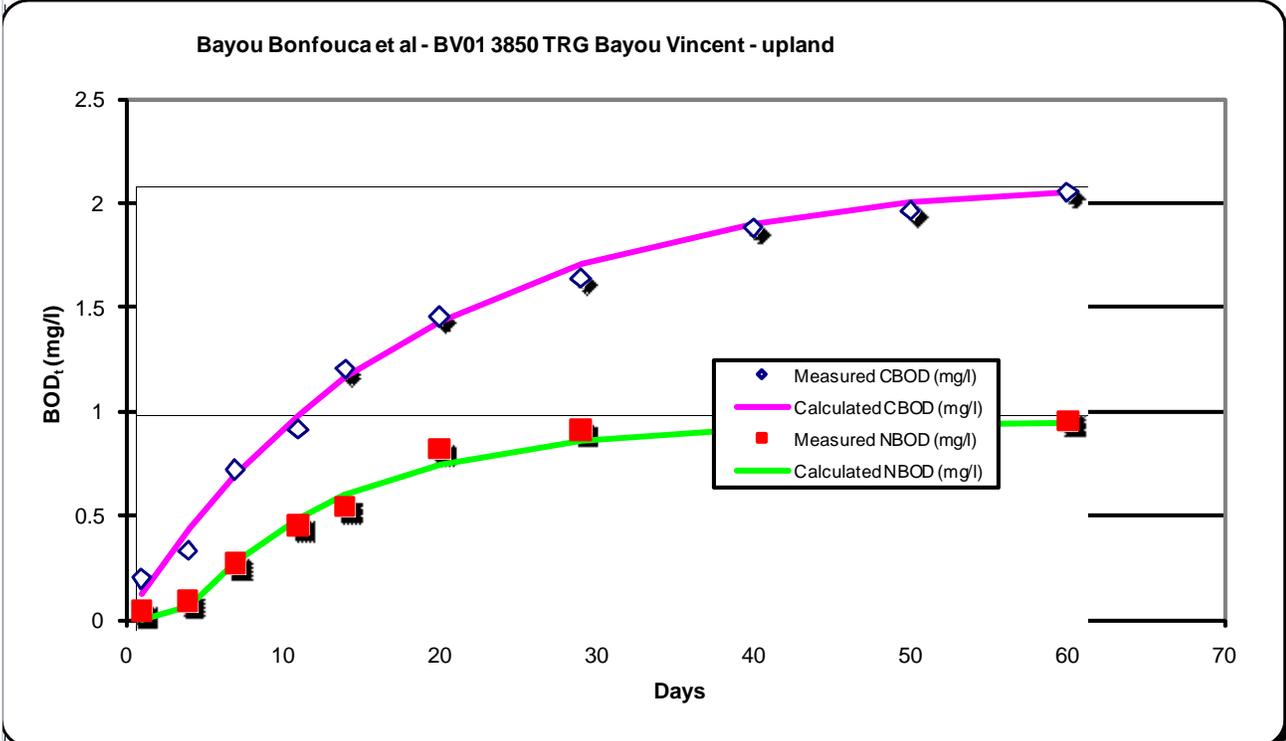
Appendix F5 – BOD Calculations

1 Component	River		NBOD		CBOD		
Site ID	Kilometer	UBOD (mg/l)	k rate (1/day)	Lag time (days)	UBOD (mg/l)	k rate (1/day)	Lag time (days)
Bayou Bonfouca et al - BV01 3850 TRG Bayou Vincent - upland	19.5	0.952	0.091	3.160	2.108	0.055	0.000
Bayou Bonfouca et al - BV02 3851 TRG Bayou Vincent - upland	17.6	27.154	0.114	13.206	119.411	0.134	0.000
Bayou Bonfouca et al - BV03 3849 TRG Bayou Vincent - tidal	14.9	1.592	0.079	4.861	10.749	0.042	0.000
Bayou Bonfouca et al - BB02 3848 FD Bayou Bonfouca - top boat site	13.3	2.588	0.252	12.007	12.926	0.086	0.000
Bayou Bonfouca et al - BB02 3848 TRG Bayou Bonfouca - tidal	13.3	2.652	0.170	10.792	12.878	0.085	0.000
Bayou Bonfouca et al - BB03 3852 TRG Bayou Bonfouca - tidal	8.6	1.575	0.252	18.472	7.171	0.075	0.000
Bayou Bonfouca et al - BB05 3855 TRG Bayou Bonfouca - tidal	4.5	1.291	0.089	18.715	7.410	0.067	0.000
Bayou Bonfouca et al - BB06 3853 TRG Bayou Bonfouca - tidal	0.5	1.422	0.129	17.354	6.302	0.068	0.000
Bayou Bonfouca et al - BB07 3856 TRG Bayou Bonfouca - tidal	0	1.804	0.129	14.219	6.632	0.092	0.000
Bayou Bonfouca et al - BL03 3861 TRG Bayou Liberty near I12	12.6	10.976	0.451	4.837	14.873	0.065	0.000
Bayou Bonfouca et al - BL04 3862 FD Bayou Liberty at top boat site	10	4.516	0.342	15.847	16.204	0.125	0.000
Bayou Bonfouca et al - BL04 3862 TRG Bayou Liberty at top boat site	10	4.401	0.239	13.076	15.700	0.128	0.000
Bayou Bonfouca et al - BL05 3868 TRG Bayou Liberty - tidal	6.9	1.577	0.086	12.347	8.233	0.058	0.000
Bayou Bonfouca et al - BL07 3867 TRG Bayou Liberty - tidal	3.3	2.717	0.170	16.868	14.061	0.082	0.000
Bayou Bonfouca et al - BL08 3866 TRG Bayou Liberty - tidal	0.4	1.926	0.129	17.306	7.301	0.071	0.000
Bayou Bonfouca et al - BP02 3864 TRG Bayou Paquet - tidal	2.4	4.721	0.390	17.646	16.023	0.081	0.000
Bayou Bonfouca et al - BP03 3870 TRG Bayou Paquet - tidal	1.6	3.916	0.104	12.931	12.821	0.079	0.000
Bayou Bonfouca et al - BP04 3869 TRG Bayou Paquet - tidal	0.2	3.019	0.252	17.500	10.817	0.086	0.000

Select Site to Graph:

	NBOD	CBOD
UBOD (mg/l)	0.9519247	2.1081572
k rate (1/day)	0.0909375	0.0554167
Lag time (days)	3.1597221	0

Refresh Data for Current Site (1 Component) Calculate for all Sites (1 Component)



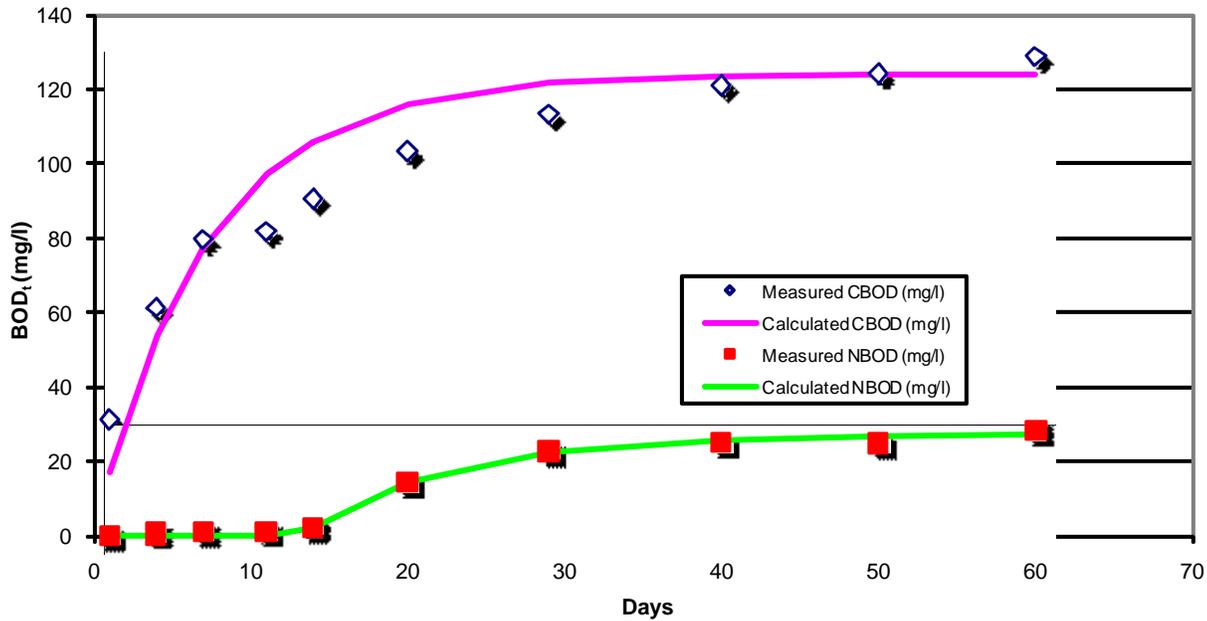
Select Site to Graph: BV02 3851 TRG Bayou Vincent - upland 040907

Refresh Data for
Current Site (1
Component)

Calculate for all
Sites (1
Component)

	NBOD	CBOD
UBOD (mg/l)	27.153885	119.41051
k rate (1/day)	0.1140451	0.1344792
Lag time (days)	13.206018	0

Bayou Bonfouca et al - BV02 3851 TRG Bayou Vincent - upland



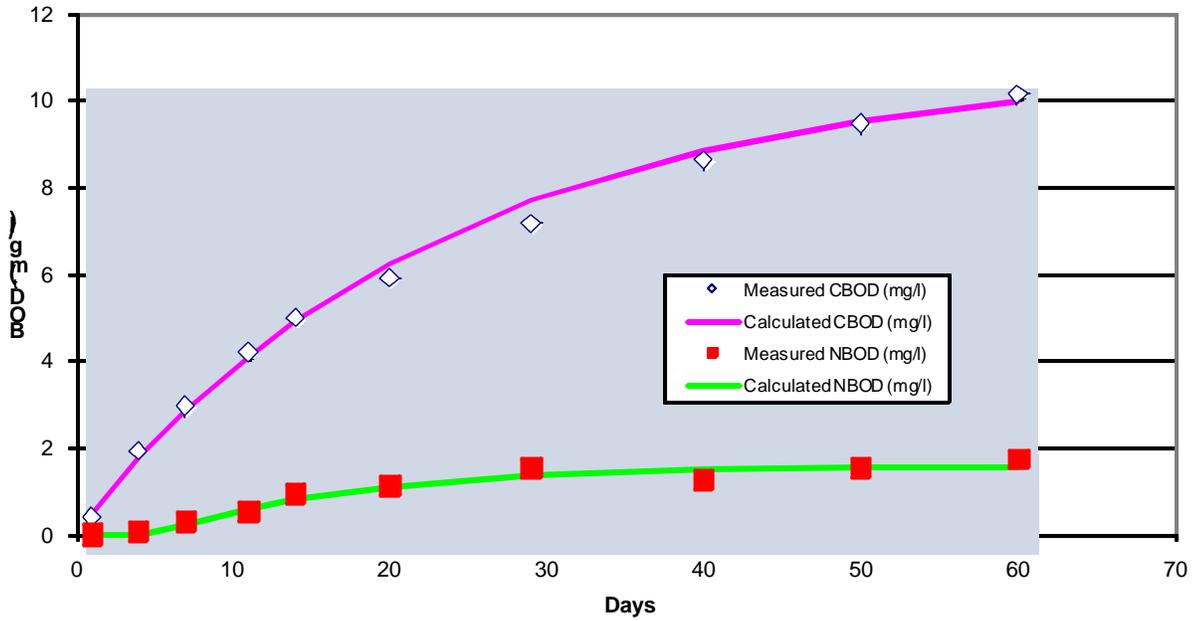
Select Site to Graph: BV03 3849 TRG Bayou Vincent - tidal 040907

Refresh Data for Current Site (1 Component)

Calculate for all Sites (1 Component)

	NBOD	CBOD
UBOD (mg/l)	1.5918834	10.749285
k rate (1/day)	0.0794792	0.0416667
Lag time (days)	4.8611107	0

Bayou Bonfouca et al - BV03 3849 TRG Bayou Vincent - tidal



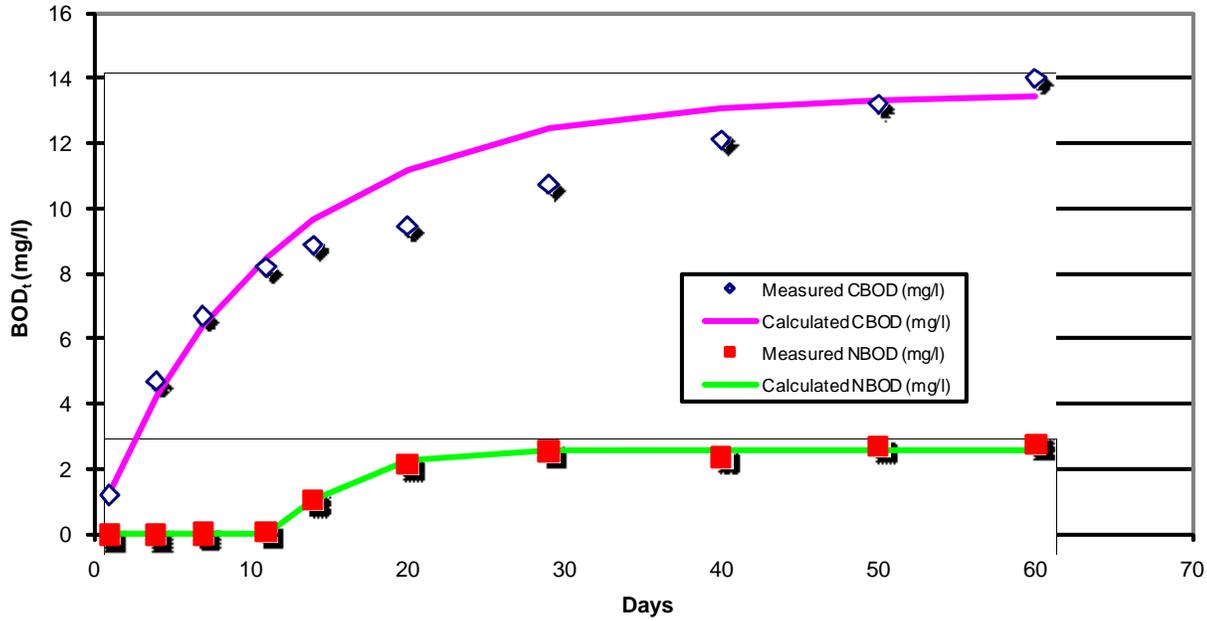
Select Site to Graph: BB02 3848 FD Bayou Bonfouca - top boat site 040907

Refresh Data for
Current Site (1
Component)

Calculate for all
Sites (1
Component)

	NBOD	CBOD
UBOD (mg/l)	2.5876567	12.925751
k rate (1/day)	0.2525	0.0859722
Lag time (days)	12.006945	0

Bayou Bonfouca et al - BB02 3848 FD Bayou Bonfouca - top boat site



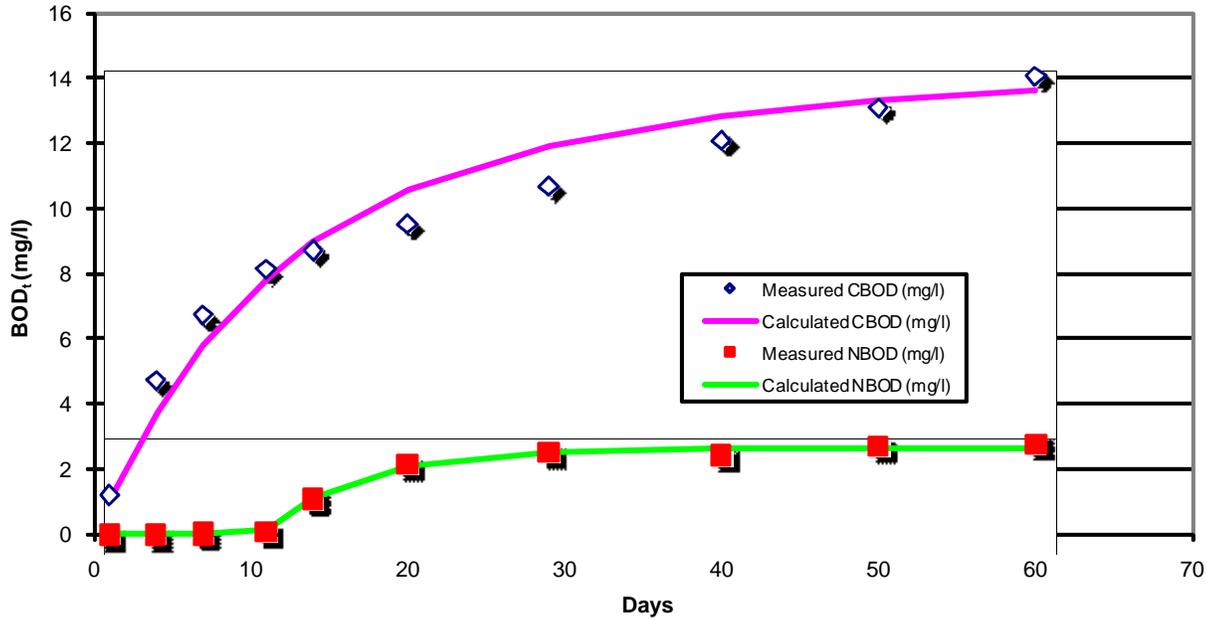
Select Site to Graph:

Refresh Data for
Current Site (1
Component)

Calculate for all
Sites (1
Component)

	NBOD	CBOD
UBOD (mg/l)	2.6521869	12.877728
k rate (1/day)	0.17	0.0853993
Lag time (days)	10.791666	0

Bayou Bonfouca et al - BB02 3848 TRG Bayou Bonfouca - tidal



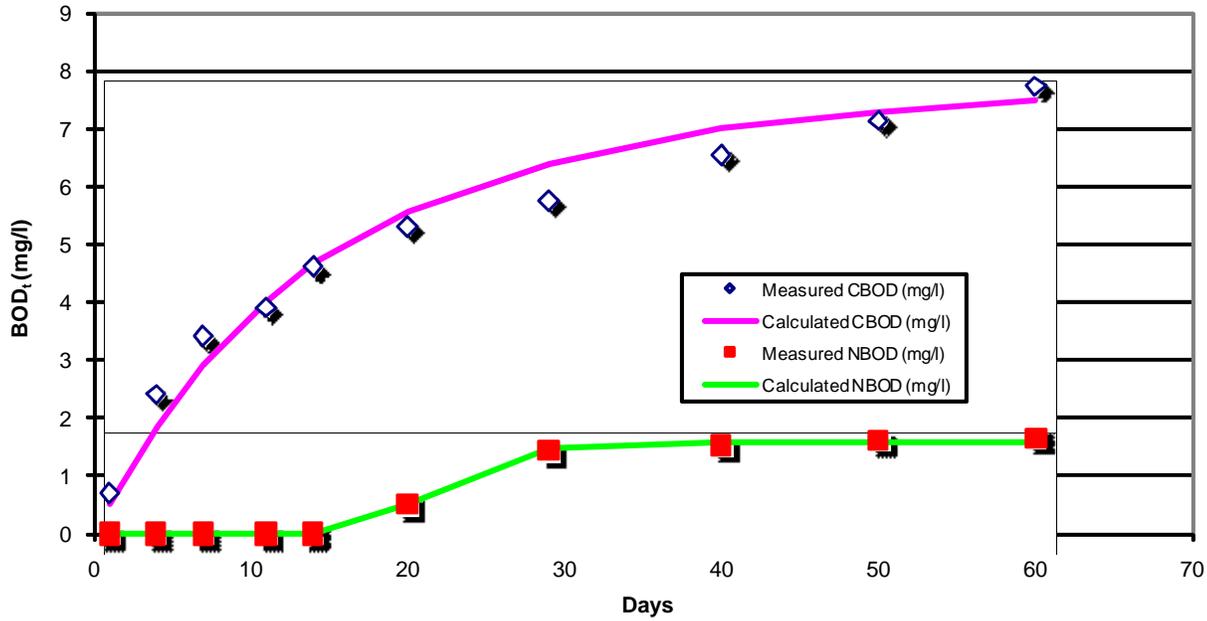
Select Site to Graph:

Refresh Data for
Current Site (1
Component)

Calculate for all
Sites (1
Component)

	NBOD	CBOD
UBOD (mg/l)	1.5747459	7.1709361
k rate (1/day)	0.2525	0.0748958
Lag time (days)	18.472221	0

Bayou Bonfouca et al - BB03 3852 TRG Bayou Bonfouca - tidal



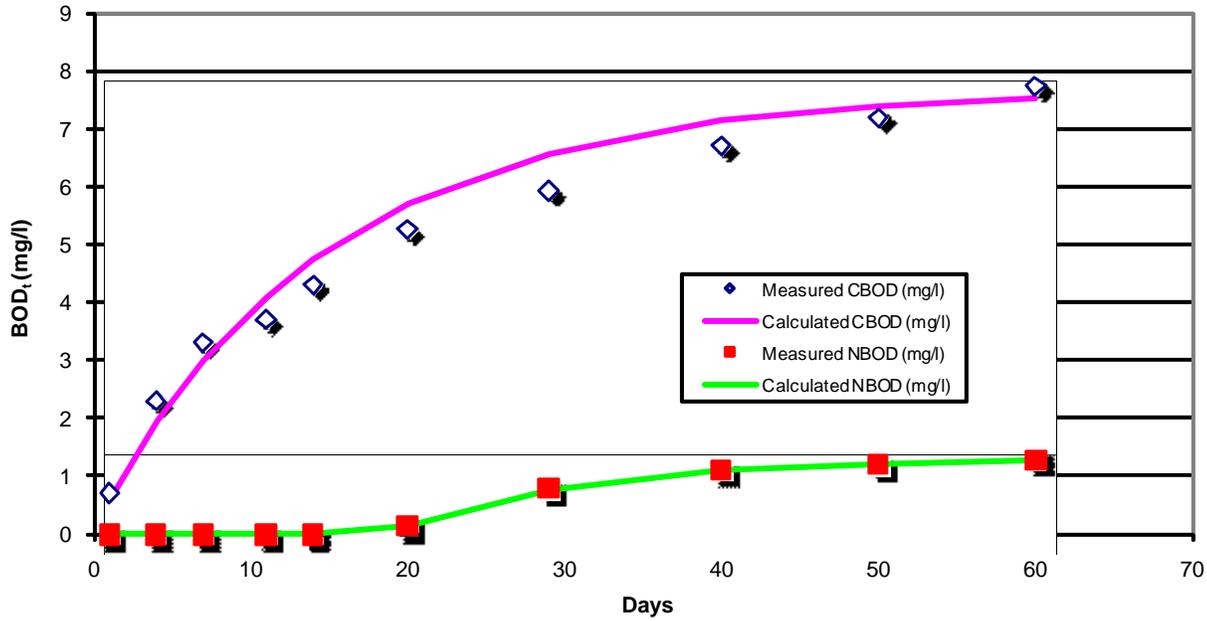
Select Site to Graph:

Refresh Data for
Current Site (1
Component)

Calculate for all
Sites (1
Component)

	NBOD	CBOD
UBOD (mg/l)	1.2914481	7.4102583
k rate (1/day)	0.0886458	0.066875
Lag time (days)	18.715279	0

Bayou Bonfouca et al - BB05 3855 TRG Bayou Bonfouca - tidal



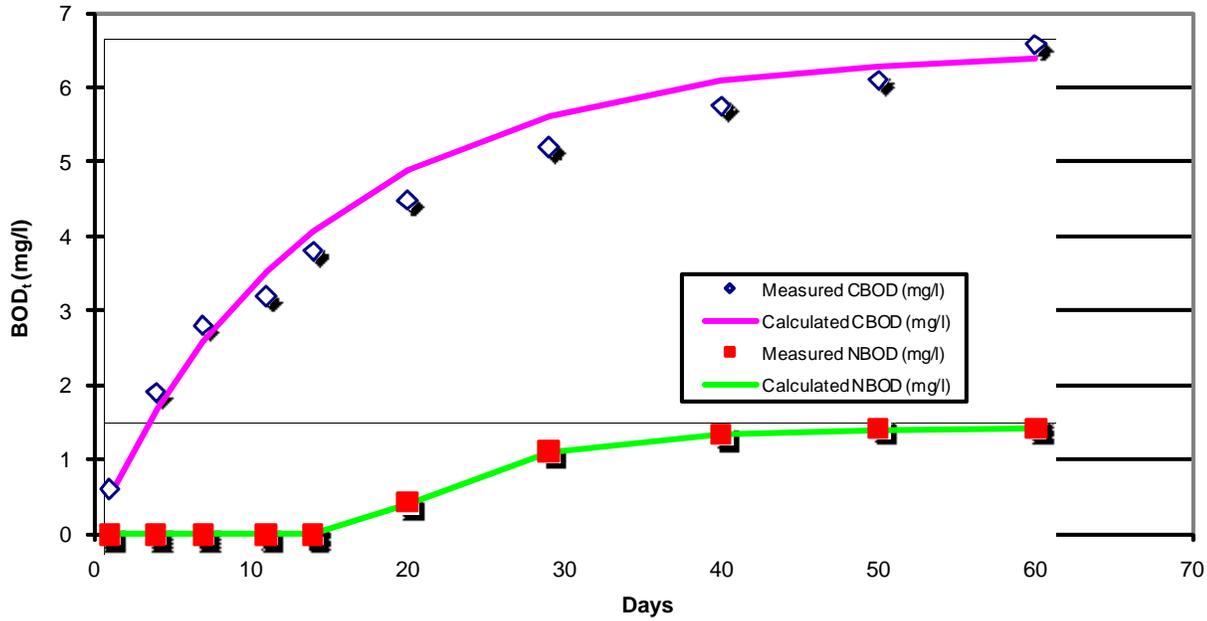
Select Site to Graph:

Refresh Data for
Current Site (1
Component)

Calculate for all
Sites (1
Component)

	NBOD	CBOD
UBOD (mg/l)	1.4216192	6.3022809
k rate (1/day)	0.12875	0.0680208
Lag time (days)	17.354168	0

Bayou Bonfouca et al - BB06 3853 TRG Bayou Bonfouca - tidal



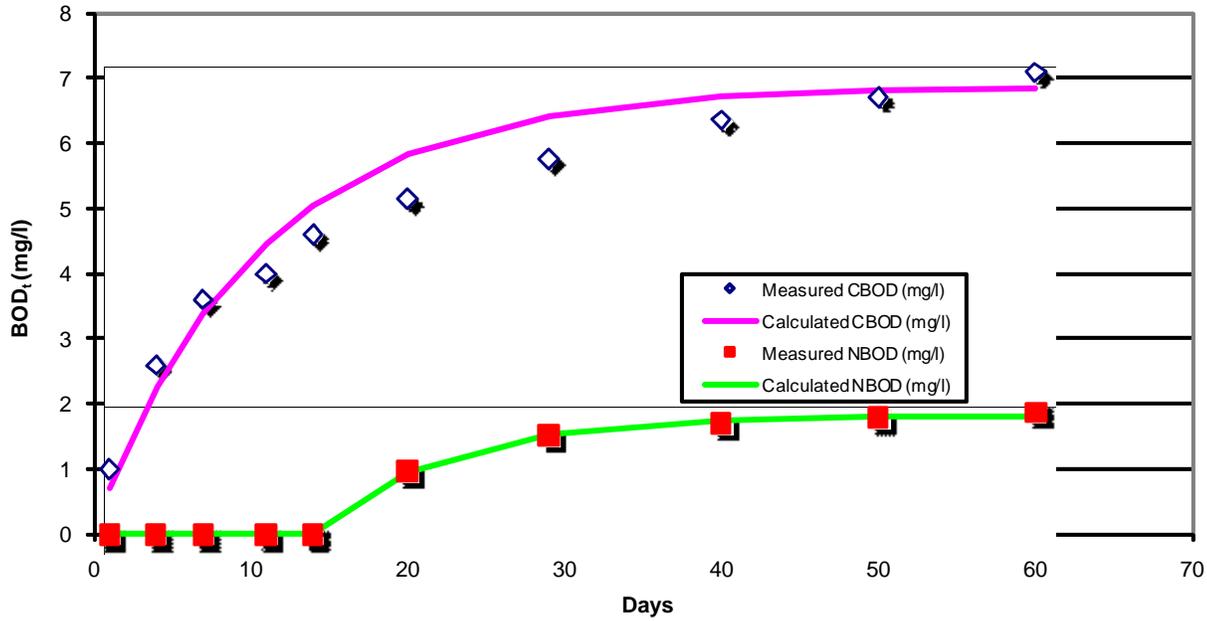
Select Site to Graph:

Refresh Data for
Current Site (1
Component)

Calculate for all
Sites (1
Component)

	NBOD	CBOD
UBOD (mg/l)	1.8043036	6.6322203
k rate (1/day)	0.12875	0.0920833
Lag time (days)	14.21875	0

Bayou Bonfouca et al - BB07 3856 TRG Bayou Bonfouca - tidal



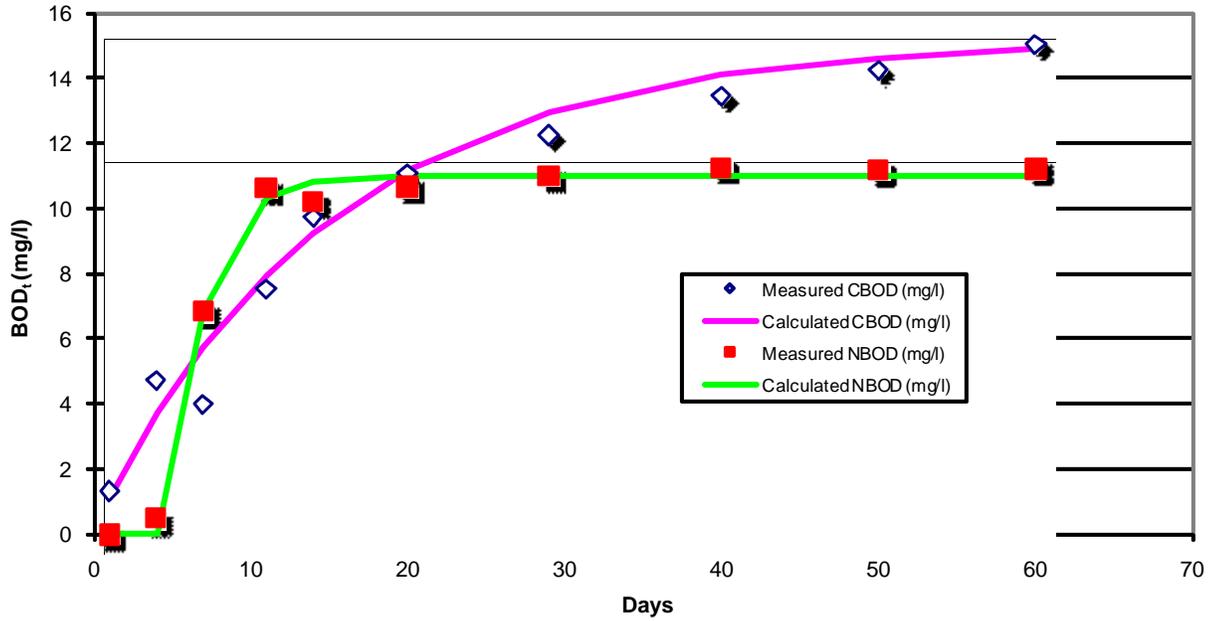
Select Site to Graph: BL03 3861 TRG Bayou Liberty near I12 040905

Refresh Data for
Current Site (1
Component)

Calculate for all
Sites (1
Component)

	NBOD	CBOD
UBOD (mg/l)	10.976198	14.8731
k rate (1/day)	0.4513498	0.0653472
Lag time (days)	4.8368058	0

Bayou Bonfouca et al - BL03 3861 TRG Bayou Liberty near I12



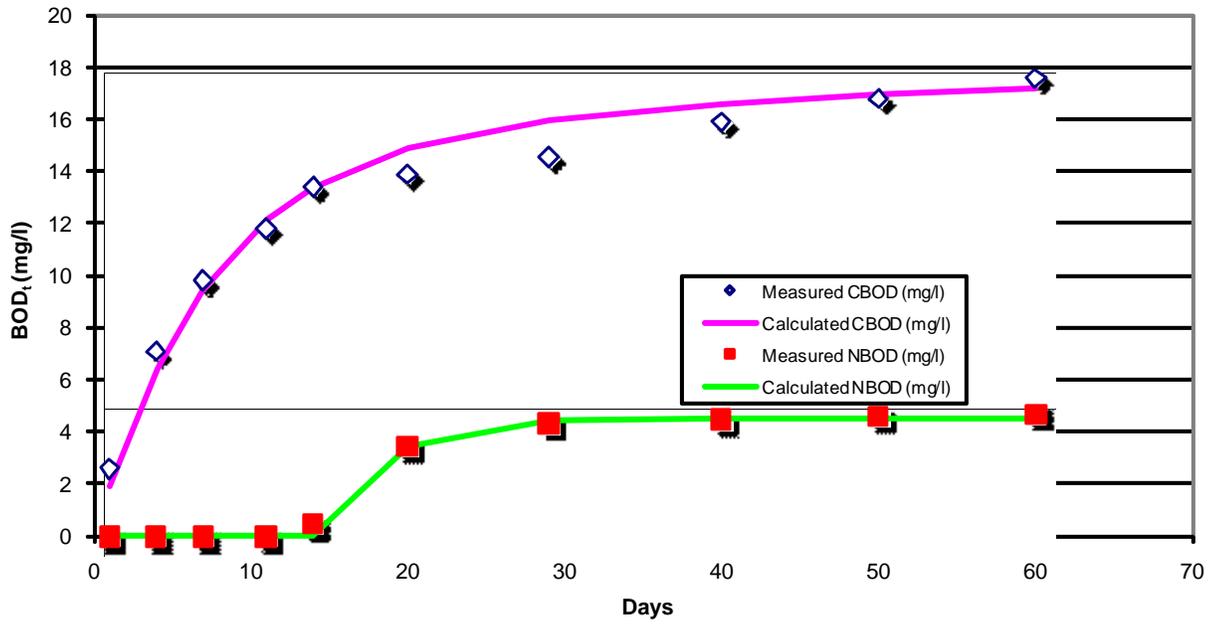
Select Site to Graph: BL04 3862 FD Bayou Liberty at top boat site 040905

Refresh Data for
Current Site (1
Component)

Calculate for all
Sites (1
Component)

	NBOD	CBOD
UBOD (mg/l)	4.5157309	16.203716
k rate (1/day)	0.341875	0.1251215
Lag time (days)	15.847221	0

Bayou Bonfouca et al - BL04 3862 FD Bayou Liberty at top boat site



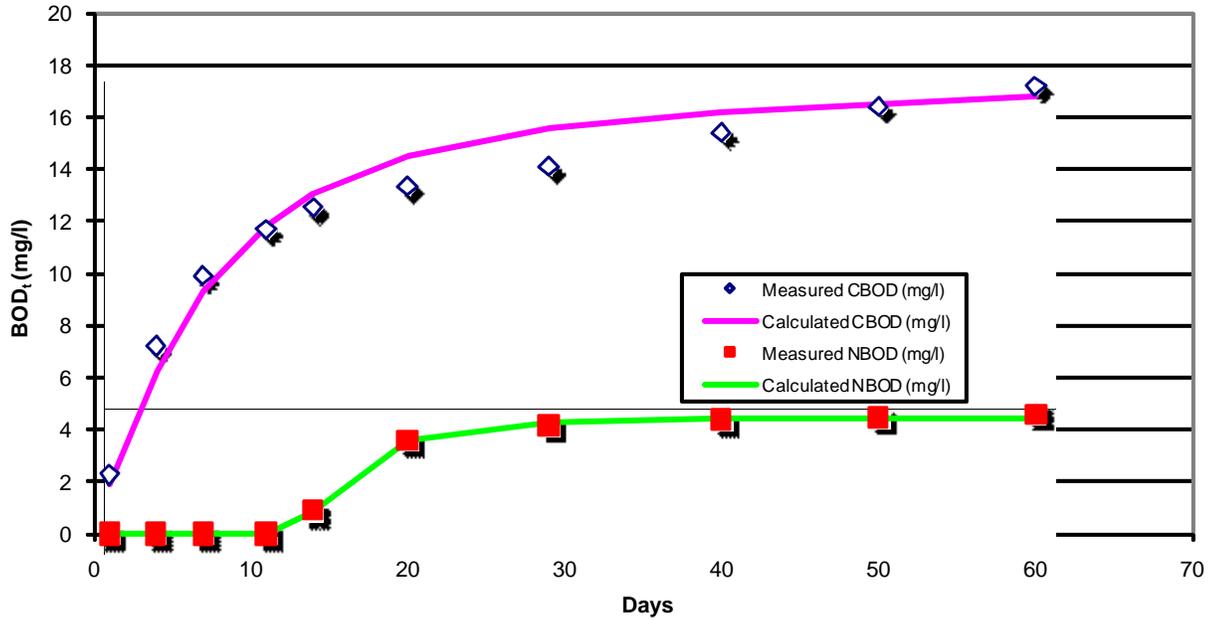
Select Site to Graph: BL04 3862 TRG Bayou Liberty at top boat site 040905

Refresh Data for
Current Site (1
Component)

Calculate for all
Sites (1
Component)

	NBOD	CBOD
UBOD (mg/l)	4.4007411	15.699687
k rate (1/day)	0.23875	0.1279861
Lag time (days)	13.076389	0

Bayou Bonfouca et al - BL04 3862 TRG Bayou Liberty at top boat site



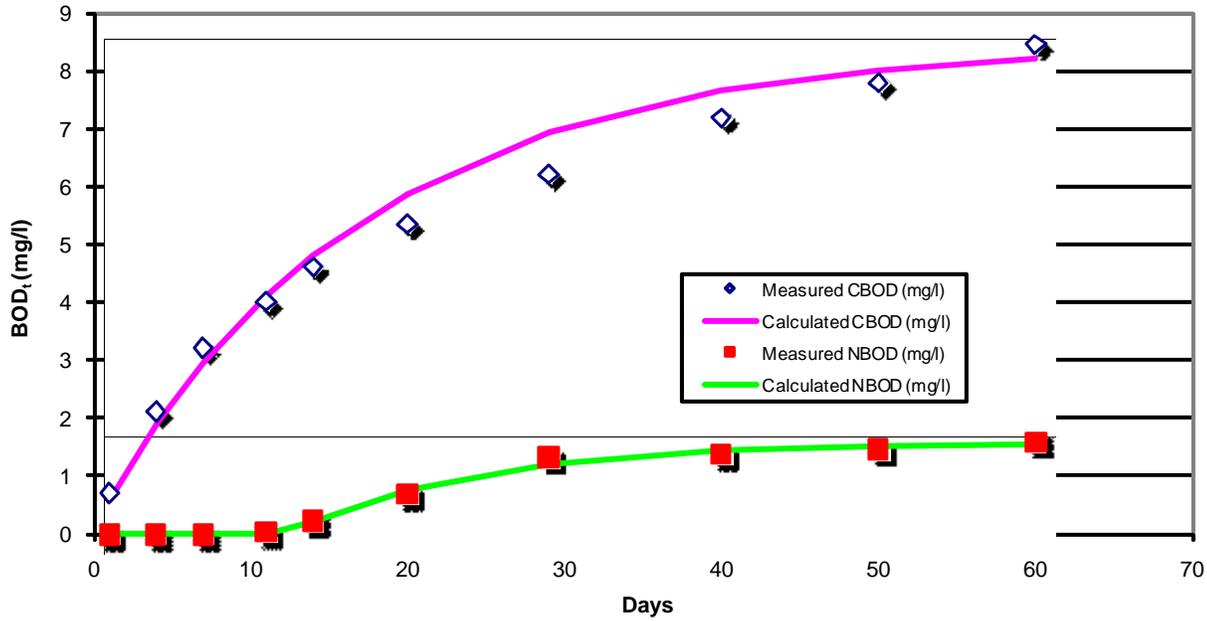
Select Site to Graph: BL05 3868 TRG Bayou Liberty - tidal 040905

Refresh Data for
 Current Site (1
 Component)

Calculate for all
 Sites (1
 Component)

	NBOD	CBOD
UBOD (mg/l)	1.5772847	8.2333422
k rate (1/day)	0.0863542	0.0577083
Lag time (days)	12.347221	0

Bayou Bonfouca et al - BL05 3868 TRG Bayou Liberty - tidal



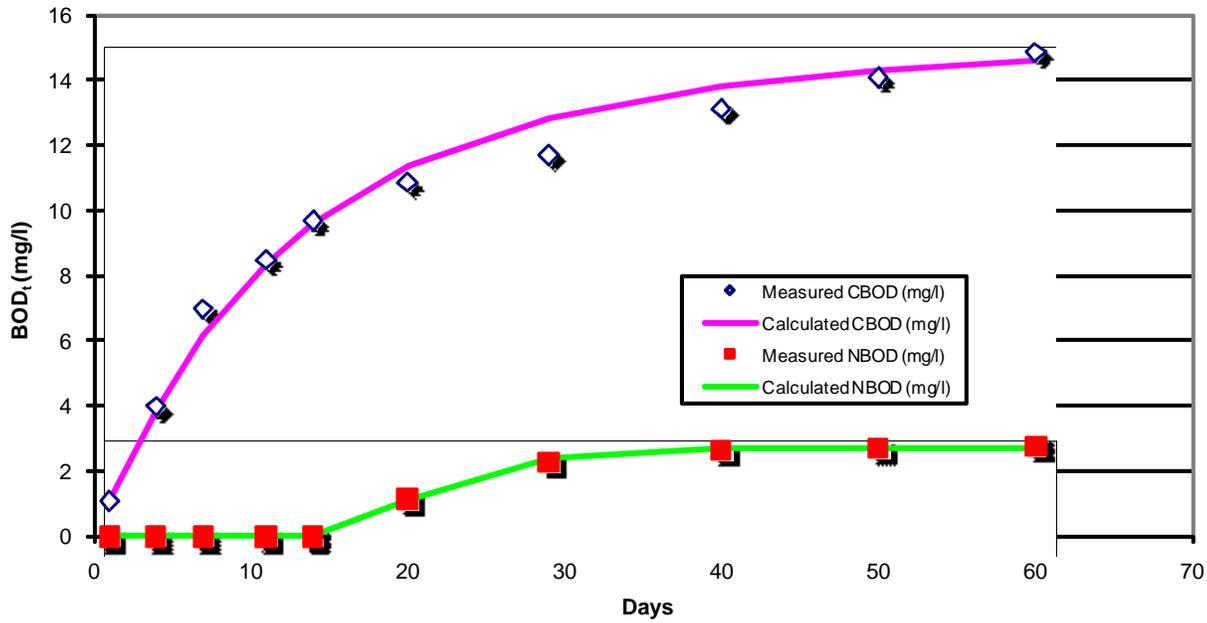
Select Site to Graph: BL07 3867 TRG Bayou Liberty - tidal 040905

Refresh Data for
Current Site (1
Component)

Calculate for all
Sites (1
Component)

	NBOD	CBOD
UBOD (mg/l)	2.716717	14.060983
k rate (1/day)	0.17	0.0821528
Lag time (days)	16.868055	0

Bayou Bonfouca et al - BL07 3867 TRG Bayou Liberty - tidal



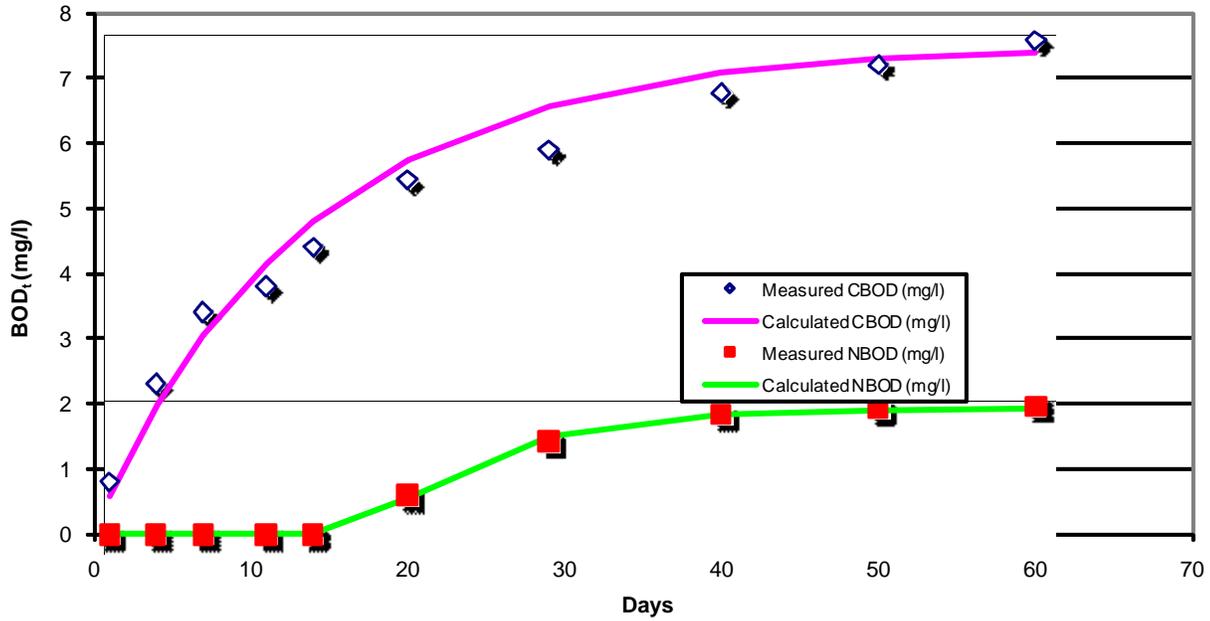
Select Site to Graph: BL08 3866 TRG Bayou Liberty - tidal 040906

Refresh Data for
Current Site (1
Component)

Calculate for all
Sites (1
Component)

	NBOD	CBOD
UBOD (mg/l)	1.9264346	7.3006678
k rate (1/day)	0.12875	0.0714583
Lag time (days)	17.305555	0

Bayou Bonfouca et al - BL08 3866 TRG Bayou Liberty - tidal



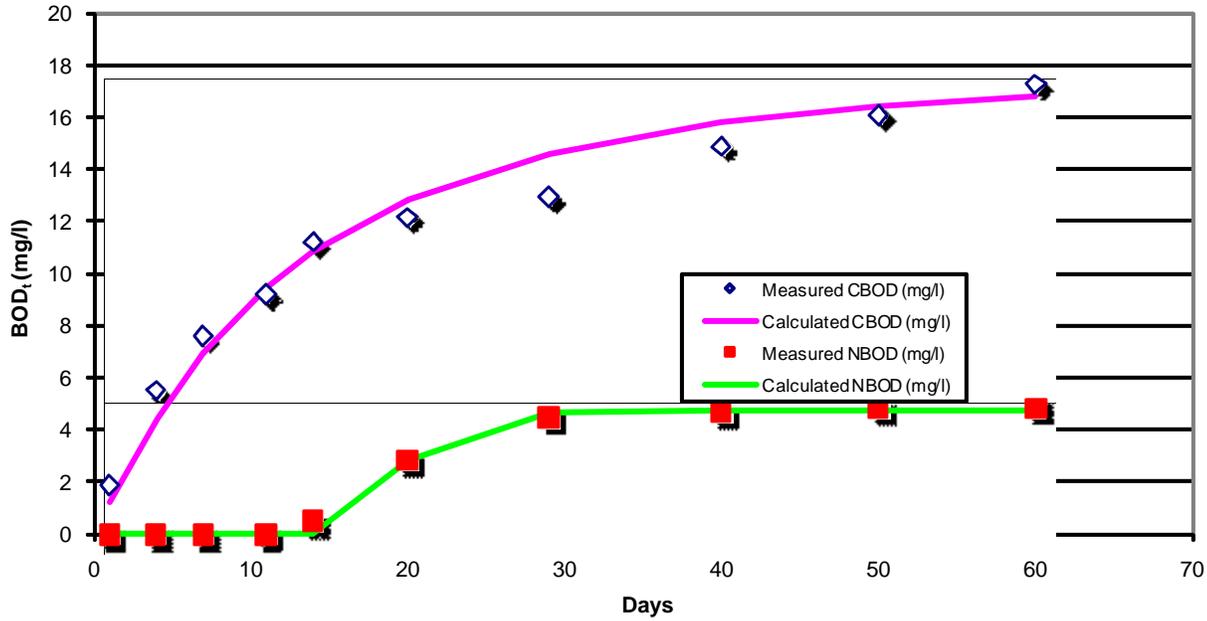
Select Site to Graph: BP02 3864 TRG \Bayou Paquet - tidal 040906

Refresh Data for
 Current Site (1
 Component)

Calculate for all
 Sites (1
 Component)

	NBOD	CBOD
UBOD (mg/l)	4.7208524	16.022541
k rate (1/day)	0.39	0.080816
Lag time (days)	17.645832	0

Bayou Bonfouca et al - BP02 3864 TRG \Bayou Paquet - tidal



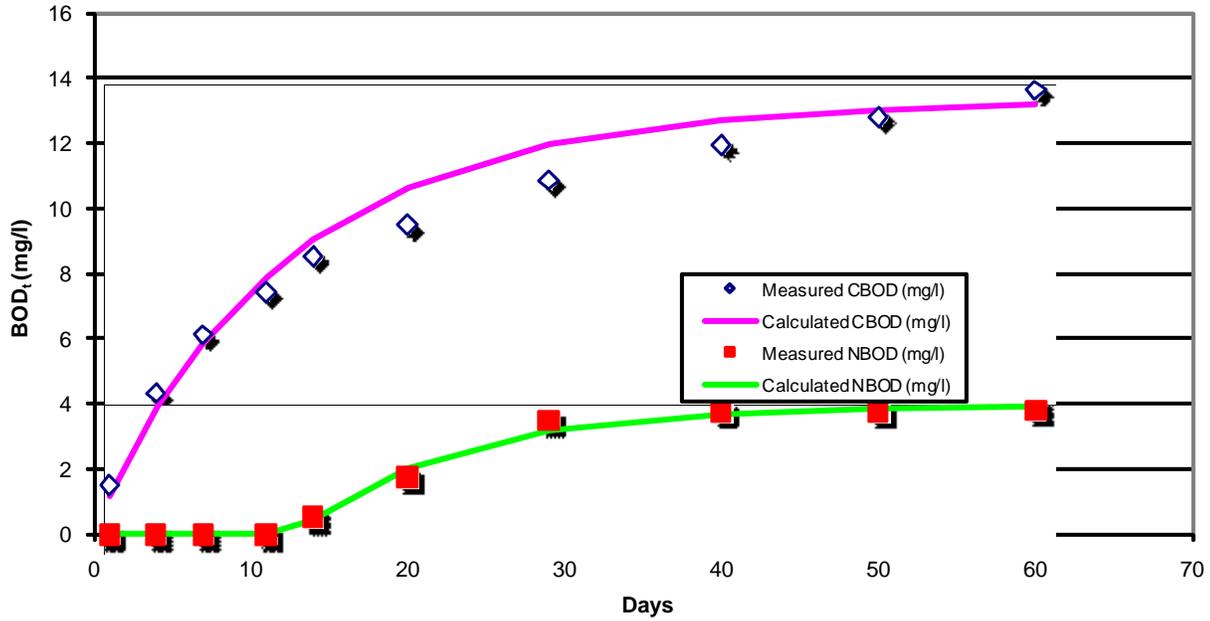
Select Site to Graph: BP03 3870 TRG Bayou Paquet - tidal 040906

Refresh Data for
 Current Site (1
 Component)

Calculate for all
 Sites (1
 Component)

	NBOD	CBOD
UBOD (mg/l)	3.9160244	12.82082
k rate (1/day)	0.1035417	0.0789063
Lag time (days)	12.930555	0

Bayou Bonfouca et al - BP03 3870 TRG Bayou Paquet - tidal

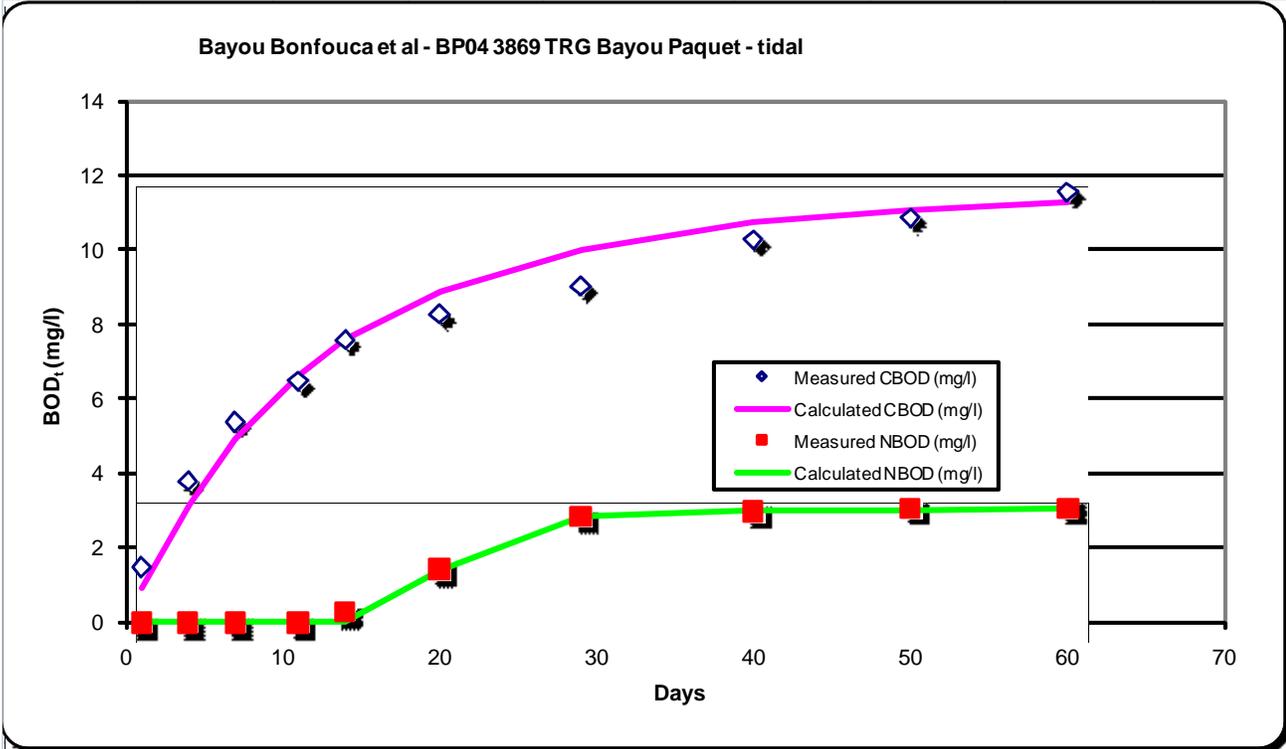


Select Site to Graph: BP04 3869 TRG Bayou Paquet - tidal 040906

Refresh Data for
Current Site (1
Component)

Calculate for all
Sites (1
Component)

	NBOD	CBOD
UBOD (mg/l)	3.0193737	10.816689
k rate (1/day)	0.2525	0.0859722
Lag time (days)	17.5	0

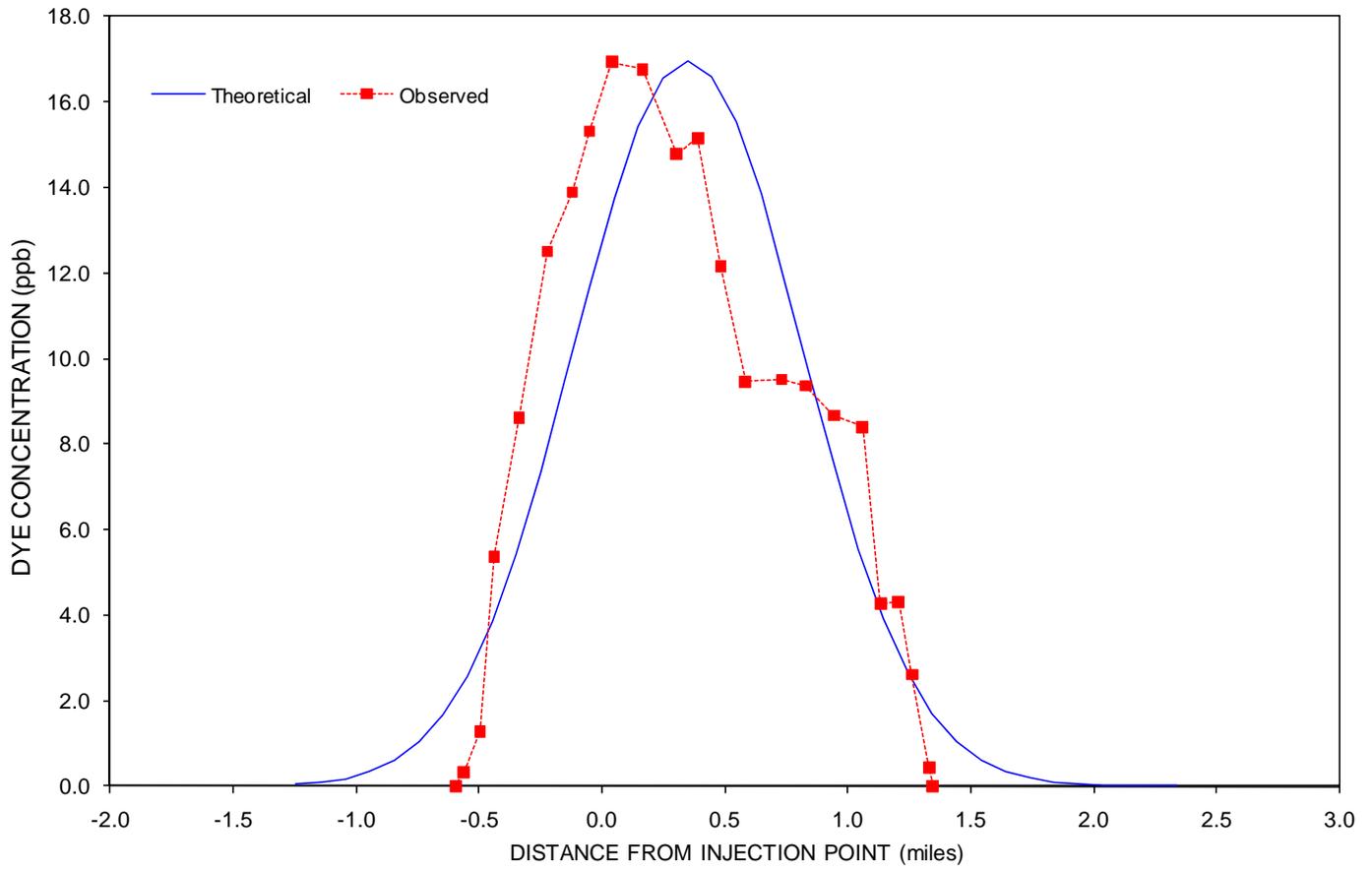


Appendix F6 – Bayou Bonfouca Dye Study Calculations

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

DYE CONCENTRATIONS VS. DISTANCE FOR BAYOU BONFOUCA IN TIDAL REACH - RUN 1					
ASSUMES 1-D ANALYSIS (LATERALLY AND VERTICALLY MIXED) OF SLUG INJECTION					
COMPARES THEORETICAL WITH FIELD DATA					
RKD 01-28-2010					
DATA INPUT CELLS					
AVG FLOW =	31.6 cfs (calculated)				
MEAN VELOCITY =	0.019 ft/sec (composite of adjective and tidal velocity - adjust to vary width of curve)				
AVG XS AREA =	1664 ft ² (calculated)				
AVG DEPTH =	5.64 ft (average measured depth of reach covered by dye)				
AVG WIDTH =	295 ft (average measured width of reach covered by dye)				
ELAPSED TIME =	25.71 hr (time from injection to average time of dye run)				
INJECT. MASS =	72 lbs stock solution (20% dye)				
ADV VELOCITY =	0.02 ft/sec (adjust to get predicted and observed data lined up horizontally)				
PREDICTED MAXIMUM DYE CONCENTRATION =	22.64 ppb	(1-D advective dispersion equation)			
ADJUSTMENT FACTOR FOR DYE LOSS =	0.75	(To fit curve)			
ADJUSTED MAXIMUM DYE CONCENTRATION =	16.98 ppb	(after applying dye loss factor)			
LONGITUDINAL DISPERSION COEFFICIENT =	32.2 ft ² /sec	(eqn. 5.19 from Fischer et al, 1979)			
ADJUSTMENT FACTOR FOR DISPERSION =	1				
ADJUSTED LONGITUDINAL DISPERS. COEFF. =	32.2 ft ² /sec	(after applying adjustment factor)			
	= 3.00 m ² /sec	(converted to metric)			
NET FLOW =	33.276 cfs				
DISTANCE		DISTANCE			
DOWNSTREAM	PREDIC.	DOWNSTREAM	OBSERV.		
FROM INJECTION	CONC.	FROM INJECTION	CONC.		
(meters)	(miles)	(meters)	(miles)	(ppb)	
-----	-----	-----	-----	-----	
-2000	-1.24	0.05	2164	1.34	0.00
-1840	-1.14	0.09	2139	1.33	0.44
-1680	-1.04	0.18	2028	1.26	2.61
-1520	-0.94	0.34	1940	1.21	4.32
-1360	-0.85	0.60	1823	1.13	4.27
-1200	-0.75	1.03	1703	1.06	8.40
-1040	-0.65	1.67	1516	0.94	8.67
-880	-0.55	2.59	1334	0.83	9.37
-720	-0.45	3.84	1175	0.73	9.51
-560	-0.35	5.43	938	0.58	9.46
-400	-0.25	7.34	778	0.48	12.15
-240	-0.15	9.48	629	0.39	15.16
-80	-0.05	11.68	488	0.30	14.78
80	0.05	13.74	265	0.16	16.76
240	0.15	15.44	66	0.04	16.94
400	0.25	16.57	-82	-0.05	15.32
560	0.35	16.98	-195	-0.12	13.89
720	0.45	16.61	-357	-0.22	12.51
880	0.55	15.52	-542	-0.34	8.62
1040	0.65	13.84	-706	-0.44	5.37
1200	0.75	11.79	-797	-0.50	1.28
1360	0.85	9.59	-904	-0.56	0.34
1520	0.94	7.45	-956	-0.59	0.00
1680	1.04	5.53			0.00
1840	1.14	3.91			0.00
2000	1.24	2.65			0.00
2160	1.34	1.71			0.00
2320	1.44	1.05			0.00
2480	1.54	0.62			0.00
2640	1.64	0.35			0.00
2800	1.74	0.19			0.00
2960	1.84	0.10			
3120	1.94	0.05			
3280	2.04	0.02			
3440	2.14	0.01			
3600	2.24	0.00			
3760	2.34	0.00			

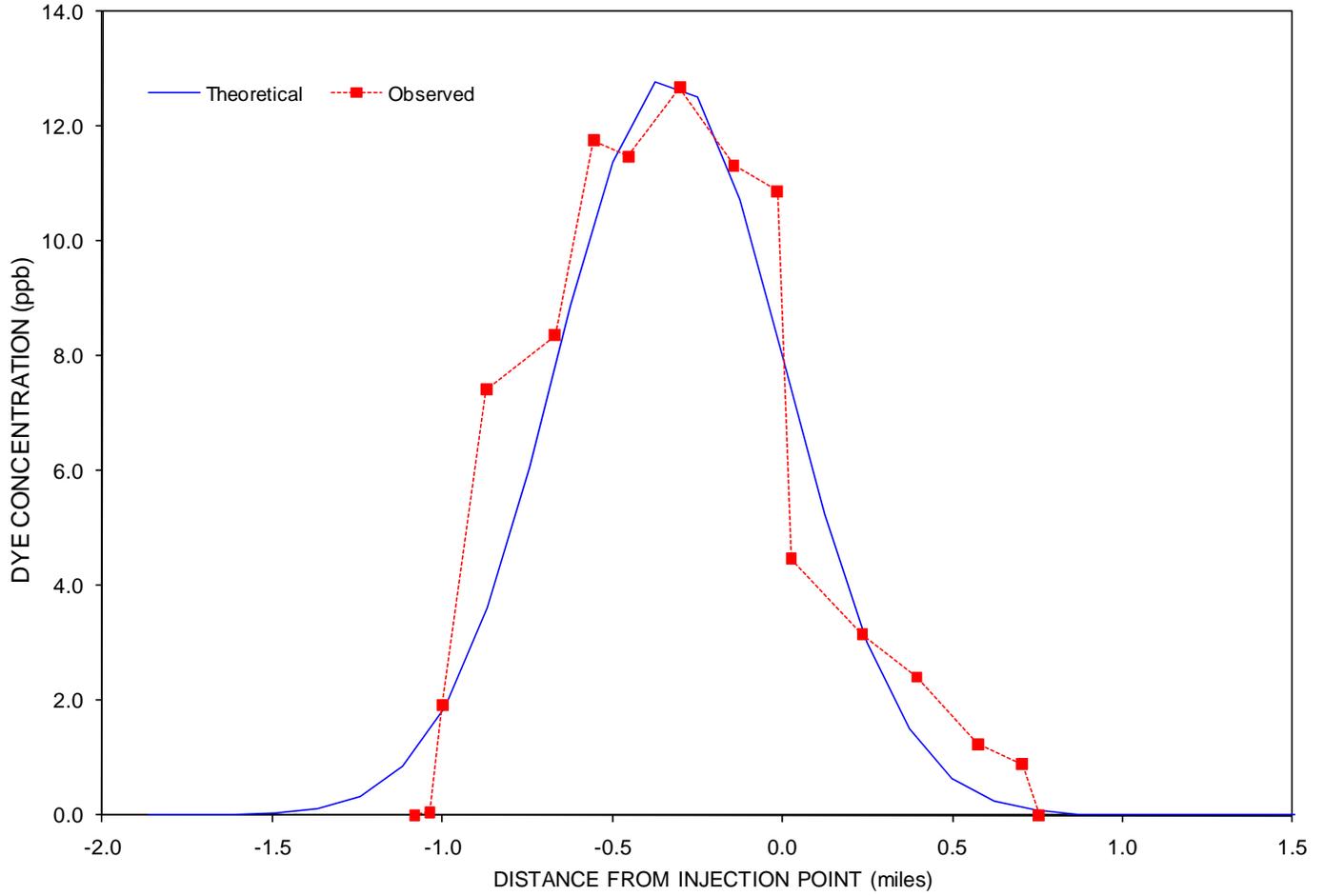
BAYOU BONFOUCA AT 25.7 HOURS



Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

DYE CONCENTRATIONS VS. DISTANCE FOR BAYOU BONFOUCA IN TIDAL REACH - RUN 2						
ASSUMES 1-D ANALYSIS (LATERALLY AND VERTICALLY MIXED) OF SLUG INJECTION						
COMPARES THEORETICAL WITH FIELD DATA						
RKD 01-28-2010						
AVG FLOW =	12.6 cfs (calculated)					
MEAN VELOCITY =	0.007 ft/sec (composite of adjective and tidal velocity - adjust to vary width of curve)					
AVG XS AREA =	1798 ft ² (calculated)					
AVG DEPTH =	5.78 ft (average measured depth of reach covered by dye)					
AVG WIDTH =	311 ft (average measured width of reach covered by dye)					
ELAPSED TIME =	34.52 hr (time from injection to average time of dye run)					
INJECT. MASS =	72 lbs stock solution (20% dye)					
ADV VELOCITY =	-0.014 ft/sec (adjust to get predicted and observed data lined up horizontally)					
PREDICTED MAXIMUM DYE CONCENTRATION =	28.61	ppb	(1-D advective dispersion equation)			
ADJUSTMENT FACTOR FOR DYE LOSS =	0.45		(To fit curve)			
ADJUSTED MAXIMUM DYE CONCENTRATION =	12.87	ppb	(after applying dye loss factor)			
LONGITUDINAL DISPERSION COEFFICIENT =	12.9	ft ² /sec	(eqn. 5.19 from Fischer et al, 1979)			
ADJUSTMENT FACTOR FOR DISPERSION =	1					
ADJUSTED LONGITUDINAL DISPERS. COEFF. =	12.9	ft ² /sec	(after applying adjustment factor)			
			1.20	m ² /sec (converted to metric)		
NET FLOW =	-25.1661 cfs					
DISTANCE DOWNSTREAM FROM INJECTION			DISTANCE DOWNSTREAM OBSERV.			
FROM INJECTION	PREDIC. CONC.		FROM INJECTION	OBSERV. CONC.		
(meters)	(miles)	(ppb)	(meters)	(miles)	(ppb)	
-3000	-1.86	0.00	1212	0.75	0	
-2800	-1.74	0.00	1135	0.71	0.89	
-2600	-1.62	0.01	923	0.57	1.24	
-2400	-1.49	0.04	635	0.39	2.41	
-2200	-1.37	0.12	377	0.23	3.15	
-2000	-1.24	0.34	41	0.03	4.47	
-1800	-1.12	0.86	-26	-0.02	10.87	
-1600	-0.99	1.88	-231	-0.14	11.32	
-1400	-0.87	3.61	-485	-0.30	12.68	
-1200	-0.75	6.06	-728	-0.45	11.48	
-1000	-0.62	8.88	-894	-0.56	11.76	
-800	-0.50	11.39	-1077	-0.67	8.36	
-600	-0.37	12.77	-1401	-0.87	7.42	
-400	-0.25	12.51	-1609	-1.00	1.92	
-200	-0.12	10.72	-1668	-1.04	0.06	
0	0.00	8.02	-1741	-1.08	0.00	
200	0.12	5.25		0.00		
400	0.25	3.01		0.00		
600	0.37	1.50		0.00		
800	0.50	0.66		0.00		
1000	0.62	0.25		0.00		
1200	0.75	0.08		0.00		
1400	0.87	0.02		0.00		
1600	0.99	0.01		0.00		
1800	1.12	0.00		0.00		
2000	1.24	0.00		0.00		
2200	1.37	0.00		0.00		
2400	1.49	0.00		0.00		
2600	1.62	0.00		0.00		
2800	1.74	0.00		0.00		
3000	1.86	0.00		0.00		
3200	1.99	0.00		0.00		
3400	2.11	0.00		0.00		
3600	2.24	0.00		0.00		
3800	2.36	0.00		0.00		
4000	2.49	0.00		0.00		
4200	2.61	0.00		0.00		
4400	2.73	0.00		0.00		
4600	2.86	0.00		0.00		
4800	2.98	0.00		0.00		
5000	3.11	0.00		0.00		
5200	3.23	0.00		0.00		
5400	3.36	0.00		0.00		

BAYOU BONFOUCA AT 34.5 HOURS



BAYOU BONFOUCA

DYE STUDY DATA

SURVEYED: JUNE 16-18, 2009

SITE	X	Y	COUNT	PDOP	QUALITY	DATUM	DATE_TIME	Julian date&time	Dye conc (ppb) Dye inject (lbs)	River meters	Meters from Injection
DUMP	-89.81884	30.26025	5	6	2	GCS_WGS_1984	6/16/09 12:16:05 PM	39980.511169	7.5 gal @ 1.15 spg = 72 lbs	6701	0
RUN 1 BG 1	-89.83783	30.25488	5	6	2	GCS_WGS_1984	6/17/09 1:35:37 PM	39981.566400	0.00	4536	2164
RUN 1 BG 01	-89.83761	30.25500	5	6	2	GCS_WGS_1984	6/17/09 1:36:19 PM	39981.566887	0.44	4562	2139
RUN 1 BG 02	-89.83713	30.25596	5	6	2	GCS_WGS_1984	6/17/09 1:38:11 PM	39981.568183	2.61	4673	2028
RUN 1 BG 03	-89.83683	30.25672	5	6	2	GCS_WGS_1984	6/17/09 1:40:03 PM	39981.569479	4.32	4761	1940
RUN 1 BG 04	-89.83610	30.25751	5	6	2	GCS_WGS_1984	6/17/09 1:42:26 PM	39981.571134	4.27	4878	1823
RUN 1 BG 05	-89.83519	30.25823	5	6	2	GCS_WGS_1984	6/17/09 1:44:08 PM	39981.572315	8.40	4998	1703
RUN 1 BG 06	-89.83350	30.25907	5	6	2	GCS_WGS_1984	6/17/09 1:46:54 PM	39981.574236	8.67	5185	1516
RUN 1 BG 07	-89.83200	30.26006	5	6	2	GCS_WGS_1984	6/17/09 1:49:05 PM	39981.575752	9.37	5367	1334
RUN 1 BG 08	-89.83047	30.26032	5	6	2	GCS_WGS_1984	6/17/09 1:51:23 PM	39981.577350	9.51	5526	1175
RUN 1 BG 09	-89.82817	30.25995	5	6	2	GCS_WGS_1984	6/17/09 1:54:31 PM	39981.579525	9.46	5763	938
RUN 1 BG 10	-89.82658	30.26039	5	6	2	GCS_WGS_1984	6/17/09 1:56:53 PM	39981.581169	12.15	5923	778
RUN 1 BG 11	-89.82520	30.26096	5	6	2	GCS_WGS_1984	6/17/09 1:58:57 PM	39981.582604	15.16	6072	629
RUN 1 BG 12	-89.82376	30.26104	5	6	2	GCS_WGS_1984	6/17/09 2:01:01 PM	39981.584039	14.78	6213	488
RUN 1 BG 13	-89.82144	30.26098	5	6	2	GCS_WGS_1984	6/17/09 2:03:53 PM	39981.586030	16.76	6435	265
RUN 1 BG 14	-89.81946	30.26049	5	6	2	GCS_WGS_1984	6/17/09 2:06:57 PM	39981.588160	16.94	6635	66
RUN 1 BG 15	-89.81800	30.26017	5	6	2	GCS_WGS_1984	6/17/09 2:09:01 PM	39981.589595	15.32	6782	-82
RUN 1 BG 16	-89.81685	30.26024	5	6	2	GCS_WGS_1984	6/17/09 2:10:54 PM	39981.590903	13.89	6896	-195
RUN 1 BG 17	-89.81528	30.26075	5	6	2	GCS_WGS_1984	6/17/09 2:13:58 PM	39981.593032	12.51	7058	-357
RUN 1 BG 18	-89.81338	30.26088	5	6	2	GCS_WGS_1984	6/17/09 2:16:03 PM	39981.594479	8.62	7243	-542
RUN 1 BG 19	-89.81171	30.26116	5	6	2	GCS_WGS_1984	6/17/09 2:18:03 PM	39981.595868	5.37	7407	-706
RUN 1 BG 20	-89.81083	30.26147	5	6	2	GCS_WGS_1984	6/17/09 2:19:19 PM	39981.596748	1.28	7498	-797
RUN 1 BG 21	-89.80983	30.26189	5	6	2	GCS_WGS_1984	6/17/09 2:20:53 PM	39981.597836	0.34	7605	-904
RUN 1 BG 2	-89.80930	30.26200	5	6	2	GCS_WGS_1984	6/17/09 2:22:07 PM	39981.598692	0.00	7657	-956
Average time of run minus dump time in hours ---->								25.71			

BAYOU BONFOUCA

DYE STUDY DATA

SURVEYED: JUNE 16-18, 2009

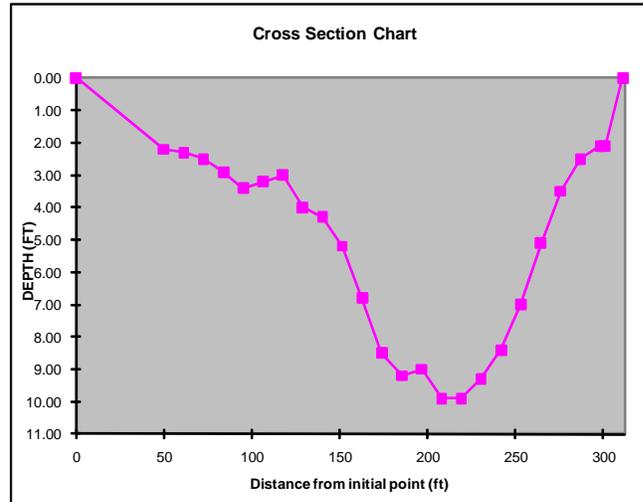
SITE	X	Y	COUNT	PDOP	QUALITY	DATUM	DATE_TIME	Julian date&time	Dye conc (ppb) Dye inject (lbs)	River meters	Meters from Injection
RUN 2 BG 1	-89.83088	30.26042	5	6	2	GCS_WGS_1984	6/17/09 10:29:05 PM	39981.936863	0.00	5489	1212
RUN 2 01	-89.83015	30.26042	5	6	2	GCS_WGS_1984	6/17/09 10:29:45 PM	39981.937326	0.89	5566	1135
RUN 2 02	-89.82803	30.26000	5	6	2	GCS_WGS_1984	6/17/09 10:32:07 PM	39981.938970	1.24	5778	923
RUN 2 03	-89.82526	30.26094	5	6	2	GCS_WGS_1984	6/17/09 10:35:00 PM	39981.940972	2.41	6066	635
RUN 2 04	-89.82260	30.26102	5	6	2	GCS_WGS_1984	6/17/09 10:38:02 PM	39981.943079	3.15	6324	377
RUN 2 05	-89.81921	30.26043	5	6	2	GCS_WGS_1984	6/17/09 10:41:46 PM	39981.945671	4.47	6660	41
RUN 2 06	-89.81856	30.26024	5	6	2	GCS_WGS_1984	6/17/09 10:42:59 PM	39981.946516	10.87	6727	-26
RUN 2 07	-89.81648	30.26034	5	6	2	GCS_WGS_1984	6/17/09 10:45:29 PM	39981.948252	11.32	6932	-231
RUN 2 08	-89.81398	30.26096	5	6	2	GCS_WGS_1984	6/17/09 10:48:09 PM	39981.950104	12.68	7186	-485
RUN 2 09	-89.81154	30.26133	5	6	2	GCS_WGS_1984	6/17/09 10:51:16 PM	39981.952269	11.48	7429	-728
RUN 2 10	-89.80994	30.26189	5	6	2	GCS_WGS_1984	6/17/09 10:53:25 PM	39981.953762	11.76	7595	-894
RUN 2 11	-89.80814	30.26242	5	6	2	GCS_WGS_1984	6/17/09 10:55:47 PM	39981.955405	8.36	7778	-1077
RUN 2 12	-89.80706	30.26501	5	6	2	GCS_WGS_1984	6/17/09 10:58:54 PM	39981.957569	7.42	8102	-1401
RUN 2 13	-89.80610	30.26666	5	6	2	GCS_WGS_1984	6/17/09 11:03:16 PM	39981.960602	1.92	8310	-1609
RUN 2 14	-89.80591	30.26715	5	6	2	GCS_WGS_1984	6/17/09 11:04:29 PM	39981.961447	0.06	8369	-1668
RUN 2 BG 2	-89.80593	30.26777	5	6	2	GCS_WGS_1984	6/17/09 11:05:35 PM	39981.962211	0.00	8442	-1741
Average time of run minus dump time in hours ----->								34.52			
								DEPTH (ft)	WIDTH (ft)		
BON DYE XS 1	-89.83235	30.25991	5	6	2	GCS_WGS_1984	6/18/09 4:51:44 PM	6.14	251	5330	
BON DYE XS 2	-89.82705	30.26037	5	6	2	GCS_WGS_1984	6/18/09 5:25:03 PM	6.21	300	5882	
BON DYE XS 3	-89.80916	30.26215	5	6	2	GCS_WGS_1984	6/18/09 5:50:31 PM	5.48	375	7676	
3855 (BB05)	-89.83795	30.25484	5	6	2	GCS_WGS_1984	5/28/09 2:20 PM	4.71	255		
3852 (BB03)	-89.80566	30.26933	5	6	2	GCS_WGS_1984	5/28/09 2:06 PM	5.29	316		
Run 1 average width and depth ----->								5.64	295		
Run 2 average width and depth ----->								5.78	311		

STREAM CROSS-SECTION SPREADSHEET

Site Number: 3854 Dump Subsegment: 040907 Waterbody: Bayou Bonfouca
 Site Description: Site 3854; See GPS
 Type of Equipment: Fathometer Hydrotrac Manual
 Initial Bank: RDB LDB
 Tapedown: _____
 Gauge Height: _____
 Date: 6/18/2009

WIDTH ¹ (ft):	311.00
AREA ² (ft ²):	1448.26
AVG. DEPTH ³ (ft):	4.66

Subsection	Distance from initial point (ft)	Width ⁴ (ft)	Depth (ft)	Area ⁵ (sq.ft.)	Area of element as % of Total Area ^{6 & 7}
1	0.0	25.00	0.00	0.00	
2	50.0	30.64	2.20	67.41	4.65%
3	61.3	11.28	2.30	25.95	1.79%
4	72.6	11.28	2.50	28.20	1.95%
5	83.8	11.28	2.90	32.71	2.26%
6	95.1	11.28	3.40	38.36	2.65%
7	106.4	11.28	3.20	36.10	2.49%
8	117.7	11.28	3.00	33.84	2.34%
9	129.0	11.28	4.00	45.12	3.12%
10	140.2	11.28	4.30	48.51	3.35%
11	151.5	11.28	5.20	58.66	4.05%
12	162.8	11.28	6.80	76.71	5.30%
13	174.1	11.28	8.50	95.89	6.62%
14	185.4	11.28	9.20	103.78	7.17%
15	196.7	11.28	9.00	101.53	7.01%
16	207.9	11.28	9.90	111.68	7.71%
17	219.2	11.28	9.90	111.68	7.71%
18	230.5	11.28	9.30	104.91	7.24%
19	241.8	11.28	8.40	94.76	6.54%
20	253.1	11.28	7.00	78.97	5.45%
21	264.3	11.28	5.10	57.53	3.97%
22	275.6	11.28	3.50	39.48	2.73%
23	286.9	11.28	2.50	28.20	1.95%
24	298.2	7.05	2.10	14.81	1.02%
25	301.0	6.41	2.10	13.46	0.93%
26	311.0	5.00	0.00	0.00	0.00%
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
Total		311.00		1448.26	100.00%



Data Collection Crew		Office Data Work	
Measurement made by:	<u>Eric Garner</u>	Data Input by / Date:	<u>Bryan Alleman 8/5/2009</u>
Notetaker/Recorder:	<u>Adam Tieben</u>	Data Input Checked by / Date:	
Other:			

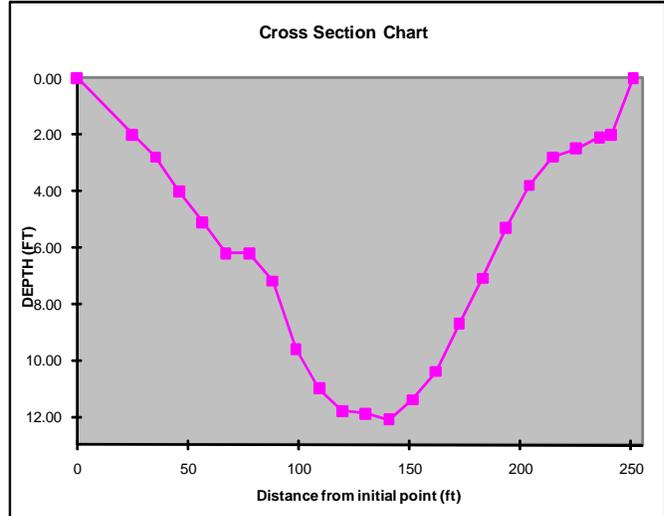
- Note 1: WIDTH (ft) = sum of the width column
- Note 2: AREA (sq.ft.) = sum of the area column
- Note 3: AVG. DEPTH (ft) = area/width (using the values from this table)
- Note 4: Width of element
- Note 5: Area=Width*Depth for element
- Note 6: Percent area = element area/total area x 100%
- Note 7: Percent area should be less than 10% as per USGS standard.
- Note 8: Blank fields are cleared from all calculations.
- Note 9: The cross sections are taken at areas representative of the stream.

STREAM CROSS-SECTION SPREADSHEET

Site Number: BONDYEXS 1 Subsegment: 040907 Waterbody: Bayou Bonfouca
 Site Description: See GPS
 Type of Equipment: Fathometer Hydrotrac Manual
 Initial Bank: RDB LDB
 Tapedown: _____
 Gauge Height: _____
 Date: 6/18/2009

WIDTH ¹ (ft):	251.00
AREA ² (ft ²):	1541.47
AVG. DEPTH ³ (ft):	6.14

Subsection	Distance from initial point (ft)	Width ⁴ (ft)	Depth (ft)	Area ⁵ (sq.ft.)	Area of element as % of Total Area ^{6, 8, 7}
1	0.0	12.50	0.00	0.00	
2	25.0	17.77	2.00	35.54	2.31%
3	35.5	10.54	2.80	29.50	1.91%
4	46.1	10.54	4.00	42.15	2.73%
5	56.6	10.54	5.10	53.74	3.49%
6	67.1	10.54	6.20	65.33	4.24%
7	77.7	10.54	6.20	65.33	4.24%
8	88.2	10.54	7.20	75.86	4.92%
9	98.8	10.54	9.60	101.15	6.56%
10	109.3	10.54	11.00	115.90	7.52%
11	119.8	10.54	11.80	124.33	8.07%
12	130.4	10.54	11.90	125.39	8.13%
13	140.9	10.54	12.10	127.49	8.27%
14	151.4	10.54	11.40	120.12	7.79%
15	162.0	10.54	10.40	109.58	7.11%
16	172.5	10.54	8.70	91.67	5.95%
17	183.0	10.54	7.10	74.81	4.85%
18	193.6	10.54	5.30	55.84	3.62%
19	204.1	10.54	3.80	40.04	2.60%
20	214.7	10.54	2.80	29.50	1.91%
21	225.2	10.54	2.50	26.34	1.71%
22	235.7	7.90	2.10	16.60	1.08%
23	241.0	7.63	2.00	15.27	0.99%
24	251.0	5.00	0.00	0.00	0.00%
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
Total		251.00		1541.47	100.00%



Data Collection Crew		Office Data Work	
Measurement made by:	Eric Garner	Data Inputted by / Date:	Bryan Alleman 08/05/2009
Notetaker/Recorder:	Adam Tieben	Data Input Checked by / Date:	
Other:			

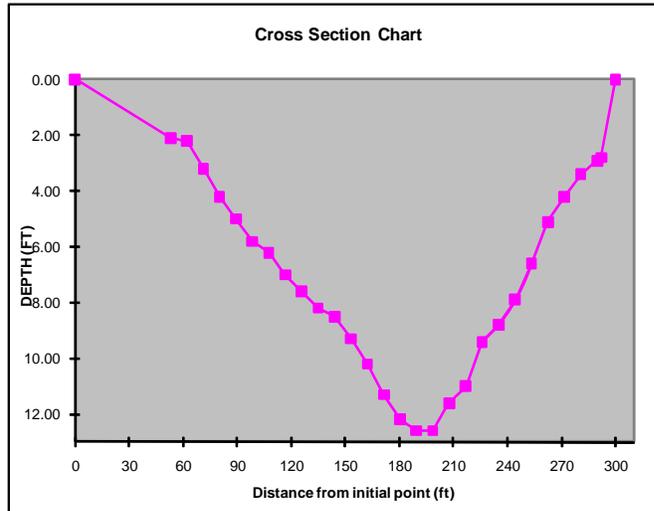
- Note 1: WIDTH (ft) = sum of the width column
- Note 2: AREA (sq.ft.) = sum of the area column
- Note 3: AVG. DEPTH (ft) = area/width (using the values from this table)
- Note 4: Width of element
- Note 5: Area=Width*Depth for element
- Note 6: Percent area = element area/total area x 100%
- Note 7: Percent area should be less than 10% as per USGS standard.
- Note 8: Blank fields are cleared from all calculations.
- Note 9: The cross sections are taken at areas representative of the stream.

STREAM CROSS-SECTION SPREADSHEET

Site Number: BONDYEXS2 Subsegment: 040907 Waterbody: Bayou Bonfouca
 Site Description: See GPS
 Type of Equipment: Fathometer Hydrotrac Manual
 Initial Bank: RDB LDB
 Tapedown: _____
 Gauge Height: _____
 Date: 6/18/2009

WIDTH ¹ (ft):	300.00
AREA ² (ft ²):	1863.33
AVG. DEPTH ³ (ft):	6.21

Subsection	Distance from initial point (ft)	Width ⁴ (ft)	Depth (ft)	Area ⁵ (sq.ft.)	Area of element as % of Total Area ^{6 & 7}
1	0.0	26.50	0.00	0.00	
2	53.0	31.05	2.10	65.21	3.50%
3	62.1	9.10	2.20	20.03	1.07%
4	71.2	9.10	3.20	29.14	1.56%
5	80.3	9.10	4.20	38.24	2.05%
6	89.4	9.10	5.00	45.52	2.44%
7	98.5	9.10	5.80	52.81	2.83%
8	107.6	9.10	6.20	56.45	3.03%
9	116.7	9.10	7.00	63.73	3.42%
10	125.8	9.10	7.60	69.20	3.71%
11	134.9	9.10	8.20	74.66	4.01%
12	144.0	9.10	8.50	77.39	4.15%
13	153.2	9.10	9.30	84.67	4.54%
14	162.3	9.10	10.20	92.87	4.98%
15	171.4	9.10	11.30	102.88	5.52%
16	180.5	9.10	12.20	111.08	5.96%
17	189.6	9.10	12.60	114.72	6.16%
18	198.7	9.10	12.60	114.72	6.16%
19	207.8	9.10	11.60	105.62	5.67%
20	216.9	9.10	11.00	100.15	5.37%
21	226.0	9.10	9.40	85.58	4.59%
22	235.1	9.10	8.80	80.12	4.30%
23	244.2	9.10	7.90	71.93	3.86%
24	253.3	9.10	6.60	60.09	3.22%
25	262.4	9.10	5.10	46.43	2.49%
26	271.5	9.10	4.20	38.24	2.05%
27	280.6	9.10	3.40	30.96	1.66%
28	289.7	5.69	2.90	16.50	0.89%
29	292.0	5.14	2.80	14.39	0.77%
30	300.0	4.00	0.00	0.00	0.00%
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
Total	300.00			1863.33	100.00%



Data Collection Crew		Office Data Work	
Measurement made by:	Adam Tieben	Data Inputted by / Date:	Bryan Alleman 08/05/2009
Notetaker/Recorder:	Eric Garner	Data Input Checked by / Date:	
Other:			

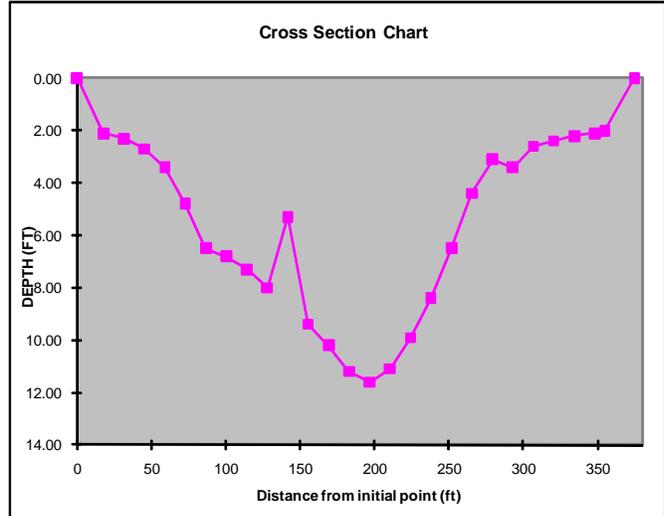
- Note 1: WIDTH (ft) = sum of the width column
- Note 2: AREA (sq.ft.) = sum of the area column
- Note 3: AVG. DEPTH (ft) = area/width (using the values from this table)
- Note 4: Width of element
- Note 5: Area=Width*Depth for element
- Note 6: Percent area = element area/total area x 100%
- Note 7: Percent area should be less than 10% as per USGS standard.
- Note 8: Blank fields are cleared from all calculations.
- Note 9: The cross sections are taken at areas representative of the stream.

STREAM CROSS-SECTION SPREADSHEET

Site Number: **BONDYXS 3** Subsegment: **040907** Waterbody: **Bayou Bonfouca**
 Site Description: **See GPS**
 Type of Equipment: Fathometer Hydrotrac Manual
 Initial Bank: RDB LDB
 Tapedown: _____
 Gauge Height: _____
 Date: **6/18/2009**

WIDTH ¹ (ft):	375.00
AREA ² (ft ²):	2055.74
AVG. DEPTH ³ (ft):	5.48

Subsection	Distance from initial point (ft)	Width ¹ (ft)	Depth (ft)	Area ² (sq.ft.)	Area of element as % of Total Area ^{6, 8, 7}
1	0.0	9.00	0.00	0.00	
2	18.0	15.88	2.10	33.34	1.62%
3	31.8	13.76	2.30	31.64	1.54%
4	45.5	13.76	2.70	37.14	1.81%
5	59.3	13.76	3.40	46.77	2.27%
6	73.0	13.76	4.80	66.02	3.21%
7	86.8	13.76	6.50	89.41	4.35%
8	100.5	13.76	6.80	93.53	4.55%
9	114.3	13.76	7.30	100.41	4.88%
10	128.0	13.76	8.00	110.04	5.35%
11	141.8	13.76	5.30	72.90	3.55%
12	155.6	13.76	9.40	129.30	6.29%
13	169.3	13.76	10.20	140.30	6.82%
14	183.1	13.76	11.20	154.06	7.49%
15	196.8	13.76	11.60	159.56	7.76%
16	210.6	13.76	11.10	152.68	7.43%
17	224.3	13.76	9.90	136.18	6.62%
18	238.1	13.76	8.40	115.54	5.62%
19	251.8	13.76	6.50	89.41	4.35%
20	265.6	13.76	4.40	60.52	2.94%
21	279.3	13.76	3.10	42.64	2.07%
22	293.1	13.76	3.40	46.77	2.27%
23	306.9	13.76	2.60	35.76	1.74%
24	320.6	13.76	2.40	33.01	1.61%
25	334.4	13.76	2.20	30.26	1.47%
26	348.1	10.32	2.10	21.66	1.05%
27	355.0	13.44	2.00	26.88	1.31%
28	375.0	10.00	0.00	0.00	0.00%
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
Total		375.00		2055.74	100.00%



Data Collection Crew		Office Data Work	
Measurement made by:	Adam Tieben	Data Inputted by / Date:	Bryan Alleman 8/5/09
Notetaker/Recorder:	Eric Garner	Data Input Checked by / Date:	
Other:			

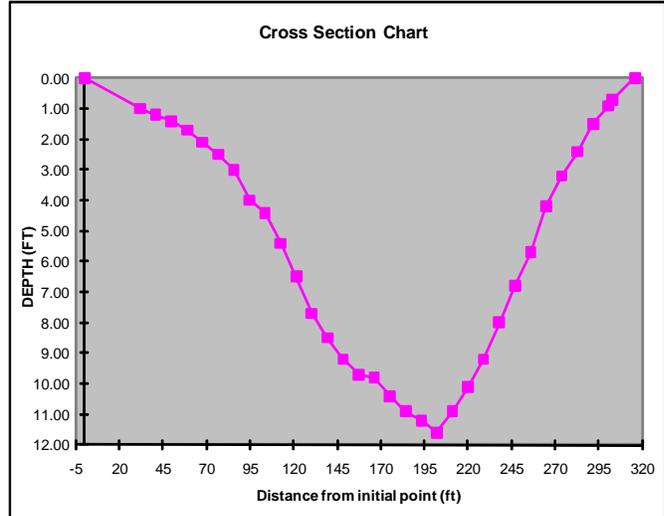
- Note 1: WIDTH (ft) = sum of the width column
- Note 2: AREA (sq.ft.) = sum of the area column
- Note 3: AVG. DEPTH (ft) = area/width (using the values from this table)
- Note 4: Width of element
- Note 5: Area=Width*Depth for element
- Note 6: Percent area = element area/total area x 100%
- Note 7: Percent area should be less than 10% as per USGS standard.
- Note 8: Blank fields are cleared from all calculations.
- Note 9: The cross sections are taken at areas representative of the stream.

STREAM CROSS-SECTION SPREADSHEET

Site Number: 3852 Subsegment: 040908 Waterbody: Bayou Bonfouca
 Site Description: estuary
 Type of Equipment: Fathometer Hydrotrac Manual
 Initial Bank: RDB LDB
 Tapedown: _____
 Gauge Height: _____
 Date: 6/18/2009

WIDTH ¹ (ft):	316.00
AREA ² (ft ²):	1672.08
AVG. DEPTH ³ (ft):	5.29

Subsection	Distance from initial point (ft)	Width ⁴ (ft)	Depth (ft)	Area ⁵ (sq.ft.)	Area of element as % of Total Area ^{6, 8, 7}
1	0.0	16.00	0.00	0.00	
2	32.0	20.48	1.00	20.48	1.22%
3	41.0	8.96	1.20	10.75	0.64%
4	49.9	8.96	1.40	12.54	0.75%
5	58.9	8.96	1.70	15.23	0.91%
6	67.8	8.96	2.10	18.81	1.13%
7	76.8	8.96	2.50	22.40	1.34%
8	85.8	8.96	3.00	26.88	1.61%
9	94.7	8.96	4.00	35.83	2.14%
10	103.7	8.96	4.40	39.42	2.36%
11	112.6	8.96	5.40	48.38	2.89%
12	121.6	8.96	6.50	58.23	3.48%
13	130.5	8.96	7.70	68.98	4.13%
14	139.5	8.96	8.50	76.15	4.55%
15	148.5	8.96	9.20	82.42	4.93%
16	157.4	8.96	9.70	86.90	5.20%
17	166.4	8.96	9.80	87.80	5.25%
18	175.3	8.96	10.40	93.17	5.57%
19	184.3	8.96	10.90	97.65	5.84%
20	193.3	8.96	11.20	100.34	6.00%
21	202.2	8.96	11.60	103.92	6.22%
22	211.2	8.96	10.90	97.65	5.84%
23	220.1	8.96	10.10	90.48	5.41%
24	229.1	8.96	9.20	82.42	4.93%
25	238.0	8.96	8.00	71.67	4.29%
26	247.0	8.96	6.80	60.92	3.64%
27	256.0	8.96	5.70	51.06	3.05%
28	264.9	8.96	4.20	37.63	2.25%
29	273.9	8.96	3.20	28.67	1.71%
30	282.8	8.96	2.40	21.50	1.29%
31	291.8	8.96	1.50	13.44	0.80%
32	300.8	5.60	0.90	5.04	0.30%
33	303.0	7.62	0.70	5.33	0.32%
34	316.0	6.50	0.00	0.00	0.00%
35					
36					
37					
38					
39					
40					
Total		316.00		1672.08	100.00%



Data Collection Crew		Office Data Work	
Measurement made by:	C. Casanova	Data Inputted by / Date:	G. LaFleur 08/25/09
Notetaker/Recorder:	G. LaFleur	Data Input Checked by / Date:	
Other:			

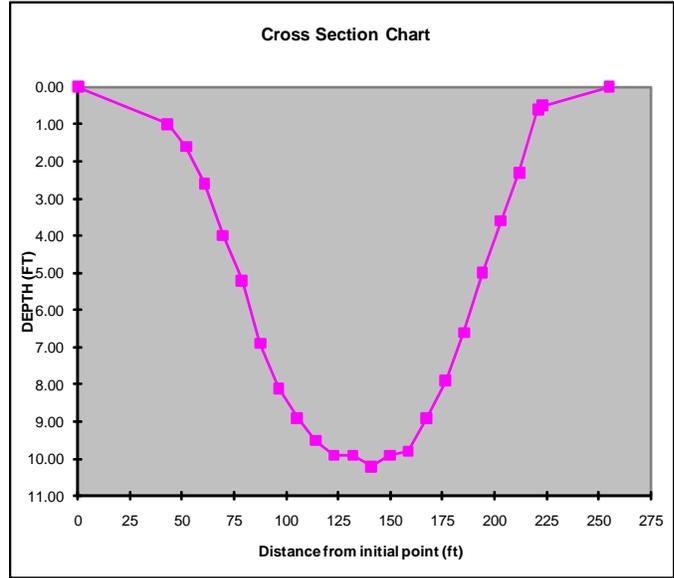
- Note 1: WIDTH (ft) = sum of the width column
- Note 2: AREA (sq.ft.) = sum of the area column
- Note 3: AVG. DEPTH (ft) = area/width (using the values from this table)
- Note 4: Width of element
- Note 5: Area=Width*Depth for element
- Note 6: Percent area = element area/total area x 100%
- Note 7: Percent area should be less than 10% as per USGS standard.
- Note 8: Blank fields are cleared from all calculations.
- Note 9: The cross sections are taken at areas representative of the stream.

STREAM CROSS-SECTION SPREADSHEET

Site Number: 3855 Subsegment: 040908 Waterbody: Bayou Bonfouca
 Site Description: estuary
 Type of Equipment: Fathometer Hydrotrac Manual
 Initial Bank: RDB LDB
 Tapedown: _____
 Gauge Height: _____
 Date: 6/18/2009

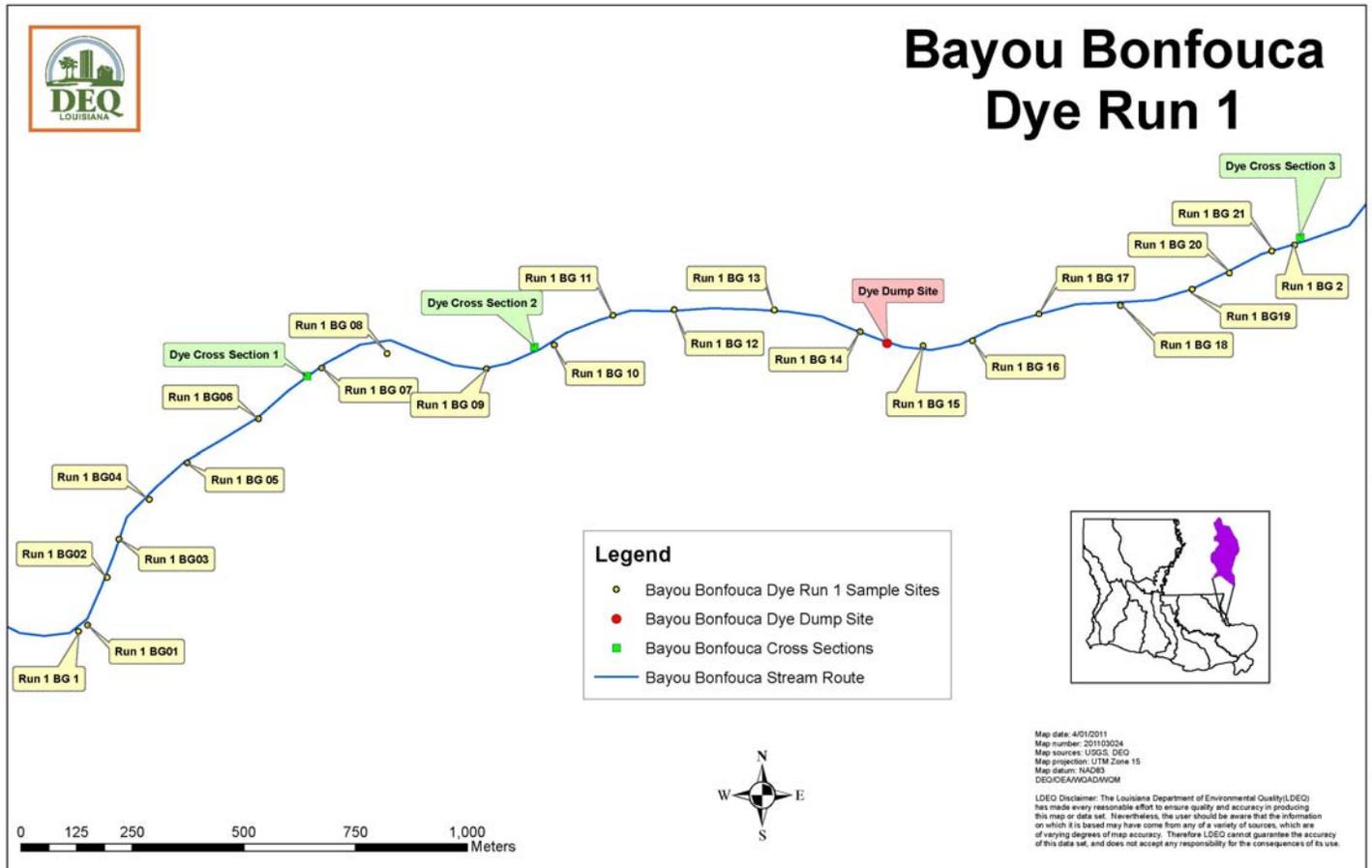
WIDTH ¹ (ft):	255.00
AREA ² (ft ²):	1200.50
AVG. DEPTH ³ (ft):	4.71

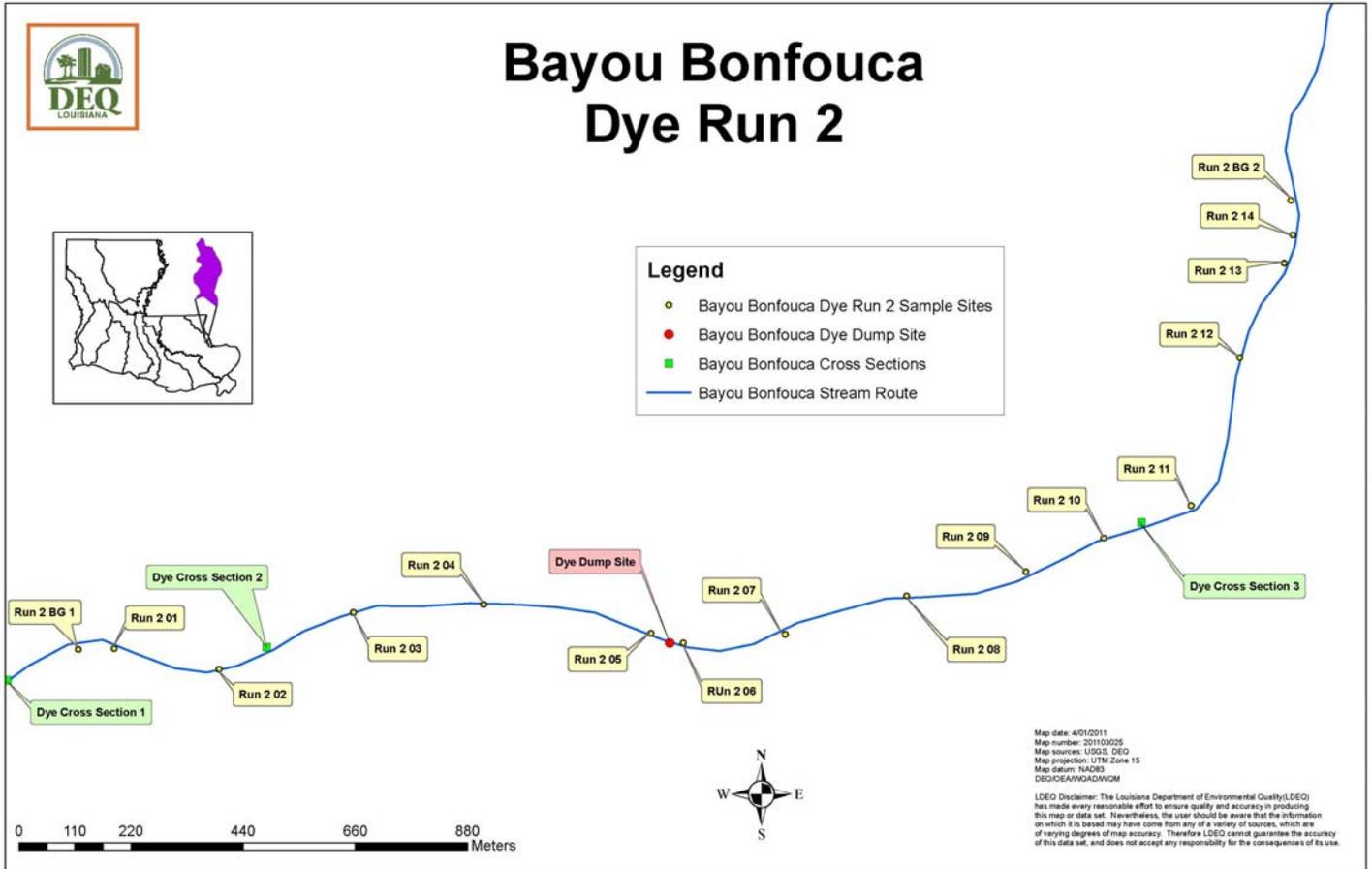
Subsection	Distance from initial point (ft)	Width ⁴ (ft)	Depth (ft)	Area ⁵ (sq.ft.)	Area of element as % of Total Area ^{6, 8, 7}
1	0.0	21.50	0.00	0.00	
2	43.0	25.94	1.00	25.94	2.16%
3	51.9	8.89	1.60	14.22	1.18%
4	60.8	8.89	2.60	23.11	1.93%
5	69.7	8.89	4.00	35.56	2.96%
6	78.6	8.89	5.20	46.22	3.85%
7	87.4	8.89	6.90	61.33	5.11%
8	96.3	8.89	8.10	72.00	6.00%
9	105.2	8.89	8.90	79.11	6.59%
10	114.1	8.89	9.50	84.44	7.03%
11	123.0	8.89	9.90	88.00	7.33%
12	131.9	8.89	9.90	88.00	7.33%
13	140.8	8.89	10.20	90.67	7.55%
14	149.7	8.89	9.90	88.00	7.33%
15	158.6	8.89	9.80	87.11	7.26%
16	167.4	8.89	8.90	79.11	6.59%
17	176.3	8.89	7.90	70.22	5.85%
18	185.2	8.89	6.60	58.67	4.89%
19	194.1	8.89	5.00	44.44	3.70%
20	203.0	8.89	3.60	32.00	2.67%
21	211.9	8.89	2.30	20.44	1.70%
22	220.8	5.56	0.60	3.33	0.28%
23	223.0	17.11	0.50	8.56	0.71%
24	255.0	16.00	0.00	0.00	0.00%
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
Total		255.00		1200.50	100.00%



Data Collection Crew		Office Data Work	
Measurement made by:	C. Casanova	Data Inputted by / Date:	G. LaFleur / 8-25-09
Notetaker/Recorder:	G. LaFleur	Data Input Checked by / Date:	
Other:			

- Note 1: WIDTH (ft) = sum of the width column
- Note 2: AREA (sq.ft.) = sum of the area column
- Note 3: AVG. DEPTH (ft) = area/width (using the values from this table)
- Note 4: Width of element
- Note 5: Area=Width*Depth for element
- Note 6: Percent area = element area/total area x 100%
- Note 7: Percent area should be less than 10% as per USGS standard.
- Note 8: Blank fields are cleared from all calculations.
- Note 9: The cross sections are taken at areas representative of the stream.





Appendix F7 – Bayou Liberty Dye Study Calculations

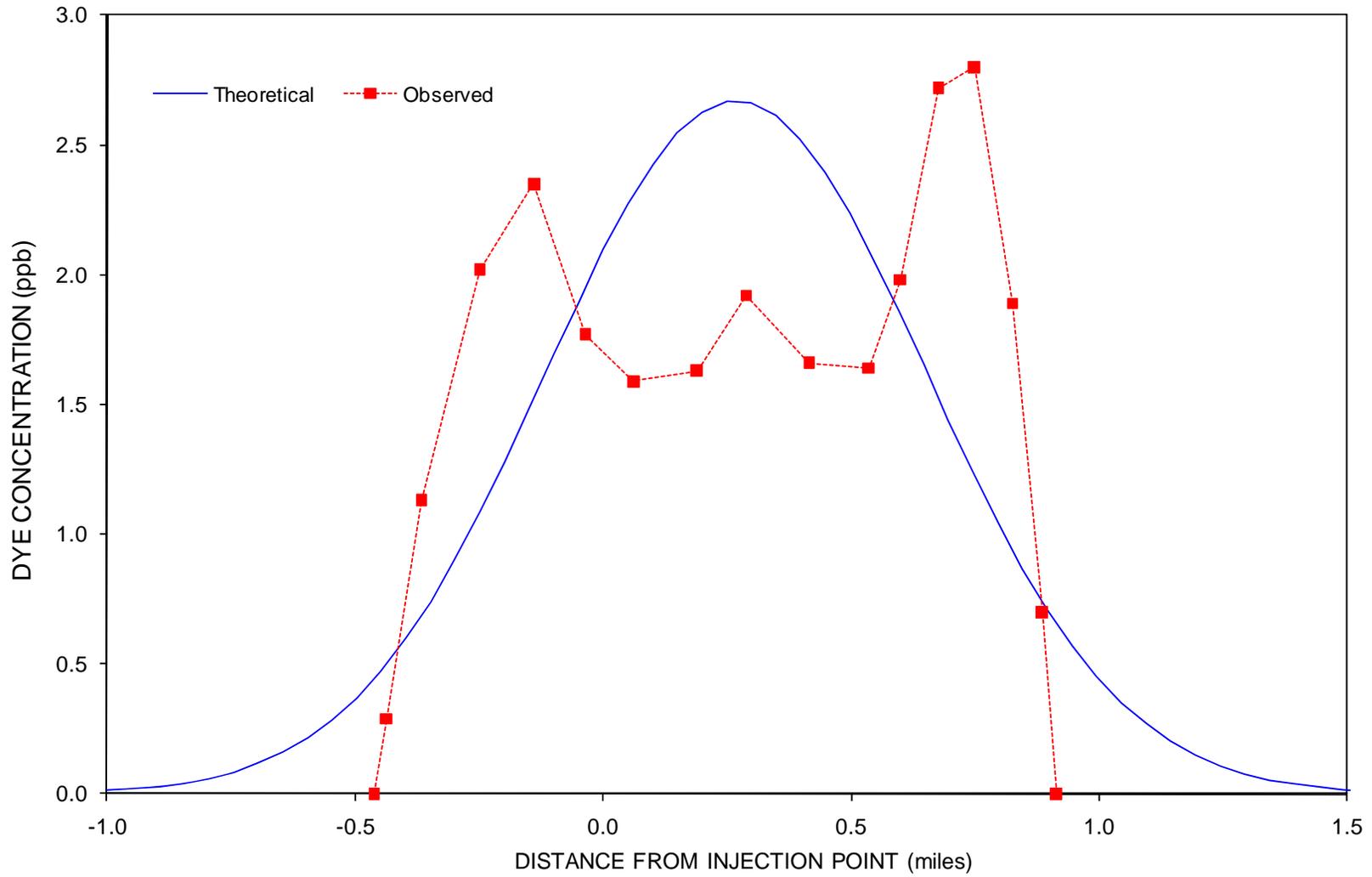
Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

DYE CONCENTRATIONS VS. DISTANCE FOR BAYOU BONFOUCA IN TIDAL REACH - RUN 1					
ASSUMES 1-D ANALYSIS (LATERALLY AND VERTICALLY MIXED) OF SLUG INJECTION					
COMPARES THEORETICAL WITH FIELD DATA					
RKD 01-28-2010					
DATA INPUT CELLS					
AVG FLOW =	56.5	cfs	(calculated)		
MEAN VELOCITY =	0.05	ft/sec	(composite of adjective and tidal velocity - adjust to vary width of curve)		
AVG XS AREA =	1130	ft ²	(calculated)		
AVG DEPTH =	6.85	ft	(average measured depth of reach covered by dye)		
AVG WIDTH =	165	ft	(average measured width of reach covered by dye)		
ELAPSED TIME =	26.24	hr	(time from injection to average time of dye run)		
INJECT. MASS =	24	lbs	stock solution (20% dye)		
ADV VELOCITY =	0.015	ft/sec	(adjust to get predicted and observed data lined up horizontally)		
PREDICTED MAXIMUM DYE CONCENTRATION =	13.35	ppb	(1-D advective dispersion equation)		
ADJUSTMENT FACTOR FOR DYE LOSS =	0.2		(To fit curve)		
ADJUSTED MAXIMUM DYE CONCENTRATION =	2.67	ppb	(after applying dye loss factor)		
LONGITUDINAL DISPERSION COEFFICIENT =	21.9	ft ² /sec	(eqn. 5.19 from Fischer et al, 1979)		
ADJUSTMENT FACTOR FOR DISPERSION =	1				
ADJUSTED LONGITUDINAL DISPERS. COEFF. =	21.9	ft ² /sec	(after applying adjustment factor)		
		2.03	m ² /sec	(converted to metric)	
NET FLOW =		16.95375	cfs		
DISTANCE		DISTANCE			
DOWNSTREAM	PREDIC.	DOWNSTREAM	DOWNSTREAM	OBSERV.	
FROM INJECTION	CONC.	FROM INJECTION	FROM INJECTION	CONC.	
(meters)	(miles)	(meters)	(miles)	(ppb)	
-2000	-1.24	0.00	1469	0.91	0.00
-1920	-1.19	0.00	1423	0.88	0.70
-1840	-1.14	0.00	1327	0.82	1.89
-1760	-1.09	0.01	1204	0.75	2.80
-1680	-1.04	0.01	1087	0.68	2.72
-1600	-0.99	0.01	963	0.60	1.98
-1520	-0.94	0.02	860	0.53	1.64
-1440	-0.89	0.03	669	0.42	1.66
-1360	-0.85	0.04	464	0.29	1.92
-1280	-0.80	0.06	303	0.19	1.63
-1200	-0.75	0.08	97	0.06	1.59
-1120	-0.70	0.12	-57	-0.04	1.77
-1040	-0.65	0.16	-225	-0.14	2.35
-960	-0.60	0.21	-400	-0.25	2.02
-880	-0.55	0.28	-589	-0.37	1.13
-800	-0.50	0.37	-703	-0.44	0.29
-720	-0.45	0.47	-743	-0.46	0.00
-640	-0.40	0.60			
-560	-0.35	0.74			
-480	-0.30	0.90			
-400	-0.25	1.08			
-320	-0.20	1.28			
-240	-0.15	1.48			
-160	-0.10	1.69			
-80	-0.05	1.90			
0	0.00	2.09			
80	0.05	2.27			
160	0.10	2.43			
240	0.15	2.55			
320	0.20	2.63			
400	0.25	2.67			
480	0.30	2.66			
560	0.35	2.61			
640	0.40	2.52			
720	0.45	2.40			
800	0.50	2.24			
880	0.55	2.06			
960	0.60	1.86			
1040	0.65	1.65			
1120	0.70	1.44			
1200	0.75	1.24			
1280	0.80	1.05			
1360	0.85	0.87			
1440	0.89	0.71			
1520	0.94	0.57			
1600	0.99	0.45			
1680	1.04	0.35			
1760	1.09	0.27			
1840	1.14	0.20			
1920	1.19	0.15			
2000	1.24	0.11			
2080	1.29	0.08			
2160	1.34	0.05			
2240	1.39	0.04			
2320	1.44	0.03			
2400	1.49	0.02			
2480	1.54	0.01			
2560	1.59	0.01			
2640	1.64	0.00			
2720	1.69	0.00			
2800	1.74	0.00			
2880	1.79	0.00			
2960	1.84	0.00			
3040	1.89	0.00			
3120	1.94	0.00			
3200	1.99	0.00			
3280	2.04	0.00			
3360	2.09	0.00			
3440	2.14	0.00			

BAYOU LIBERTY AT 26.2 HOURS



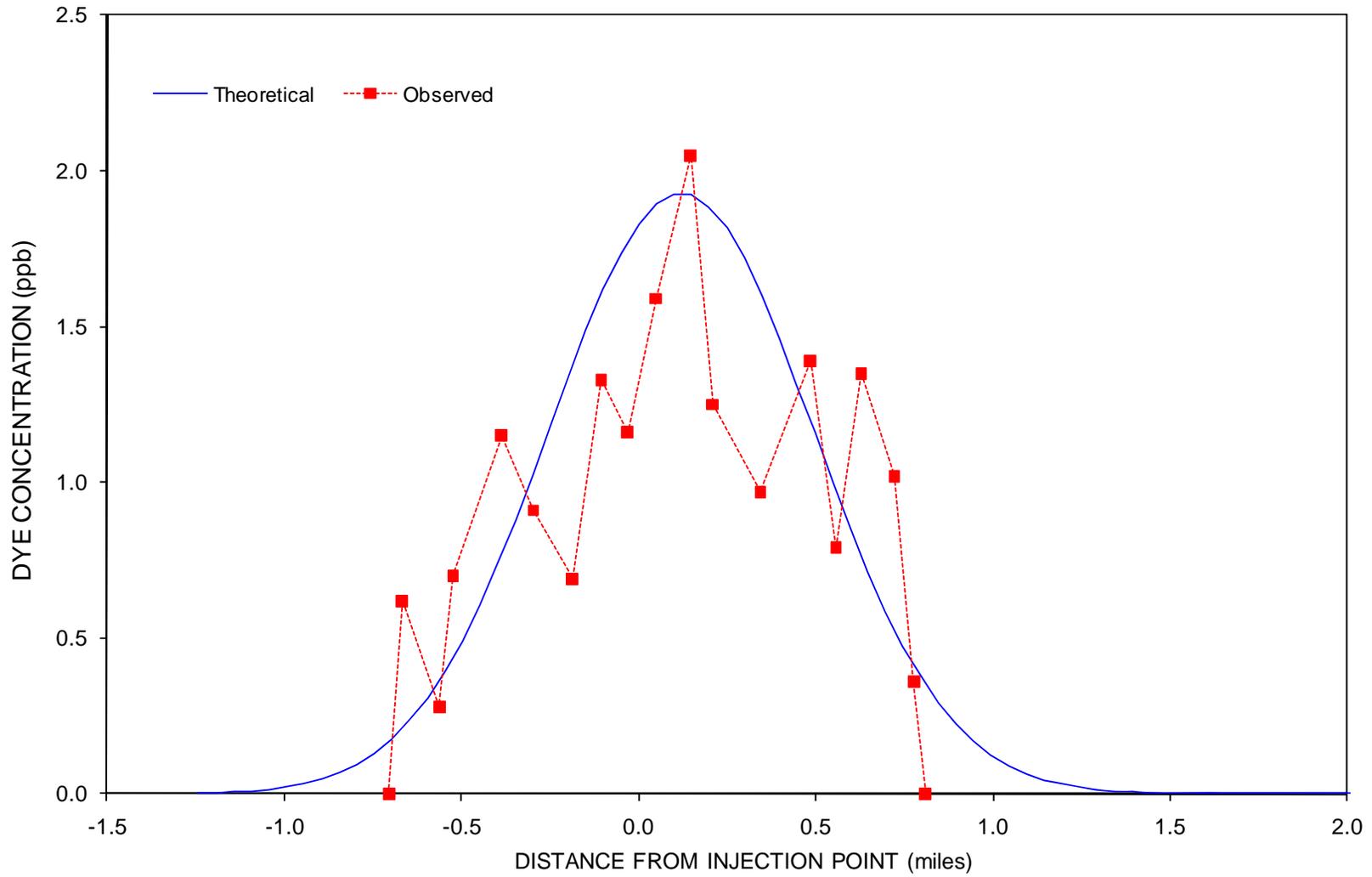
Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

DYE CONCENTRATIONS VS. DISTANCE FOR BAYOU BONFOUCA IN TIDAL REACH - RUN 1						
ASSUMES 1-D ANALYSIS (LATERALLY AND VERTICALLY MIXED) OF SLUG INJECTION						
COMPARES THEORETICAL WITH FIELD DATA						
RKD 01-28-2010						
DATA INPUT CELLS						
AVG FLOW =	39.6 cfs (calculated)					
MEAN VELOCITY =	0.035 ft/sec (composite of adjective and tidal velocity - adjust to vary width of curve)					
AVG XS AREA =	1130 ft ² (calculated)					
AVG DEPTH =	6.85 ft (average measured depth of reach covered by dye)					
AVG WIDTH =	165 ft (average measured width of reach covered by dye)					
ELAPSED TIME =	35.26 hr (time from injection to average time of dye run)					
INJECT. MASS =	24 lbs stock solution (20% dye)					
ADV VELOCITY =	0.005 ft/sec (adjust to get predicted and observed data lined up horizontally)					
PREDICTED MAXIMUM DYE CONCENTRATION =	13.77	ppb	(1-D advective dispersion equation)			
ADJUSTMENT FACTOR FOR DYE LOSS =	0.14		(To fit curve)			
ADJUSTED MAXIMUM DYE CONCENTRATION =	1.93	ppb	(after applying dye loss factor)			
LONGITUDINAL DISPERSION COEFFICIENT =	15.3	ft ² /sec	(eqn. 5.19 from Fischer et al, 1979)			
ADJUSTMENT FACTOR FOR DISPERSION =	1					
ADJUSTED LONGITUDINAL DISPERS. COEFF. =	15.3	ft ² /sec	(after applying adjustment factor)			
			1.42	m ² /sec (converted to metric)		
NET FLOW =	5.65125 cfs					
DISTANCE DOWNSTREAM FROM INJECTION		PREDIC. CONC.	DISTANCE DOWNSTREAM FROM INJECTION		OBSERV. CONC.	
(meters)	(miles)	(ppb)	(meters)	(miles)	(ppb)	
-2000	-1.24	0.00	1302	0.81	0.00	
-1920	-1.19	0.00	1249	0.78	0.36	
-1840	-1.14	0.01	1160	0.72	1.02	
-1760	-1.09	0.01	1011	0.63	1.35	
-1680	-1.04	0.01	897	0.56	0.79	
-1600	-0.99	0.02	780	0.48	1.39	
-1520	-0.94	0.03	553	0.34	0.97	
-1440	-0.89	0.05	336	0.21	1.25	
-1360	-0.85	0.07	235	0.15	2.05	
-1280	-0.80	0.10	77	0.05	1.59	
-1200	-0.75	0.13	-50	-0.03	1.16	
-1120	-0.70	0.18	-170	-0.11	1.33	
-1040	-0.65	0.23	-302	-0.19	0.69	
-960	-0.60	0.31	-479	-0.30	0.91	
-880	-0.55	0.39	-624	-0.39	1.15	
-800	-0.50	0.49	-844	-0.52	0.70	
-720	-0.45	0.61	-906	-0.56	0.28	
-640	-0.40	0.74	-1074	-0.67	0.62	
-560	-0.35	0.88	-1134	-0.70	0.00	
-480	-0.30	1.03				
-400	-0.25	1.18				
-320	-0.20	1.34				
-240	-0.15	1.49				
-160	-0.10	1.62				
-80	-0.05	1.74				
0	0.00	1.83				
80	0.05	1.89				
160	0.10	1.92				
240	0.15	1.92				
320	0.20	1.89				
400	0.25	1.82				
480	0.30	1.72				
560	0.35	1.60				
640	0.40	1.46				
720	0.45	1.31				
800	0.50	1.16				
880	0.55	1.00				
960	0.60	0.85				
1040	0.65	0.71				
1120	0.70	0.59				
1200	0.75	0.47				
1280	0.80	0.38				
1360	0.85	0.29				
1440	0.89	0.22				
1520	0.94	0.17				
1600	0.99	0.12				
1680	1.04	0.09				
1760	1.09	0.06				
1840	1.14	0.05				
1920	1.19	0.03				
2000	1.24	0.02				
2080	1.29	0.01				
2160	1.34	0.01				
2240	1.39	0.01				
2320	1.44	0.00				
2400	1.49	0.00				
2480	1.54	0.00				
2560	1.59	0.00				
2640	1.64	0.00				
2720	1.69	0.00				
2800	1.74	0.00				
2880	1.79	0.00				
2960	1.84	0.00				
3040	1.89	0.00				
3120	1.94	0.00				
3200	1.99	0.00				
3280	2.04	0.00				
3360	2.09	0.00				
3440	2.14	0.00				

BAYOU LIBERTY AT 35.3 HOURS



BAYOU LIBERTY

DYE STUDY DATA

SURVEYED: JUNE 16-18, 2009

SITE	X	Y	COUNT	PDOP	QUALITY	DATUM	DATE_TIME	Julian date& time	Dye conc (ppb) Dye inject (lbs)	River meters	Meters from Injection
BL06 DUMP	-89.82879	30.27096	5	6	2	GCS_WGS_1984	6/16/09 1:19:47 PM	39980.555405	2.5 gal @ 1.15 spg = 24 lbs	4932	
RUN 1 BG1	-89.84007	30.26735	5	6	2	GCS_WGS_1984	6/17/09 3:15:20 PM	39981.635648	0.00	3462	1469
RUN 1 01	-89.83961	30.26725	5	6	2	GCS_WGS_1984	6/17/09 3:17:25 PM	39981.637095	0.70	3509	1423
RUN 1 02	-89.83862	30.26732	5	6	2	GCS_WGS_1984	6/17/09 3:19:05 PM	39981.638252	1.89	3604	1327
RUN 1 03	-89.83737	30.26759	5	6	2	GCS_WGS_1984	6/17/09 3:21:06 PM	39981.639653	2.80	3727	1204
RUN 1 04	-89.83624	30.26797	5	6	2	GCS_WGS_1984	6/17/09 3:23:05 PM	39981.641030	2.72	3844	1087
RUN 1 05	-89.83520	30.26864	5	6	2	GCS_WGS_1984	6/17/09 3:25:24 PM	39981.642639	1.98	3968	963
RUN 1 06	-89.83460	30.26942	5	6	2	GCS_WGS_1984	6/17/09 3:27:07 PM	39981.643831	1.64	4071	860
RUN 1 07	-89.83400	30.27108	5	6	2	GCS_WGS_1984	6/17/09 3:30:08 PM	39981.645926	1.66	4263	669
RUN 1 08	-89.83278	30.27205	5	6	2	GCS_WGS_1984	6/17/09 3:33:18 PM	39981.648125	1.92	4467	464
RUN 1 09	-89.83166	30.27101	5	6	2	GCS_WGS_1984	6/17/09 3:36:09 PM	39981.650104	1.63	4628	303
RUN 1 10	-89.82977	30.27103	5	6	2	GCS_WGS_1984	6/17/09 3:39:39 PM	39981.652535	1.59	4835	97
RUN 1 11	-89.82820	30.27083	5	6	2	GCS_WGS_1984	6/17/09 3:42:14 PM	39981.654329	1.77	4989	-57
RUN 1 12	-89.82659	30.27135	5	6	2	GCS_WGS_1984	6/17/09 3:45:12 PM	39981.656389	2.35	5157	-225
RUN 1 13	-89.82621	30.27287	5	6	2	GCS_WGS_1984	6/17/09 3:48:07 PM	39981.658414	2.02	5332	-400
RUN 1 14	-89.82559	30.27429	5	6	2	GCS_WGS_1984	6/17/09 3:51:09 PM	39981.660521	1.13	5520	-589
RUN 1 15	-89.82445	30.27453	5	6	2	GCS_WGS_1984	6/17/09 3:53:09 PM	39981.661910	0.29	5634	-703
RUN 1 BG2	-89.82401	30.27452	5	6	2	GCS_WGS_1984	6/17/09 3:54:06 PM	39981.662569	0.00	5675	-743
Average time of run minus dump time in hours ---->								26.24			

BAYOU LIBERTY

DYE STUDY DATA

SURVEYED: JUNE 16-18, 2009

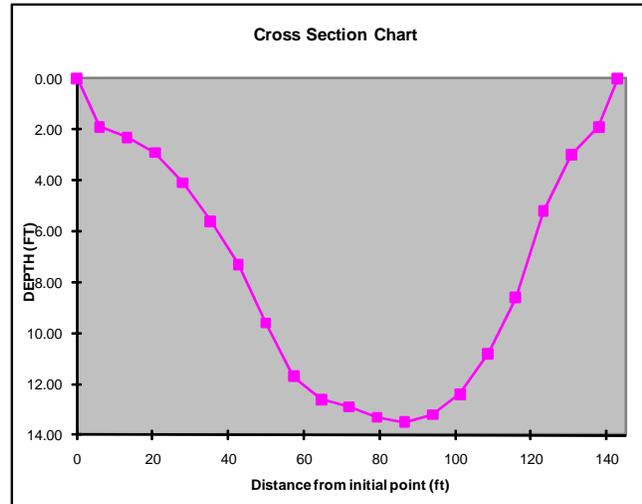
SITE	X	Y	COUNT	PDOP	QUALITY	DATUM	DATE_TIME	Julian date& time	Dye conc (ppb) Dye inject (lbs)	River meters	Meters from Injection
RUN 2 BG 1	-89.83837	30.26740	5	6	2	GCS_WGS_1984	6/18/09 12:15:36 AM	39982.010833	0.00	3630	1302
RUN 2 01	-89.83783	30.26751	5	6	2	GCS_WGS_1984	6/18/09 12:17:20 AM	39982.012037	0.36	3683	1249
RUN 2 02	-89.83696	30.26779	5	6	2	GCS_WGS_1984	6/18/09 12:18:48 AM	39982.013056	1.02	3772	1160
RUN 2 03	-89.83559	30.26838	5	6	2	GCS_WGS_1984	6/18/09 12:21:10 AM	39982.014699	1.35	3921	1011
RUN 2 04	-89.83478	30.26912	5	6	2	GCS_WGS_1984	6/18/09 12:23:20 AM	39982.016204	0.79	4035	897
RUN 2 05	-89.83433	30.27011	5	6	2	GCS_WGS_1984	6/18/09 12:25:07 AM	39982.017442	1.39	4151	780
RUN 2 06	-89.83361	30.27196	5	6	2	GCS_WGS_1984	6/18/09 12:28:27 AM	39982.019757	0.97	4379	553
RUN 2 07	-89.83182	30.27128	5	6	2	GCS_WGS_1984	6/18/09 12:31:04 AM	39982.021574	1.25	4595	336
RUN 2 08	-89.83108	30.27074	5	6	2	GCS_WGS_1984	6/18/09 12:32:42 AM	39982.022708	2.05	4697	235
RUN 2 09	-89.82956	30.27109	5	6	2	GCS_WGS_1984	6/18/09 12:35:13 AM	39982.024456	1.59	4855	77
RUN 2 10	-89.82827	30.27093	5	6	2	GCS_WGS_1984	6/18/09 12:37:11 AM	39982.025822	1.16	4981	-50
RUN 2 11	-89.82708	30.27109	5	6	2	GCS_WGS_1984	6/18/09 12:38:57 AM	39982.027049	1.33	5102	-170
RUN 2 12	-89.82625	30.27198	5	6	2	GCS_WGS_1984	6/18/09 12:41:06 AM	39982.028542	0.69	5233	-302
RUN 2 13	-89.82627	30.27357	5	6	2	GCS_WGS_1984	6/18/09 12:43:47 AM	39982.030405	0.91	5411	-479
RUN 2 14	-89.82526	30.27442	5	6	2	GCS_WGS_1984	6/18/09 12:46:00 AM	39982.031944	1.15	5555	-624
RUN 2 15	-89.82359	30.27537	5	6	2	GCS_WGS_1984	6/18/09 12:49:02 AM	39982.034051	0.70	5776	-844
RUN 2 16	-89.82358	30.27592	5	6	2	GCS_WGS_1984	6/18/09 12:50:04 AM	39982.034769	0.28	5837	-906
RUN 2 17	-89.82336	30.27742	5	6	2	GCS_WGS_1984	6/18/09 12:56:32 AM	39982.039259	0.62	6006	-1074
RUN 2 BG 2	-89.82311	30.27791	5	6	2	GCS_WGS_1984	6/18/09 12:57:32 AM	39982.039954	0.00	6065	-1134
Average time of run minus dump time in hours ----->								35.26			
								DEPTH (ft)	WIDTH (ft)		
LIB DYE XS1	-89.82540	30.27453	5	6	2	GCS_WGS_1984	6/18/09 4:07:07 PM	6.820000	156	5546	
LIB DYE XS2	-89.83433	30.27057	5	6	2	GCS_WGS_1984	6/18/09 4:21:24 PM	6.870000	173	4200	
Run 1 & 2 average width and depth ----->								6.85	165		

STREAM CROSS-SECTION SPREADSHEET

Site Number: 3865 Dump Subsegment: 040905 Waterbody: Bayou Liberty
 Site Description: Site 3865; See GPS
 Type of Equipment: Fathometer Hydrotrac Manual
 Initial Bank: RDB LDB
 Tapedown: _____
 Gauge Height: _____
 Date: 6/18/2009

WIDTH ¹ (ft):	143.00
AREA ² (ft ²):	1117.05
AVG. DEPTH ³ (ft):	7.81

Subsection	Distance from initial point (ft)	Width ⁴ (ft)	Depth (ft)	Area ⁵ (sq.ft.)	Area of element as % of Total Area ^{6, 7}
1	0.0	3.00	0.00	0.00	
2	6.0	6.67	1.90	12.67	1.13%
3	13.3	7.33	2.30	16.87	1.51%
4	20.7	7.33	2.90	21.27	1.90%
5	28.0	7.33	4.10	30.07	2.69%
6	35.3	7.33	5.60	41.07	3.68%
7	42.7	7.33	7.30	53.53	4.79%
8	50.0	7.33	9.60	70.40	6.30%
9	57.3	7.33	11.70	85.80	7.68%
10	64.7	7.33	12.60	92.40	8.27%
11	72.0	7.33	12.90	94.60	8.47%
12	79.3	7.33	13.30	97.53	8.73%
13	86.7	7.33	13.50	99.00	8.86%
14	94.0	7.33	13.20	96.80	8.67%
15	101.3	7.33	12.40	90.93	8.14%
16	108.7	7.33	10.80	79.20	7.09%
17	116.0	7.33	8.60	63.07	5.65%
18	123.3	7.33	5.20	38.13	3.41%
19	130.7	7.33	3.00	22.00	1.97%
20	138.0	6.17	1.90	11.72	1.05%
21	143.0	2.50	0.00	0.00	0.00%
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
Total		143.00		1117.05	100.00%



Data Collection Crew		Office Data Work	
Measurement made by:	<u>Eric Garner</u>	Data Inputted by / Date:	<u>Bryan Alleman 8/5/09</u>
Notetaker/Recorder:	<u>Adam Tieben</u>	Data Input Checked by / Date:	
Other:			

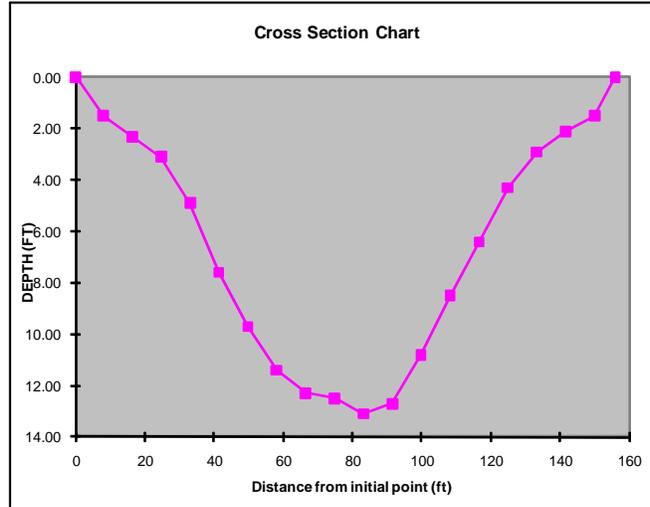
- Note 1: WIDTH (ft) = sum of the width column
- Note 2: AREA (sq.ft.) = sum of the area column
- Note 3: AVG. DEPTH (ft) = area/width (using the values from this table)
- Note 4: Width of element
- Note 5: Area=Width*Depth for element
- Note 6: Percent area = element area/total area x 100%
- Note 7: Percent area should be less than 10% as per USGS standard.
- Note 8: Blank fields are cleared from all calculations.
- Note 9: The cross sections are taken at areas representative of the stream.

STREAM CROSS-SECTION SPREADSHEET

Site Number: LIBDYE XS1 Subsegment: 040905 Waterbody: Bayou Liberty
 Site Description: See GPS
 Type of Equipment: Fathometer Hydrotrac Manual
 Initial Bank: RDB LDB
 Tapedown: _____
 Gauge Height: _____
 Date: 6/18/2009

WIDTH ¹ (ft):	156.00
AREA ² (ft ²):	1063.81
AVG. DEPTH ³ (ft):	6.82

Subsection	Distance from initial point (ft)	Width ⁴ (ft)	Depth (ft)	Area ⁵ (sq.ft.)	Area of element as % of Total Area ^{6 & 7}
1	0.0	4.00	0.00	0.00	
2	8.0	8.18	1.50	12.26	1.15%
3	16.4	8.35	2.30	19.21	1.81%
4	24.7	8.35	3.10	25.89	2.43%
5	33.1	8.35	4.90	40.93	3.85%
6	41.4	8.35	7.60	63.48	5.97%
7	49.8	8.35	9.70	81.02	7.62%
8	58.1	8.35	11.40	95.22	8.95%
9	66.5	8.35	12.30	102.74	9.66%
10	74.8	8.35	12.50	104.41	9.81%
11	83.2	8.35	13.10	109.42	10.29%
12	91.5	8.35	12.70	106.08	9.97%
13	99.9	8.35	10.80	90.21	8.48%
14	108.2	8.35	8.50	71.00	6.67%
15	116.6	8.35	6.40	53.46	5.03%
16	124.9	8.35	4.30	35.92	3.38%
17	133.3	8.35	2.90	24.22	2.28%
18	141.6	8.35	2.10	17.54	1.65%
19	150.0	7.18	1.50	10.76	1.01%
20	156.0	3.00	0.00	0.00	0.00%
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
Total	156.00			1063.81	100.00%



Data Collection Crew		Office Data Work	
Measurement made by:	<u>Adam Tieben</u>	Data Inputted by / Date:	<u>Bryan Alleman 8/5/09</u>
Notetaker/Recorder:	<u>Eric Garner</u>	Data Input Checked by / Date:	_____
Other:	_____		

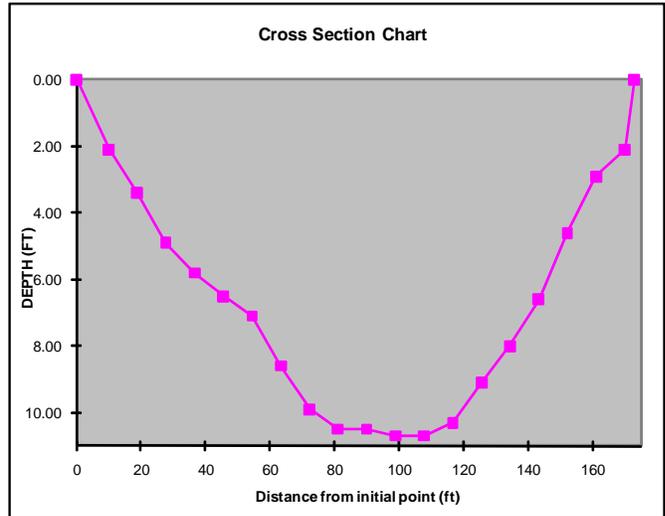
- Note 1: WIDTH (ft) = sum of the width column
- Note 2: AREA (sq.ft.) = sum of the area column
- Note 3: AVG. DEPTH (ft) = area/width (using the values from this table)
- Note 4: Width of element
- Note 5: Area=Width*Depth for element
- Note 6: Percent area = element area/total area x 100%
- Note 7: Percent area should be less than 10% as per USGS standard.
- Note 8: Blank fields are cleared from all calculations.
- Note 9: The cross sections are taken at areas representative of the stream.

STREAM CROSS-SECTION SPREADSHEET

Site Number: LIBDYEXS2 Subsegment: 040905 Waterbody: Bayou Liberty
 Site Description: See GPS
 Type of Equipment: Fathometer Hydrotrac Manual
 Initial Bank: RDB LDB
 Tapedown: _____
 Gauge Height: _____
 Date: 6/18/2009

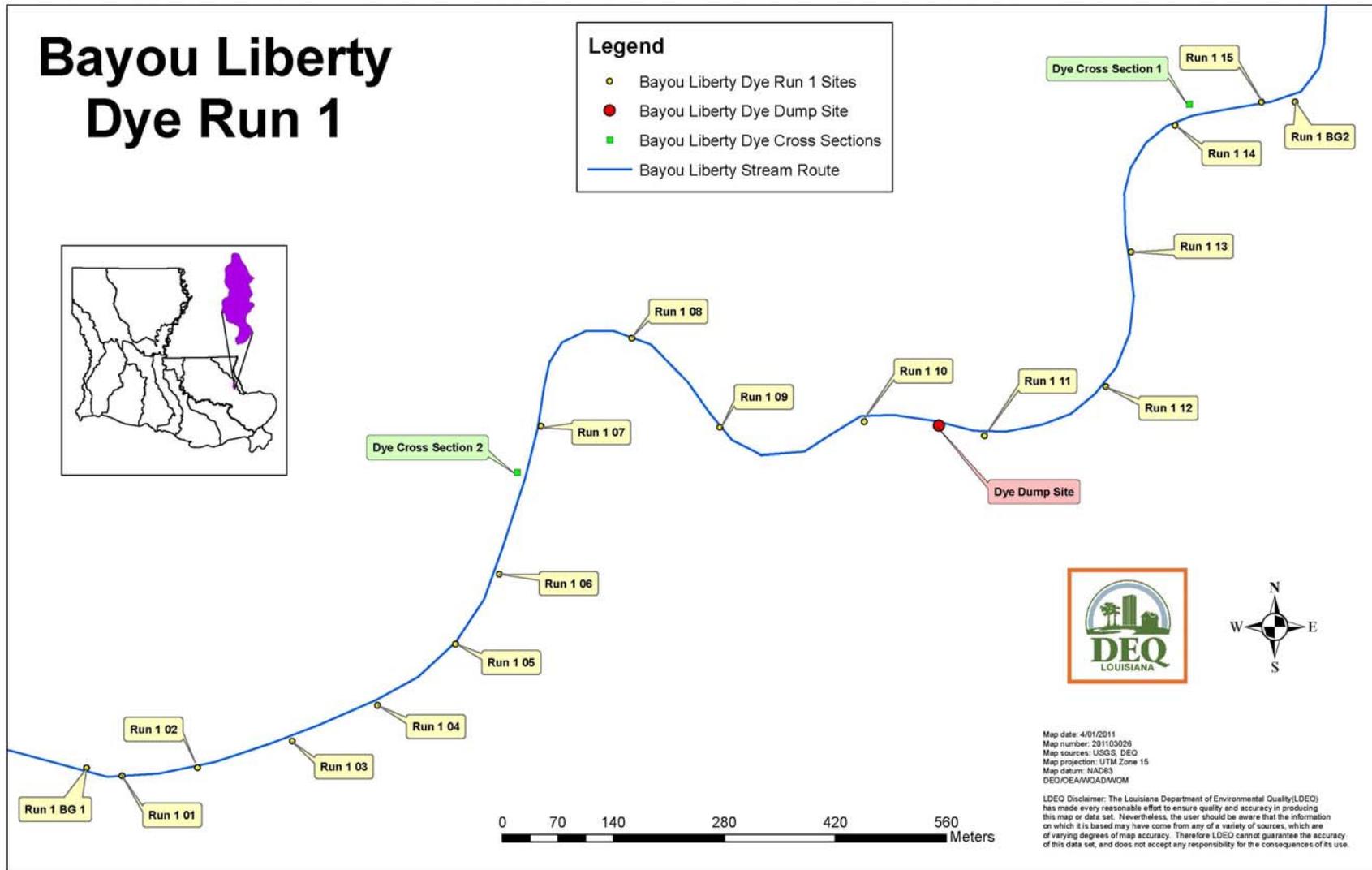
WIDTH ¹ (ft):	173.00
AREA ² (ft ²):	1188.76
AVG. DEPTH ³ (ft):	6.87

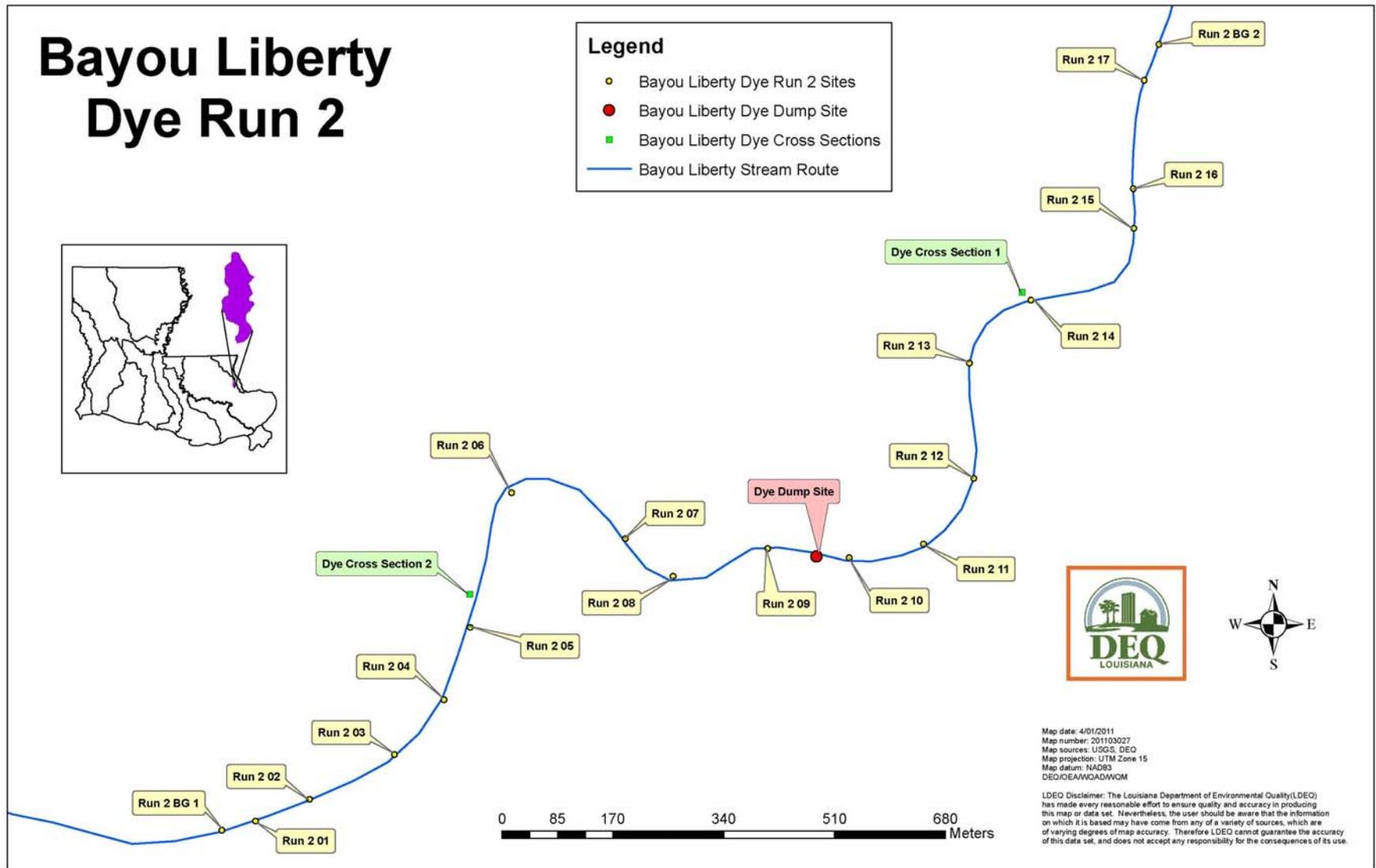
Subsection	Distance from initial point (ft)	Width ⁴ (ft)	Depth (ft)	Area ⁵ (sq.ft.)	Area of element as % of Total Area ⁶ & 7
1	0.0	5.00	0.00	0.00	
2	10.0	9.44	2.10	19.83	1.67%
3	18.9	8.89	3.40	30.22	2.54%
4	27.8	8.89	4.90	43.56	3.66%
5	36.7	8.89	5.80	51.56	4.34%
6	45.6	8.89	6.50	57.78	4.86%
7	54.4	8.89	7.10	63.11	5.31%
8	63.3	8.89	8.60	76.44	6.43%
9	72.2	8.89	9.90	88.00	7.40%
10	81.1	8.89	10.50	93.33	7.85%
11	90.0	8.89	10.50	93.33	7.85%
12	98.9	8.89	10.70	95.11	8.00%
13	107.8	8.89	10.70	95.11	8.00%
14	116.7	8.89	10.30	91.56	7.70%
15	125.6	8.89	9.10	80.89	6.80%
16	134.4	8.89	8.00	71.11	5.98%
17	143.3	8.89	6.60	58.67	4.94%
18	152.2	8.89	4.60	40.89	3.44%
19	161.1	8.89	2.90	25.78	2.17%
20	170.0	5.94	2.10	12.48	1.05%
21	173.0	1.50	0.00	0.00	0.00%
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
Total		173.00		1188.76	100.00%



Data Collection Crew		Office Data Work	
Measurement made by:	Eric Garner	Data Inputted by / Date:	Bryan Alleman 08/05/2009
Notetaker/Recorder:	Adam Tieben	Data Input Checked by / Date:	
Other:			

- Note 1: WIDTH (ft) = sum of the width column
- Note 2: AREA (sq.ft.) = sum of the area column
- Note 3: AVG. DEPTH (ft) = area/width (using the values from this table)
- Note 4: Width of element
- Note 5: Area=Width*Depth for element
- Note 6: Percent area = element area/total area x 100%
- Note 7: Percent area should be less than 10% as per USGS standard.
- Note 8: Blank fields are cleared from all calculations.
- Note 9: The cross sections are taken at areas representative of the stream.





Appendix G– Historical and Ambient Data

Appendix G1 – Ambient Data Calcs for current seasonal limits

Critical Temperature and DO Sat Determinations for WQN 0301 for current seasons

Site Description: Bayou Bonfouca at Slidell, Louisiana

Raw Data					Input values into shaded area	
Date			DO	Temperature		
Mo	D	Yr	(mg/l)	(C°)		
1	15	91	7.8	11.6	Summer Chlorinity	0
3	12	91	4.1	17.3	Winter Chlorinity	0
5	14	91	5.56	27.75		
7	16	91	1.9	30.7		
9	10	91	1.7	28.4	Summer Season 90th Percentile, Temperature (°C):	30.3
11	19	91	6.3	16.12	Winter Season 90th Percentile, Temperature (°C):	20.7
1	7	92	4.9	13.59		
3	10	92	5.4	19.48		
5	12	92	4.8	24.18		
7	14	92	1.1	30.64		
9	15	92	1.8	27.33	Summer Season 90 percent DO Sat	6.8
11	17	92	4.3	14.98	Winter Season 90 percent DO Sat	8.1
1	12	93	5.8	17		
3	9	93	6.05	16.97		
5	11	93	4.48	23.44		
7	13	93	7.32	23.33		
9	14	93	3.49	27.21		
11	15	93	3.91	17.35		
1	10	94	4.98	9.64	Summer Season	
3	14	94	6.17	16.16	5	
5	10	94	2.15	26.24	6	
7	12	94	0.08	27.19	7	
9	13	94	1.58	28.09	8	
11	15	94	1.81	20.9	9	
1	10	95	1.64	13.14	10	
3	14	95	5.9	16.2		
7	11	95	2.85	29.6		
9	12	95	4.65	28.44		
11	14	95	4.4	17		
1	8	96	6.75	9.75		
3	11	96	5.14	13.11		
5	14	96	2.16	24.95		
7	8	96	3.38	29.83	Winter Season	
9	10	96	5.6	29	11	
11	18	96	7.7	17.85	12	
1	7	97	6.21	17.43	1	
3	11	97	3.92	20.55	2	
5	13	97	3.07	23.37	3	
7	15	97	2.54	28.65	4	
9	9	97	4.01	28.45		
11	17	97	5.55	15.25		
1	13	98	5.91	14.91		
3	9	98	5.68	15.32		
5	11	98	2.19	27.11		
1	24	1	5.79	9.82		
2	21	1	6.04	16.95		
3	28	1	5.67	15.26		
4	25	1	4.63	21.4		
5	23	1	5.72	27.39		
6	20	1	2.2	28.73		
7	25	1	2.31	29.22		
8	22	1	4.58	31.2		
9	19	1	3.87	28.17		
10	17	1	3.9	20.25		
11	14	1	6.19	19.31		
12	19	1	4.68	17.13		
1	23	7	6.42	13.32		
2	13	7	7.49	14.78		
3	13	7	5.94	19.4		
4	3	7	6.05	24.58		
4	26	7	5.44	24.5		
5	15	7	8.17	28.31		
6	5	7	1.82	26.42		
6	26	7	8.35	29.1		
7	24	7	3.22	29.61		
8	14	7	2.27	32.43		
9	11	7	4.08	29.86		
10	2	7	4	26.99		
10	12	10	5.4	23.94		
11	9	10	7.24	17.46		
12	7	10	8.68	13.77		

Appendix G2 – Ambient Data Calcs for proposed seasonal limits

Critical Temperature and DO Sat Determinations for WQN 0301 for current seasons

Site Description: **Bayou Bonfouca at Slidell, Louisiana**

Raw Data				Input values into shaded area	
Date			DO		Temperature
Mo	D	Yr	(mg/l)		(C°)
1	15	91	7.8	11.6	
3	12	91	4.1	17.3	
5	14	91	5.56	27.75	
7	16	91	1.9	30.7	
9	10	91	1.7	28.4	
11	19	91	6.3	16.12	
1	7	92	4.9	13.59	
3	10	92	5.4	19.48	
5	12	92	4.8	24.18	
7	14	92	1.1	30.64	
9	15	92	1.8	27.33	
11	17	92	4.3	14.98	
1	12	93	5.8	17	
3	9	93	6.05	16.97	
5	11	93	4.48	23.44	
7	13	93	7.32	23.33	
9	14	93	3.49	27.21	
11	15	93	3.91	17.35	
1	10	94	4.98	9.64	
3	14	94	6.17	16.16	
5	10	94	2.15	26.24	
7	12	94	0.08	27.19	
9	13	94	1.58	28.09	
11	15	94	1.81	20.9	
1	10	95	1.64	13.14	
3	14	95	5.9	16.2	
7	11	95	2.85	29.6	
9	12	95	4.65	28.44	
11	14	95	4.4	17	
1	8	96	6.75	9.75	
3	11	96	5.14	13.11	
5	14	96	2.16	24.95	
7	8	96	3.38	29.83	
9	10	96	5.6	29	
11	18	96	7.7	17.85	
1	7	97	6.21	17.43	
3	11	97	3.92	20.55	
5	13	97	3.07	23.37	
7	15	97	2.54	28.65	
9	9	97	4.01	28.45	
11	17	97	5.55	15.25	
1	13	98	5.91	14.91	
3	9	98	5.68	15.32	
5	11	98	2.19	27.11	
1	24	1	5.79	9.82	
2	21	1	6.04	16.95	
3	28	1	5.67	15.26	
4	25	1	4.63	21.4	
5	23	1	5.72	27.39	
6	20	1	2.2	28.73	
7	25	1	2.31	29.22	
8	22	1	4.58	31.2	
9	19	1	3.87	28.17	
10	17	1	3.9	20.25	
11	14	1	6.19	19.31	
12	19	1	4.68	17.13	
1	23	7	6.42	13.32	
2	13	7	7.49	14.78	
3	13	7	5.94	19.4	
4	3	7	6.05	24.58	
4	26	7	5.44	24.5	
5	15	7	8.17	28.31	
6	5	7	1.82	26.42	
6	26	7	8.35	29.1	
7	24	7	3.22	29.61	
8	14	7	2.27	32.43	
9	11	7	4.08	29.86	
10	2	7	4	26.99	
10	12	10	5.4	23.94	
11	9	10	7.24	17.46	
12	7	10	8.68	13.77	

Summer Chlorinity **0**
 Winter Chlorinity **0**

Summer Season 90th Percentile, Temperature (°C): **29.8**
 Winter Season 90th Percentile, Temperature (°C): **17.1**

Summer Season 90 percent DO Sat **6.8**
 Winter Season 90 percent DO Sat **8.7**

Summer Season	
3	
4	
5	
6	
7	
8	
9	
10	

Winter Season	
12	
1	
2	

Appendix G3 – Land Use

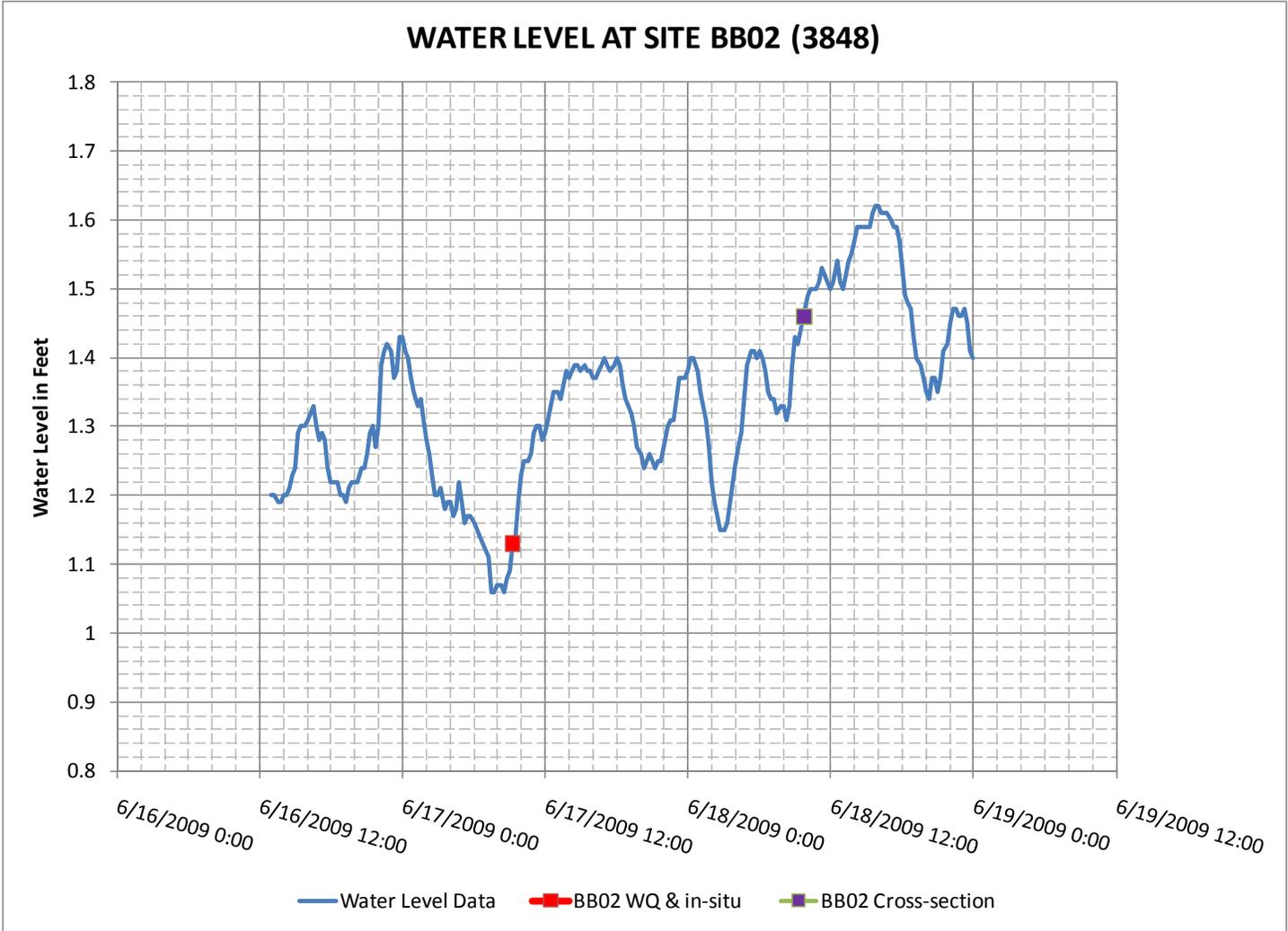
Subsegment	40905	
Evergreen Forest Land	13154.61	69.09
Deciduous Forest Land	2486.87	13.06
Urban or Built-up Land	1360.56	7.15
Forested Wetland	779.27	4.09
Developed low density	399.22	2.10
Pasture/Hay	308.49	1.62
Developed medium density	272.41	1.43
Water	143.32	0.75
Developed high density	83.62	0.44
Transitional Areas	23.62	0.12
Sugarcane	14.13	0.07
Wetland Nonforested	9.88	0.05
Gravel Pit, Strip Mine	2.37	0.01
Clouds	1.19	0.01
Totals	19039.57	100.00

Subsegment	40906	
Evergreen Forest Land	3187.96	43.24
Brackish Marsh	1268.84	17.21
Deciduous Forest Land	1184.92	16.07
Forested Wetland	682.70	9.26
Urban or Built-up Land	634.17	8.60
Pasture/Hay	145.50	1.97
Developed low density	129.29	1.75
Water	81.54	1.11
Transitional Areas	23.72	0.32
Wetland Nonforested	16.21	0.22
Clouds	8.11	0.11
Developed medium density	4.74	0.06
Sugarcane	3.26	0.04
Developed high density	1.19	0.02
Totals	7372.143	100.00

Subsegment	40907	
Evergreen Forest Land	5075.35	42.07
Deciduous Forest Land	2085.97	17.29
Urban or Built-up Land	2039.71	16.91
Developed low density	1116.22	9.25
Developed medium density	530.49	4.40
Pasture/Hay	493.22	4.09
Water	308.78	2.56
Developed high density	165.17	1.37
Forested Wetland	141.15	1.17
Transitional Areas	98.55	0.82
Wetland Nonforested	5.83	0.05
Gravel Pit, Strip Mine	3.56	0.03
Sugarcane	0.99	0.01
Totals	12064.97	100.00

Subsegment	40908	
Brackish Marsh	4673.46	61.26
Urban or Built-up Land	708.90	9.29
Deciduous Forest Land	707.41	9.27
Forested Wetland	374.12	4.90
Water	357.02	4.68
Developed low density	343.97	4.51
Evergreen Forest Land	226.55	2.97
Developed medium density	82.43	1.08
Transitional Areas	77.69	1.02
Pasture/Hay	42.11	0.55
Developed high density	14.04	0.18
Wetland Nonforested	12.45	0.16
Sugarcane	7.31	0.10
Clouds	1.19	0.02
Totals	7628.638	100.00

Appendix G4 – Stage Data



Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/16/2009 13:00	1.2
6/16/2009 13:15	1.2
6/16/2009 13:30	1.19
6/16/2009 13:45	1.19
6/16/2009 14:00	1.2
6/16/2009 14:15	1.2
6/16/2009 14:30	1.21
6/16/2009 14:45	1.23
6/16/2009 15:00	1.24
6/16/2009 15:15	1.29
6/16/2009 15:30	1.3
6/16/2009 15:45	1.3
6/16/2009 16:00	1.31
6/16/2009 16:15	1.32
6/16/2009 16:30	1.33
6/16/2009 16:45	1.3
6/16/2009 17:00	1.28
6/16/2009 17:15	1.29
6/16/2009 17:30	1.28
6/16/2009 17:45	1.24
6/16/2009 18:00	1.22
6/16/2009 18:15	1.22
6/16/2009 18:30	1.22
6/16/2009 18:45	1.2
6/16/2009 19:00	1.2
6/16/2009 19:15	1.19
6/16/2009 19:30	1.21
6/16/2009 19:45	1.22
6/16/2009 20:00	1.22
6/16/2009 20:15	1.22
6/16/2009 20:30	1.24
6/16/2009 20:45	1.24
6/16/2009 21:00	1.26
6/16/2009 21:15	1.29
6/16/2009 21:30	1.3
6/16/2009 21:45	1.27
6/16/2009 22:00	1.3
6/16/2009 22:15	1.39
6/16/2009 22:30	1.41
6/16/2009 22:45	1.42
6/16/2009 23:00	1.41
6/16/2009 23:15	1.37
6/16/2009 23:30	1.38
6/16/2009 23:45	1.43
6/17/2009	1.43
6/17/2009 0:15	1.41

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/17/2009 0:30	1.4
6/17/2009 0:45	1.37
6/17/2009 1:00	1.35
6/17/2009 1:15	1.33
6/17/2009 1:30	1.34
6/17/2009 1:45	1.31
6/17/2009 2:00	1.28
6/17/2009 2:15	1.26
6/17/2009 2:30	1.23
6/17/2009 2:45	1.2
6/17/2009 3:00	1.2
6/17/2009 3:15	1.21
6/17/2009 3:30	1.18
6/17/2009 3:45	1.19
6/17/2009 4:00	1.19
6/17/2009 4:15	1.17
6/17/2009 4:30	1.18
6/17/2009 4:45	1.22
6/17/2009 5:00	1.19
6/17/2009 5:15	1.16
6/17/2009 5:30	1.17
6/17/2009 5:45	1.17
6/17/2009 6:00	1.16
6/17/2009 6:15	1.15
6/17/2009 6:30	1.14
6/17/2009 6:45	1.13
6/17/2009 7:00	1.12
6/17/2009 7:15	1.11
6/17/2009 7:30	1.06
6/17/2009 7:45	1.06
6/17/2009 8:00	1.07
6/17/2009 8:15	1.07
6/17/2009 8:30	1.06
6/17/2009 8:45	1.08
6/17/2009 9:00	1.09
6/17/2009 9:15	1.13
6/17/2009 9:30	1.14
6/17/2009 9:45	1.19
6/17/2009 10:00	1.23
6/17/2009 10:15	1.25
6/17/2009 10:30	1.25
6/17/2009 10:45	1.26
6/17/2009 11:00	1.29
6/17/2009 11:15	1.3
6/17/2009 11:30	1.3
6/17/2009 11:45	1.28

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/17/2009 12:00	1.29
6/17/2009 12:15	1.31
6/17/2009 12:30	1.33
6/17/2009 12:45	1.35
6/17/2009 13:00	1.35
6/17/2009 13:15	1.34
6/17/2009 13:30	1.36
6/17/2009 13:45	1.38
6/17/2009 14:00	1.37
6/17/2009 14:15	1.38
6/17/2009 14:30	1.39
6/17/2009 14:45	1.39
6/17/2009 15:00	1.38
6/17/2009 15:15	1.39
6/17/2009 15:30	1.38
6/17/2009 15:45	1.38
6/17/2009 16:00	1.37
6/17/2009 16:15	1.37
6/17/2009 16:30	1.38
6/17/2009 16:45	1.39
6/17/2009 17:00	1.4
6/17/2009 17:15	1.39
6/17/2009 17:30	1.38
6/17/2009 17:45	1.39
6/17/2009 18:00	1.4
6/17/2009 18:15	1.39
6/17/2009 18:30	1.36
6/17/2009 18:45	1.34
6/17/2009 19:00	1.33
6/17/2009 19:15	1.32
6/17/2009 19:30	1.3
6/17/2009 19:45	1.27
6/17/2009 20:00	1.26
6/17/2009 20:15	1.24
6/17/2009 20:30	1.25
6/17/2009 20:45	1.26
6/17/2009 21:00	1.25
6/17/2009 21:15	1.24
6/17/2009 21:30	1.25
6/17/2009 21:45	1.25
6/17/2009 22:00	1.27
6/17/2009 22:15	1.3
6/17/2009 22:30	1.31
6/17/2009 22:45	1.31
6/17/2009 23:00	1.34
6/17/2009 23:15	1.37

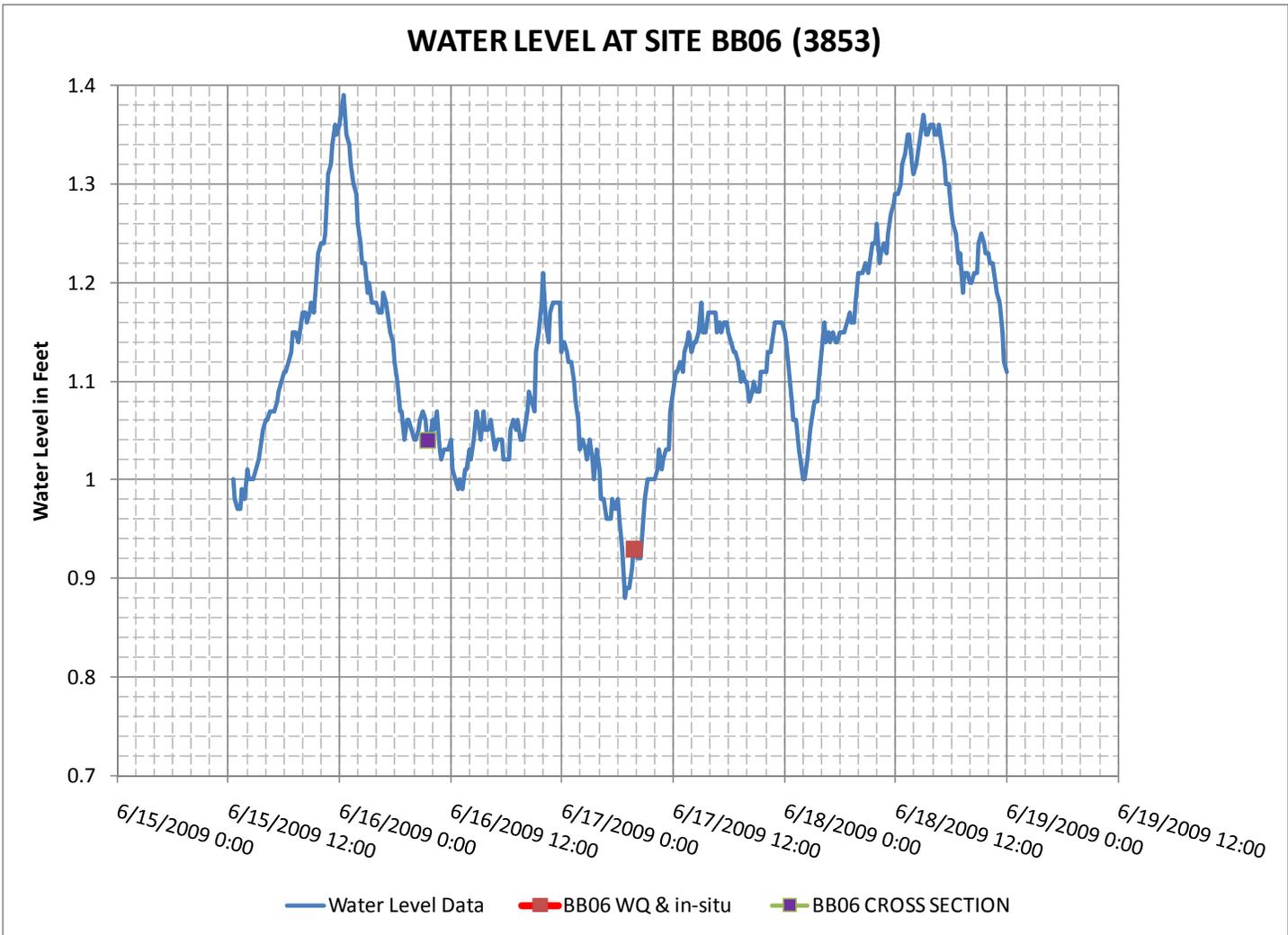
Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/17/2009 23:30	1.37
6/17/2009 23:45	1.37
6/18/2009	1.38
6/18/2009 0:15	1.4
6/18/2009 0:30	1.4
6/18/2009 0:45	1.38
6/18/2009 1:00	1.35
6/18/2009 1:15	1.33
6/18/2009 1:30	1.31
6/18/2009 1:45	1.27
6/18/2009 2:00	1.22
6/18/2009 2:15	1.19
6/18/2009 2:30	1.17
6/18/2009 2:45	1.15
6/18/2009 3:00	1.15
6/18/2009 3:15	1.16
6/18/2009 3:30	1.19
6/18/2009 3:45	1.22
6/18/2009 4:00	1.25
6/18/2009 4:15	1.27
6/18/2009 4:30	1.29
6/18/2009 4:45	1.34
6/18/2009 5:00	1.39
6/18/2009 5:15	1.41
6/18/2009 5:30	1.41
6/18/2009 5:45	1.4
6/18/2009 6:00	1.41
6/18/2009 6:15	1.4
6/18/2009 6:30	1.38
6/18/2009 6:45	1.35
6/18/2009 7:00	1.34
6/18/2009 7:15	1.34
6/18/2009 7:30	1.32
6/18/2009 7:45	1.33
6/18/2009 8:00	1.33
6/18/2009 8:15	1.31
6/18/2009 8:30	1.33
6/18/2009 8:45	1.39
6/18/2009 9:00	1.43
6/18/2009 9:15	1.42
6/18/2009 9:30	1.44
6/18/2009 9:45	1.46
6/18/2009 10:00	1.49
6/18/2009 10:15	1.5
6/18/2009 10:30	1.5
6/18/2009 10:45	1.5

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/18/2009 11:00	1.51
6/18/2009 11:15	1.53
6/18/2009 11:30	1.52
6/18/2009 11:45	1.51
6/18/2009 12:00	1.5
6/18/2009 12:15	1.51
6/18/2009 12:30	1.54
6/18/2009 12:45	1.51
6/18/2009 13:00	1.5
6/18/2009 13:15	1.52
6/18/2009 13:30	1.54
6/18/2009 13:45	1.55
6/18/2009 14:00	1.57
6/18/2009 14:15	1.59
6/18/2009 14:30	1.59
6/18/2009 14:45	1.59
6/18/2009 15:00	1.59
6/18/2009 15:15	1.59
6/18/2009 15:30	1.61
6/18/2009 15:45	1.62
6/18/2009 16:00	1.62
6/18/2009 16:15	1.61
6/18/2009 16:30	1.61
6/18/2009 16:45	1.61
6/18/2009 17:00	1.6
6/18/2009 17:15	1.59
6/18/2009 17:30	1.59
6/18/2009 17:45	1.57
6/18/2009 18:00	1.53
6/18/2009 18:15	1.49
6/18/2009 18:30	1.48
6/18/2009 18:45	1.47
6/18/2009 19:00	1.43
6/18/2009 19:15	1.4
6/18/2009 19:30	1.39
6/18/2009 19:45	1.37
6/18/2009 20:00	1.35
6/18/2009 20:15	1.34
6/18/2009 20:30	1.37
6/18/2009 20:45	1.37
6/18/2009 21:00	1.35
6/18/2009 21:15	1.37
6/18/2009 21:30	1.41
6/18/2009 21:45	1.42
6/18/2009 22:00	1.45
6/18/2009 22:15	1.47

6/18/2009 22:30	1.47
6/18/2009 22:45	1.46
6/18/2009 23:00	1.46
6/18/2009 23:15	1.47
6/18/2009 23:30	1.45
6/18/2009 23:45	1.41
6/19/2009	1.4



Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/15/2009 12:30	1
6/15/2009 12:45	0.98
6/15/2009 13:00	0.97
6/15/2009 13:15	0.97
6/15/2009 13:30	0.99
6/15/2009 13:45	0.98
6/15/2009 14:00	1.01
6/15/2009 14:15	1
6/15/2009 14:30	1
6/15/2009 14:45	1
6/15/2009 15:00	1.01
6/15/2009 15:15	1.02
6/15/2009 15:30	1.03
6/15/2009 15:45	1.05
6/15/2009 16:00	1.06
6/15/2009 16:15	1.06
6/15/2009 16:30	1.07
6/15/2009 16:45	1.07
6/15/2009 17:00	1.07
6/15/2009 17:15	1.08
6/15/2009 17:30	1.09
6/15/2009 17:45	1.1
6/15/2009 18:00	1.11
6/15/2009 18:15	1.11
6/15/2009 18:30	1.12
6/15/2009 18:45	1.13
6/15/2009 19:00	1.15
6/15/2009 19:15	1.15
6/15/2009 19:30	1.14
6/15/2009 19:45	1.15
6/15/2009 20:00	1.17
6/15/2009 20:15	1.17
6/15/2009 20:30	1.16
6/15/2009 20:45	1.17
6/15/2009 21:00	1.18
6/15/2009 21:15	1.17
6/15/2009 21:30	1.21
6/15/2009 21:45	1.23
6/15/2009 22:00	1.24
6/15/2009 22:15	1.24
6/15/2009 22:30	1.25
6/15/2009 22:45	1.31
6/15/2009 23:00	1.32
6/15/2009 23:15	1.34
6/15/2009 23:30	1.36
6/15/2009 23:45	1.35

6/16/2009	1.36
6/16/2009 0:15	1.38
6/16/2009 0:30	1.39
6/16/2009 0:45	1.35
6/16/2009 1:00	1.34
6/16/2009 1:15	1.32
6/16/2009 1:30	1.3
6/16/2009 1:45	1.29
6/16/2009 2:00	1.26
6/16/2009 2:15	1.24
6/16/2009 2:30	1.22
6/16/2009 2:45	1.22
6/16/2009 3:00	1.19
6/16/2009 3:15	1.2
6/16/2009 3:30	1.18
6/16/2009 3:45	1.18
6/16/2009 4:00	1.18
6/16/2009 4:15	1.17
6/16/2009 4:30	1.17
6/16/2009 4:45	1.19
6/16/2009 5:00	1.18
6/16/2009 5:15	1.17
6/16/2009 5:30	1.15
6/16/2009 5:45	1.14
6/16/2009 6:00	1.12
6/16/2009 6:15	1.1
6/16/2009 6:30	1.07
6/16/2009 6:45	1.07
6/16/2009 7:00	1.04
6/16/2009 7:15	1.06
6/16/2009 7:30	1.06
6/16/2009 7:45	1.05
6/16/2009 8:00	1.04
6/16/2009 8:15	1.04
6/16/2009 8:30	1.05
6/16/2009 8:45	1.06
6/16/2009 9:00	1.07
6/16/2009 9:15	1.06
6/16/2009 9:30	1.04
6/16/2009 9:45	1.04
6/16/2009 10:00	1.06
6/16/2009 10:15	1.05
6/16/2009 10:30	1.07
6/16/2009 10:45	1.03
6/16/2009 11:00	1.02
6/16/2009 11:15	1.03

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/16/2009 11:30	1.03
6/16/2009 11:45	1.03
6/16/2009 12:00	1.04
6/16/2009 12:15	1.01
6/16/2009 12:30	1
6/16/2009 12:45	0.99
6/16/2009 13:00	1
6/16/2009 13:15	0.99
6/16/2009 13:30	1.01
6/16/2009 13:45	1.01
6/16/2009 14:00	1.03
6/16/2009 14:15	1.02
6/16/2009 14:30	1.04
6/16/2009 14:45	1.07
6/16/2009 15:00	1.06
6/16/2009 15:15	1.04
6/16/2009 15:30	1.07
6/16/2009 15:45	1.05
6/16/2009 16:00	1.05
6/16/2009 16:15	1.06
6/16/2009 16:30	1.05
6/16/2009 16:45	1.03
6/16/2009 17:00	1.04
6/16/2009 17:15	1.04
6/16/2009 17:30	1.04
6/16/2009 17:45	1.02
6/16/2009 18:00	1.02
6/16/2009 18:15	1.02
6/16/2009 18:30	1.05
6/16/2009 18:45	1.06
6/16/2009 19:00	1.05
6/16/2009 19:15	1.06
6/16/2009 19:30	1.04
6/16/2009 19:45	1.04
6/16/2009 20:00	1.05
6/16/2009 20:15	1.07
6/16/2009 20:30	1.09
6/16/2009 20:45	1.08
6/16/2009 21:00	1.07
6/16/2009 21:15	1.13
6/16/2009 21:30	1.15
6/16/2009 21:45	1.18
6/16/2009 22:00	1.21
6/16/2009 22:15	1.16
6/16/2009 22:30	1.14
6/16/2009 22:45	1.17

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/16/2009 23:00	1.18
6/16/2009 23:15	1.18
6/16/2009 23:30	1.18
6/16/2009 23:45	1.18
6/17/2009	1.13
6/17/2009 0:15	1.14
6/17/2009 0:30	1.13
6/17/2009 0:45	1.12
6/17/2009 1:00	1.12
6/17/2009 1:15	1.1
6/17/2009 1:30	1.08
6/17/2009 1:45	1.06
6/17/2009 2:00	1.03
6/17/2009 2:15	1.04
6/17/2009 2:30	1.03
6/17/2009 2:45	1.02
6/17/2009 3:00	1.04
6/17/2009 3:15	1.02
6/17/2009 3:30	1
6/17/2009 3:45	1.03
6/17/2009 4:00	1.01
6/17/2009 4:15	0.98
6/17/2009 4:30	0.98
6/17/2009 4:45	0.96
6/17/2009 5:00	0.96
6/17/2009 5:15	0.96
6/17/2009 5:30	0.98
6/17/2009 5:45	0.97
6/17/2009 6:00	0.98
6/17/2009 6:15	0.96
6/17/2009 6:30	0.93
6/17/2009 6:45	0.88
6/17/2009 7:00	0.89
6/17/2009 7:15	0.89
6/17/2009 7:30	0.91
6/17/2009 7:45	0.93
6/17/2009 8:00	0.93
6/17/2009 8:15	0.92
6/17/2009 8:30	0.92
6/17/2009 8:45	0.96
6/17/2009 9:00	0.98
6/17/2009 9:15	1
6/17/2009 9:30	1
6/17/2009 9:45	1
6/17/2009 10:00	1
6/17/2009 10:15	1.01

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/17/2009 10:30	1.03
6/17/2009 10:45	1.01
6/17/2009 11:00	1.02
6/17/2009 11:15	1.03
6/17/2009 11:30	1.03
6/17/2009 11:45	1.07
6/17/2009 12:00	1.09
6/17/2009 12:15	1.11
6/17/2009 12:30	1.11
6/17/2009 12:45	1.12
6/17/2009 13:00	1.11
6/17/2009 13:15	1.13
6/17/2009 13:30	1.14
6/17/2009 13:45	1.15
6/17/2009 14:00	1.13
6/17/2009 14:15	1.14
6/17/2009 14:30	1.14
6/17/2009 14:45	1.15
6/17/2009 15:00	1.18
6/17/2009 15:15	1.15
6/17/2009 15:30	1.15
6/17/2009 15:45	1.17
6/17/2009 16:00	1.17
6/17/2009 16:15	1.17
6/17/2009 16:30	1.17
6/17/2009 16:45	1.15
6/17/2009 17:00	1.16
6/17/2009 17:15	1.15
6/17/2009 17:30	1.16
6/17/2009 17:45	1.16
6/17/2009 18:00	1.15
6/17/2009 18:15	1.14
6/17/2009 18:30	1.13
6/17/2009 18:45	1.13
6/17/2009 19:00	1.12
6/17/2009 19:15	1.1
6/17/2009 19:30	1.11
6/17/2009 19:45	1.1
6/17/2009 20:00	1.1
6/17/2009 20:15	1.08
6/17/2009 20:30	1.09
6/17/2009 20:45	1.1
6/17/2009 21:00	1.09
6/17/2009 21:15	1.09
6/17/2009 21:30	1.11
6/17/2009 21:45	1.11

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

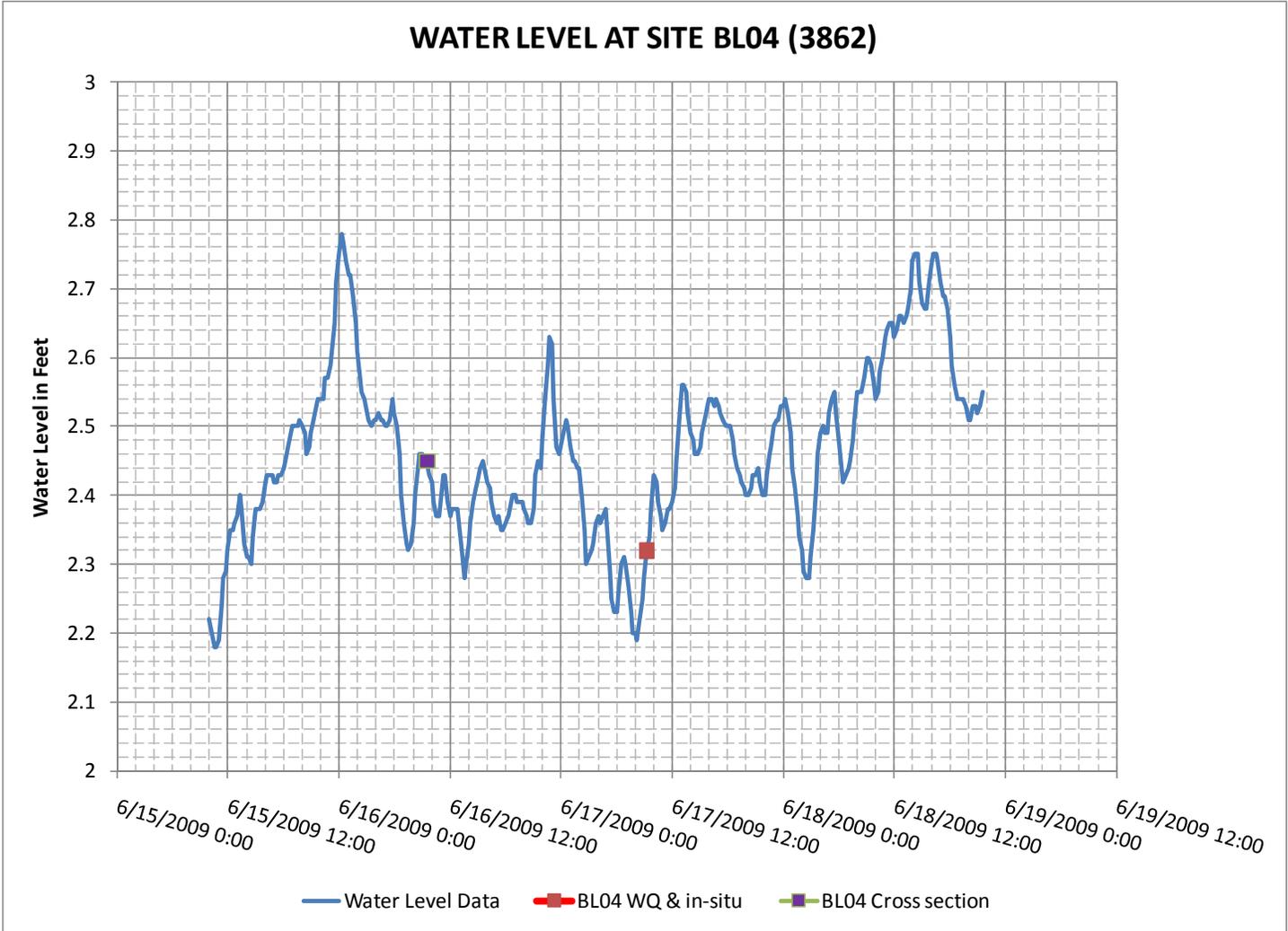
6/17/2009 22:00	1.11
6/17/2009 22:15	1.13
6/17/2009 22:30	1.13
6/17/2009 22:45	1.14
6/17/2009 23:00	1.16
6/17/2009 23:15	1.16
6/17/2009 23:30	1.16
6/17/2009 23:45	1.16
6/18/2009	1.15
6/18/2009 0:15	1.14
6/18/2009 0:30	1.11
6/18/2009 0:45	1.08
6/18/2009 1:00	1.06
6/18/2009 1:15	1.06
6/18/2009 1:30	1.03
6/18/2009 1:45	1.02
6/18/2009 2:00	1
6/18/2009 2:15	1
6/18/2009 2:30	1.02
6/18/2009 2:45	1.05
6/18/2009 3:00	1.06
6/18/2009 3:15	1.08
6/18/2009 3:30	1.08
6/18/2009 3:45	1.1
6/18/2009 4:00	1.13
6/18/2009 4:15	1.16
6/18/2009 4:30	1.14
6/18/2009 4:45	1.15
6/18/2009 5:00	1.14
6/18/2009 5:15	1.15
6/18/2009 5:30	1.14
6/18/2009 5:45	1.14
6/18/2009 6:00	1.15
6/18/2009 6:15	1.15
6/18/2009 6:30	1.15
6/18/2009 6:45	1.16
6/18/2009 7:00	1.17
6/18/2009 7:15	1.16
6/18/2009 7:30	1.16
6/18/2009 7:45	1.18
6/18/2009 8:00	1.21
6/18/2009 8:15	1.21
6/18/2009 8:30	1.21
6/18/2009 8:45	1.22
6/18/2009 9:00	1.21
6/18/2009 9:15	1.22

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/18/2009 9:30	1.24
6/18/2009 9:45	1.24
6/18/2009 10:00	1.26
6/18/2009 10:15	1.22
6/18/2009 10:30	1.23
6/18/2009 10:45	1.24
6/18/2009 11:00	1.23
6/18/2009 11:15	1.25
6/18/2009 11:30	1.27
6/18/2009 11:45	1.28
6/18/2009 12:00	1.29
6/18/2009 12:15	1.29
6/18/2009 12:30	1.3
6/18/2009 12:45	1.32
6/18/2009 13:00	1.33
6/18/2009 13:15	1.35
6/18/2009 13:30	1.35
6/18/2009 13:45	1.32
6/18/2009 14:00	1.31
6/18/2009 14:15	1.32
6/18/2009 14:30	1.34
6/18/2009 14:45	1.35
6/18/2009 15:00	1.37
6/18/2009 15:15	1.35
6/18/2009 15:30	1.35
6/18/2009 15:45	1.36
6/18/2009 16:00	1.36
6/18/2009 16:15	1.35
6/18/2009 16:30	1.35
6/18/2009 16:45	1.36
6/18/2009 17:00	1.34
6/18/2009 17:15	1.32
6/18/2009 17:30	1.3
6/18/2009 17:45	1.3
6/18/2009 18:00	1.27
6/18/2009 18:15	1.26
6/18/2009 18:30	1.25
6/18/2009 18:45	1.22
6/18/2009 19:00	1.23
6/18/2009 19:15	1.19
6/18/2009 19:30	1.21
6/18/2009 19:45	1.21
6/18/2009 20:00	1.2
6/18/2009 20:15	1.2
6/18/2009 20:30	1.21
6/18/2009 20:45	1.21

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/18/2009 21:00	1.24
6/18/2009 21:15	1.25
6/18/2009 21:30	1.24
6/18/2009 21:45	1.23
6/18/2009 22:00	1.23
6/18/2009 22:15	1.22
6/18/2009 22:30	1.22
6/18/2009 22:45	1.2
6/18/2009 23:00	1.19
6/18/2009 23:15	1.18
6/18/2009 23:30	1.15
6/18/2009 23:45	1.12
6/19/2009	1.11



Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/15/2009 10:00	2.22
6/15/2009 10:15	2.2
6/15/2009 10:30	2.18
6/15/2009 10:45	2.18
6/15/2009 11:00	2.19
6/15/2009 11:15	2.24
6/15/2009 11:30	2.28
6/15/2009 11:45	2.29
6/15/2009 12:00	2.32
6/15/2009 12:15	2.35
6/15/2009 12:30	2.35
6/15/2009 12:45	2.36
6/15/2009 13:00	2.37
6/15/2009 13:15	2.4
6/15/2009 13:30	2.38
6/15/2009 13:45	2.33
6/15/2009 14:00	2.31
6/15/2009 14:15	2.31
6/15/2009 14:30	2.3
6/15/2009 14:45	2.34
6/15/2009 15:00	2.38
6/15/2009 15:15	2.38
6/15/2009 15:30	2.38
6/15/2009 15:45	2.39
6/15/2009 16:00	2.42
6/15/2009 16:15	2.43
6/15/2009 16:30	2.43
6/15/2009 16:45	2.43
6/15/2009 17:00	2.42
6/15/2009 17:15	2.42
6/15/2009 17:30	2.43
6/15/2009 17:45	2.43
6/15/2009 18:00	2.44
6/15/2009 18:15	2.45
6/15/2009 18:30	2.47
6/15/2009 18:45	2.49
6/15/2009 19:00	2.5
6/15/2009 19:15	2.5
6/15/2009 19:30	2.5
6/15/2009 19:45	2.51
6/15/2009 20:00	2.5
6/15/2009 20:15	2.49
6/15/2009 20:30	2.46
6/15/2009 20:45	2.47
6/15/2009 21:00	2.49
6/15/2009 21:15	2.51

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/15/2009 21:30	2.53
6/15/2009 21:45	2.54
6/15/2009 22:00	2.54
6/15/2009 22:15	2.54
6/15/2009 22:30	2.57
6/15/2009 22:45	2.57
6/15/2009 23:00	2.59
6/15/2009 23:15	2.61
6/15/2009 23:30	2.65
6/15/2009 23:45	2.71
6/16/2009	2.75
6/16/2009 0:15	2.78
6/16/2009 0:30	2.77
6/16/2009 0:45	2.74
6/16/2009 1:00	2.72
6/16/2009 1:15	2.72
6/16/2009 1:30	2.69
6/16/2009 1:45	2.65
6/16/2009 2:00	2.61
6/16/2009 2:15	2.57
6/16/2009 2:30	2.55
6/16/2009 2:45	2.54
6/16/2009 3:00	2.52
6/16/2009 3:15	2.51
6/16/2009 3:30	2.5
6/16/2009 3:45	2.51
6/16/2009 4:00	2.51
6/16/2009 4:15	2.52
6/16/2009 4:30	2.51
6/16/2009 4:45	2.51
6/16/2009 5:00	2.5
6/16/2009 5:15	2.5
6/16/2009 5:30	2.51
6/16/2009 5:45	2.54
6/16/2009 6:00	2.52
6/16/2009 6:15	2.5
6/16/2009 6:30	2.46
6/16/2009 6:45	2.4
6/16/2009 7:00	2.36
6/16/2009 7:15	2.33
6/16/2009 7:30	2.32
6/16/2009 7:45	2.33
6/16/2009 8:00	2.36
6/16/2009 8:15	2.4
6/16/2009 8:30	2.44
6/16/2009 8:45	2.46

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/16/2009 9:00	2.46
6/16/2009 9:15	2.45
6/16/2009 9:30	2.45
6/16/2009 9:45	2.43
6/16/2009 10:00	2.42
6/16/2009 10:15	2.39
6/16/2009 10:30	2.37
6/16/2009 10:45	2.37
6/16/2009 11:00	2.39
6/16/2009 11:15	2.43
6/16/2009 11:30	2.43
6/16/2009 11:45	2.39
6/16/2009 12:00	2.37
6/16/2009 12:15	2.38
6/16/2009 12:30	2.38
6/16/2009 12:45	2.38
6/16/2009 13:00	2.36
6/16/2009 13:15	2.32
6/16/2009 13:30	2.28
6/16/2009 13:45	2.3
6/16/2009 14:00	2.33
6/16/2009 14:15	2.36
6/16/2009 14:30	2.39
6/16/2009 14:45	2.41
6/16/2009 15:00	2.42
6/16/2009 15:15	2.44
6/16/2009 15:30	2.45
6/16/2009 15:45	2.44
6/16/2009 16:00	2.42
6/16/2009 16:15	2.41
6/16/2009 16:30	2.39
6/16/2009 16:45	2.37
6/16/2009 17:00	2.36
6/16/2009 17:15	2.37
6/16/2009 17:30	2.35
6/16/2009 17:45	2.35
6/16/2009 18:00	2.36
6/16/2009 18:15	2.37
6/16/2009 18:30	2.38
6/16/2009 18:45	2.4
6/16/2009 19:00	2.4
6/16/2009 19:15	2.39
6/16/2009 19:30	2.39
6/16/2009 19:45	2.39
6/16/2009 20:00	2.38
6/16/2009 20:15	2.37

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/16/2009 20:30	2.36
6/16/2009 20:45	2.36
6/16/2009 21:00	2.38
6/16/2009 21:15	2.43
6/16/2009 21:30	2.45
6/16/2009 21:45	2.44
6/16/2009 22:00	2.48
6/16/2009 22:15	2.54
6/16/2009 22:30	2.59
6/16/2009 22:45	2.63
6/16/2009 23:00	2.62
6/16/2009 23:15	2.54
6/16/2009 23:30	2.47
6/16/2009 23:45	2.46
6/17/2009	2.47
6/17/2009 0:15	2.49
6/17/2009 0:30	2.51
6/17/2009 0:45	2.5
6/17/2009 1:00	2.47
6/17/2009 1:15	2.45
6/17/2009 1:30	2.45
6/17/2009 1:45	2.44
6/17/2009 2:00	2.44
6/17/2009 2:15	2.4
6/17/2009 2:30	2.35
6/17/2009 2:45	2.3
6/17/2009 3:00	2.31
6/17/2009 3:15	2.32
6/17/2009 3:30	2.33
6/17/2009 3:45	2.36
6/17/2009 4:00	2.37
6/17/2009 4:15	2.36
6/17/2009 4:30	2.37
6/17/2009 4:45	2.38
6/17/2009 5:00	2.35
6/17/2009 5:15	2.29
6/17/2009 5:30	2.25
6/17/2009 5:45	2.23
6/17/2009 6:00	2.23
6/17/2009 6:15	2.26
6/17/2009 6:30	2.3
6/17/2009 6:45	2.31
6/17/2009 7:00	2.3
6/17/2009 7:15	2.27
6/17/2009 7:30	2.23
6/17/2009 7:45	2.2

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/17/2009 8:00	2.2
6/17/2009 8:15	2.19
6/17/2009 8:30	2.22
6/17/2009 8:45	2.25
6/17/2009 9:00	2.28
6/17/2009 9:15	2.32
6/17/2009 9:30	2.34
6/17/2009 9:45	2.38
6/17/2009 10:00	2.43
6/17/2009 10:15	2.42
6/17/2009 10:30	2.39
6/17/2009 10:45	2.37
6/17/2009 11:00	2.35
6/17/2009 11:15	2.36
6/17/2009 11:30	2.38
6/17/2009 11:45	2.38
6/17/2009 12:00	2.39
6/17/2009 12:15	2.41
6/17/2009 12:30	2.45
6/17/2009 12:45	2.51
6/17/2009 13:00	2.56
6/17/2009 13:15	2.56
6/17/2009 13:30	2.55
6/17/2009 13:45	2.52
6/17/2009 14:00	2.49
6/17/2009 14:15	2.48
6/17/2009 14:30	2.46
6/17/2009 14:45	2.46
6/17/2009 15:00	2.47
6/17/2009 15:15	2.49
6/17/2009 15:30	2.51
6/17/2009 15:45	2.53
6/17/2009 16:00	2.54
6/17/2009 16:15	2.54
6/17/2009 16:30	2.53
6/17/2009 16:45	2.54
6/17/2009 17:00	2.53
6/17/2009 17:15	2.52
6/17/2009 17:30	2.51
6/17/2009 17:45	2.5
6/17/2009 18:00	2.5
6/17/2009 18:15	2.5
6/17/2009 18:30	2.48
6/17/2009 18:45	2.46
6/17/2009 19:00	2.44
6/17/2009 19:15	2.43

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

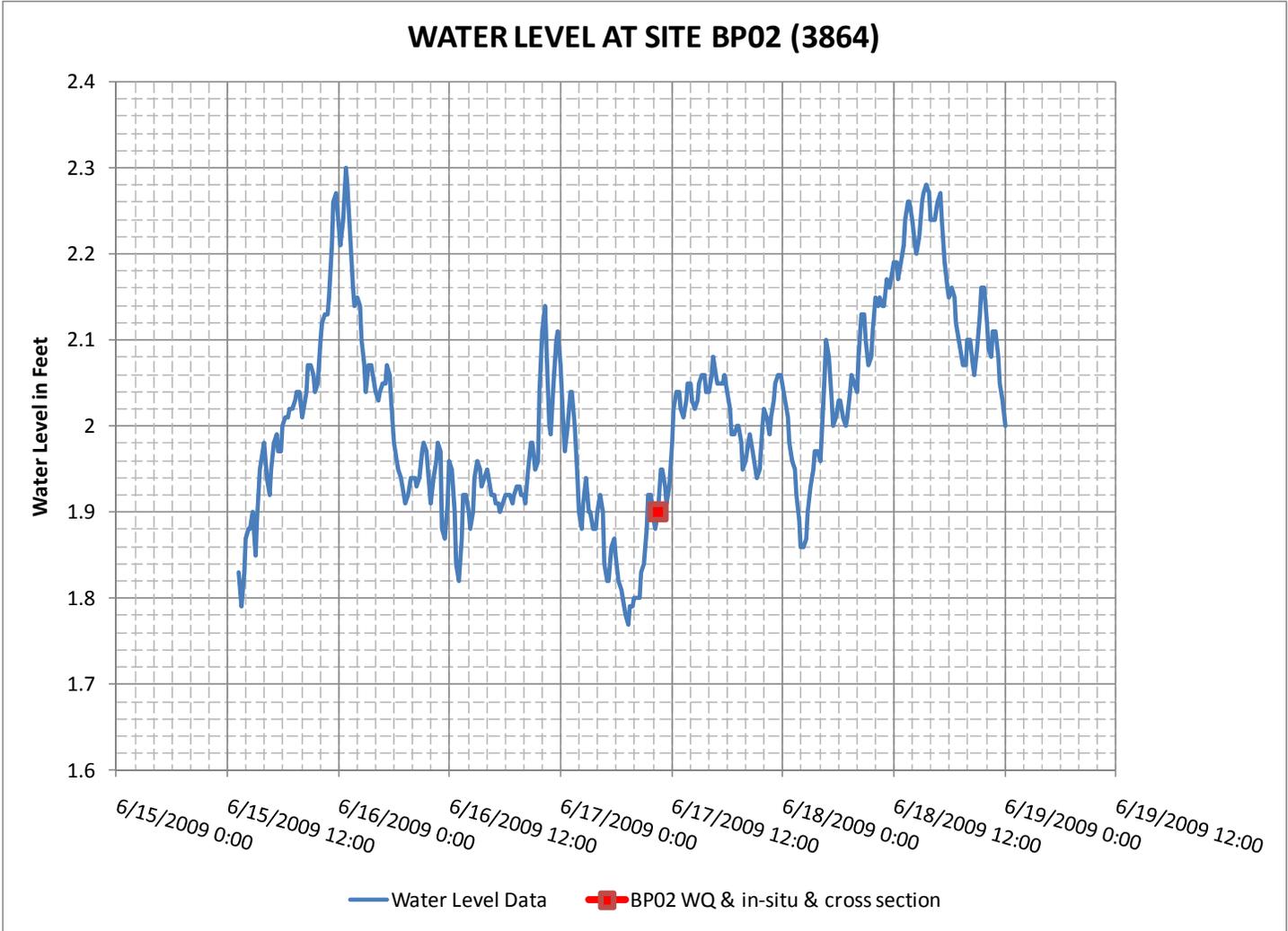
6/17/2009 19:30	2.42
6/17/2009 19:45	2.41
6/17/2009 20:00	2.4
6/17/2009 20:15	2.4
6/17/2009 20:30	2.41
6/17/2009 20:45	2.43
6/17/2009 21:00	2.43
6/17/2009 21:15	2.44
6/17/2009 21:30	2.42
6/17/2009 21:45	2.4
6/17/2009 22:00	2.4
6/17/2009 22:15	2.43
6/17/2009 22:30	2.46
6/17/2009 22:45	2.47
6/17/2009 23:00	2.5
6/17/2009 23:15	2.51
6/17/2009 23:30	2.51
6/17/2009 23:45	2.53
6/18/2009	2.53
6/18/2009 0:15	2.54
6/18/2009 0:30	2.52
6/18/2009 0:45	2.49
6/18/2009 1:00	2.44
6/18/2009 1:15	2.41
6/18/2009 1:30	2.37
6/18/2009 1:45	2.34
6/18/2009 2:00	2.32
6/18/2009 2:15	2.29
6/18/2009 2:30	2.28
6/18/2009 2:45	2.28
6/18/2009 3:00	2.31
6/18/2009 3:15	2.35
6/18/2009 3:30	2.41
6/18/2009 3:45	2.46
6/18/2009 4:00	2.49
6/18/2009 4:15	2.5
6/18/2009 4:30	2.49
6/18/2009 4:45	2.49
6/18/2009 5:00	2.52
6/18/2009 5:15	2.54
6/18/2009 5:30	2.55
6/18/2009 5:45	2.52
6/18/2009 6:00	2.48
6/18/2009 6:15	2.44
6/18/2009 6:30	2.42
6/18/2009 6:45	2.43

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/18/2009 7:00	2.44
6/18/2009 7:15	2.45
6/18/2009 7:30	2.48
6/18/2009 7:45	2.51
6/18/2009 8:00	2.55
6/18/2009 8:15	2.55
6/18/2009 8:30	2.55
6/18/2009 8:45	2.57
6/18/2009 9:00	2.6
6/18/2009 9:15	2.6
6/18/2009 9:30	2.59
6/18/2009 9:45	2.56
6/18/2009 10:00	2.54
6/18/2009 10:15	2.55
6/18/2009 10:30	2.58
6/18/2009 10:45	2.6
6/18/2009 11:00	2.63
6/18/2009 11:15	2.64
6/18/2009 11:30	2.65
6/18/2009 11:45	2.65
6/18/2009 12:00	2.63
6/18/2009 12:15	2.64
6/18/2009 12:30	2.66
6/18/2009 12:45	2.66
6/18/2009 13:00	2.65
6/18/2009 13:15	2.66
6/18/2009 13:30	2.67
6/18/2009 13:45	2.7
6/18/2009 14:00	2.74
6/18/2009 14:15	2.75
6/18/2009 14:30	2.75
6/18/2009 14:45	2.71
6/18/2009 15:00	2.68
6/18/2009 15:15	2.67
6/18/2009 15:30	2.67
6/18/2009 15:45	2.71
6/18/2009 16:00	2.74
6/18/2009 16:15	2.75
6/18/2009 16:30	2.75
6/18/2009 16:45	2.74
6/18/2009 17:00	2.71
6/18/2009 17:15	2.69
6/18/2009 17:30	2.69
6/18/2009 17:45	2.67
6/18/2009 18:00	2.63
6/18/2009 18:15	2.59

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/18/2009 18:30	2.56
6/18/2009 18:45	2.54
6/18/2009 19:00	2.54
6/18/2009 19:15	2.54
6/18/2009 19:30	2.54
6/18/2009 19:45	2.53
6/18/2009 20:00	2.51
6/18/2009 20:15	2.51
6/18/2009 20:30	2.53
6/18/2009 20:45	2.53
6/18/2009 21:00	2.52
6/18/2009 21:15	2.53
6/18/2009 21:30	2.55
6/18/2009 21:45	2.57
6/18/2009 22:00	2.62
6/18/2009 22:15	2.63
6/18/2009 22:30	2.62
6/18/2009 22:45	2.58
6/18/2009 23:00	2.54
6/18/2009 23:15	2.53
6/18/2009 23:30	2.49
6/18/2009 23:45	2.48
6/19/2009	2.47



Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/15/2009 13:15	1.83
6/15/2009 13:30	1.79
6/15/2009 13:45	1.83
6/15/2009 14:00	1.87
6/15/2009 14:15	1.88
6/15/2009 14:30	1.88
6/15/2009 14:45	1.9
6/15/2009 15:00	1.85
6/15/2009 15:15	1.89
6/15/2009 15:30	1.95
6/15/2009 15:45	1.97
6/15/2009 16:00	1.98
6/15/2009 16:15	1.94
6/15/2009 16:30	1.92
6/15/2009 16:45	1.95
6/15/2009 17:00	1.98
6/15/2009 17:15	1.99
6/15/2009 17:30	1.97
6/15/2009 17:45	1.97
6/15/2009 18:00	2
6/15/2009 18:15	2.01
6/15/2009 18:30	2.01
6/15/2009 18:45	2.02
6/15/2009 19:00	2.02
6/15/2009 19:15	2.03
6/15/2009 19:30	2.04
6/15/2009 19:45	2.04
6/15/2009 20:00	2.01
6/15/2009 20:15	2.02
6/15/2009 20:30	2.04
6/15/2009 20:45	2.07
6/15/2009 21:00	2.07
6/15/2009 21:15	2.06
6/15/2009 21:30	2.04
6/15/2009 21:45	2.05
6/15/2009 22:00	2.1
6/15/2009 22:15	2.12
6/15/2009 22:30	2.13
6/15/2009 22:45	2.13
6/15/2009 23:00	2.15
6/15/2009 23:15	2.21
6/15/2009 23:30	2.26
6/15/2009 23:45	2.27
6/16/2009	2.23
6/16/2009 0:15	2.21
6/16/2009 0:30	2.24

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/16/2009 0:45	2.3
6/16/2009 1:00	2.28
6/16/2009 1:15	2.22
6/16/2009 1:30	2.16
6/16/2009 1:45	2.14
6/16/2009 2:00	2.15
6/16/2009 2:15	2.14
6/16/2009 2:30	2.1
6/16/2009 2:45	2.07
6/16/2009 3:00	2.04
6/16/2009 3:15	2.07
6/16/2009 3:30	2.07
6/16/2009 3:45	2.06
6/16/2009 4:00	2.04
6/16/2009 4:15	2.03
6/16/2009 4:30	2.04
6/16/2009 4:45	2.05
6/16/2009 5:00	2.05
6/16/2009 5:15	2.07
6/16/2009 5:30	2.06
6/16/2009 5:45	2.03
6/16/2009 6:00	1.98
6/16/2009 6:15	1.96
6/16/2009 6:30	1.95
6/16/2009 6:45	1.94
6/16/2009 7:00	1.92
6/16/2009 7:15	1.91
6/16/2009 7:30	1.92
6/16/2009 7:45	1.94
6/16/2009 8:00	1.94
6/16/2009 8:15	1.94
6/16/2009 8:30	1.93
6/16/2009 8:45	1.94
6/16/2009 9:00	1.97
6/16/2009 9:15	1.98
6/16/2009 9:30	1.97
6/16/2009 9:45	1.93
6/16/2009 10:00	1.91
6/16/2009 10:15	1.94
6/16/2009 10:30	1.96
6/16/2009 10:45	1.98
6/16/2009 11:00	1.97
6/16/2009 11:15	1.88
6/16/2009 11:30	1.87
6/16/2009 11:45	1.91
6/16/2009 12:00	1.96

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/16/2009 12:15	1.95
6/16/2009 12:30	1.9
6/16/2009 12:45	1.84
6/16/2009 13:00	1.82
6/16/2009 13:15	1.87
6/16/2009 13:30	1.92
6/16/2009 13:45	1.92
6/16/2009 14:00	1.9
6/16/2009 14:15	1.88
6/16/2009 14:30	1.9
6/16/2009 14:45	1.94
6/16/2009 15:00	1.96
6/16/2009 15:15	1.95
6/16/2009 15:30	1.93
6/16/2009 15:45	1.94
6/16/2009 16:00	1.95
6/16/2009 16:15	1.94
6/16/2009 16:30	1.92
6/16/2009 16:45	1.92
6/16/2009 17:00	1.91
6/16/2009 17:15	1.91
6/16/2009 17:30	1.9
6/16/2009 17:45	1.91
6/16/2009 18:00	1.92
6/16/2009 18:15	1.92
6/16/2009 18:30	1.92
6/16/2009 18:45	1.91
6/16/2009 19:00	1.92
6/16/2009 19:15	1.93
6/16/2009 19:30	1.93
6/16/2009 19:45	1.92
6/16/2009 20:00	1.92
6/16/2009 20:15	1.91
6/16/2009 20:30	1.95
6/16/2009 20:45	1.98
6/16/2009 21:00	1.98
6/16/2009 21:15	1.95
6/16/2009 21:30	1.96
6/16/2009 21:45	2.04
6/16/2009 22:00	2.11
6/16/2009 22:15	2.14
6/16/2009 22:30	2.09
6/16/2009 22:45	2
6/16/2009 23:00	1.99
6/16/2009 23:15	2.05
6/16/2009 23:30	2.1

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/16/2009 23:45	2.11
6/17/2009	2.07
6/17/2009 0:15	2
6/17/2009 0:30	1.97
6/17/2009 0:45	2
6/17/2009 1:00	2.04
6/17/2009 1:15	2.04
6/17/2009 1:30	2
6/17/2009 1:45	1.94
6/17/2009 2:00	1.9
6/17/2009 2:15	1.88
6/17/2009 2:30	1.91
6/17/2009 2:45	1.94
6/17/2009 3:00	1.9
6/17/2009 3:15	1.9
6/17/2009 3:30	1.88
6/17/2009 3:45	1.88
6/17/2009 4:00	1.9
6/17/2009 4:15	1.92
6/17/2009 4:30	1.9
6/17/2009 4:45	1.84
6/17/2009 5:00	1.82
6/17/2009 5:15	1.82
6/17/2009 5:30	1.86
6/17/2009 5:45	1.87
6/17/2009 6:00	1.85
6/17/2009 6:15	1.82
6/17/2009 6:30	1.81
6/17/2009 6:45	1.8
6/17/2009 7:00	1.78
6/17/2009 7:15	1.77
6/17/2009 7:30	1.79
6/17/2009 7:45	1.79
6/17/2009 8:00	1.8
6/17/2009 8:15	1.8
6/17/2009 8:30	1.8
6/17/2009 8:45	1.83
6/17/2009 9:00	1.84
6/17/2009 9:15	1.88
6/17/2009 9:30	1.92
6/17/2009 9:45	1.92
6/17/2009 10:00	1.89
6/17/2009 10:15	1.88
6/17/2009 10:30	1.9
6/17/2009 10:45	1.95
6/17/2009 11:00	1.95

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/17/2009 11:15	1.93
6/17/2009 11:30	1.91
6/17/2009 11:45	1.93
6/17/2009 12:00	1.98
6/17/2009 12:15	2.02
6/17/2009 12:30	2.04
6/17/2009 12:45	2.04
6/17/2009 13:00	2.02
6/17/2009 13:15	2.01
6/17/2009 13:30	2.03
6/17/2009 13:45	2.05
6/17/2009 14:00	2.05
6/17/2009 14:15	2.03
6/17/2009 14:30	2.02
6/17/2009 14:45	2.03
6/17/2009 15:00	2.05
6/17/2009 15:15	2.06
6/17/2009 15:30	2.06
6/17/2009 15:45	2.04
6/17/2009 16:00	2.04
6/17/2009 16:15	2.06
6/17/2009 16:30	2.08
6/17/2009 16:45	2.06
6/17/2009 17:00	2.05
6/17/2009 17:15	2.05
6/17/2009 17:30	2.05
6/17/2009 17:45	2.06
6/17/2009 18:00	2.04
6/17/2009 18:15	2.02
6/17/2009 18:30	1.99
6/17/2009 18:45	1.99
6/17/2009 19:00	2
6/17/2009 19:15	2
6/17/2009 19:30	1.98
6/17/2009 19:45	1.95
6/17/2009 20:00	1.96
6/17/2009 20:15	1.98
6/17/2009 20:30	1.99
6/17/2009 20:45	1.97
6/17/2009 21:00	1.95
6/17/2009 21:15	1.94
6/17/2009 21:30	1.95
6/17/2009 21:45	2
6/17/2009 22:00	2.02
6/17/2009 22:15	2.01
6/17/2009 22:30	1.99

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

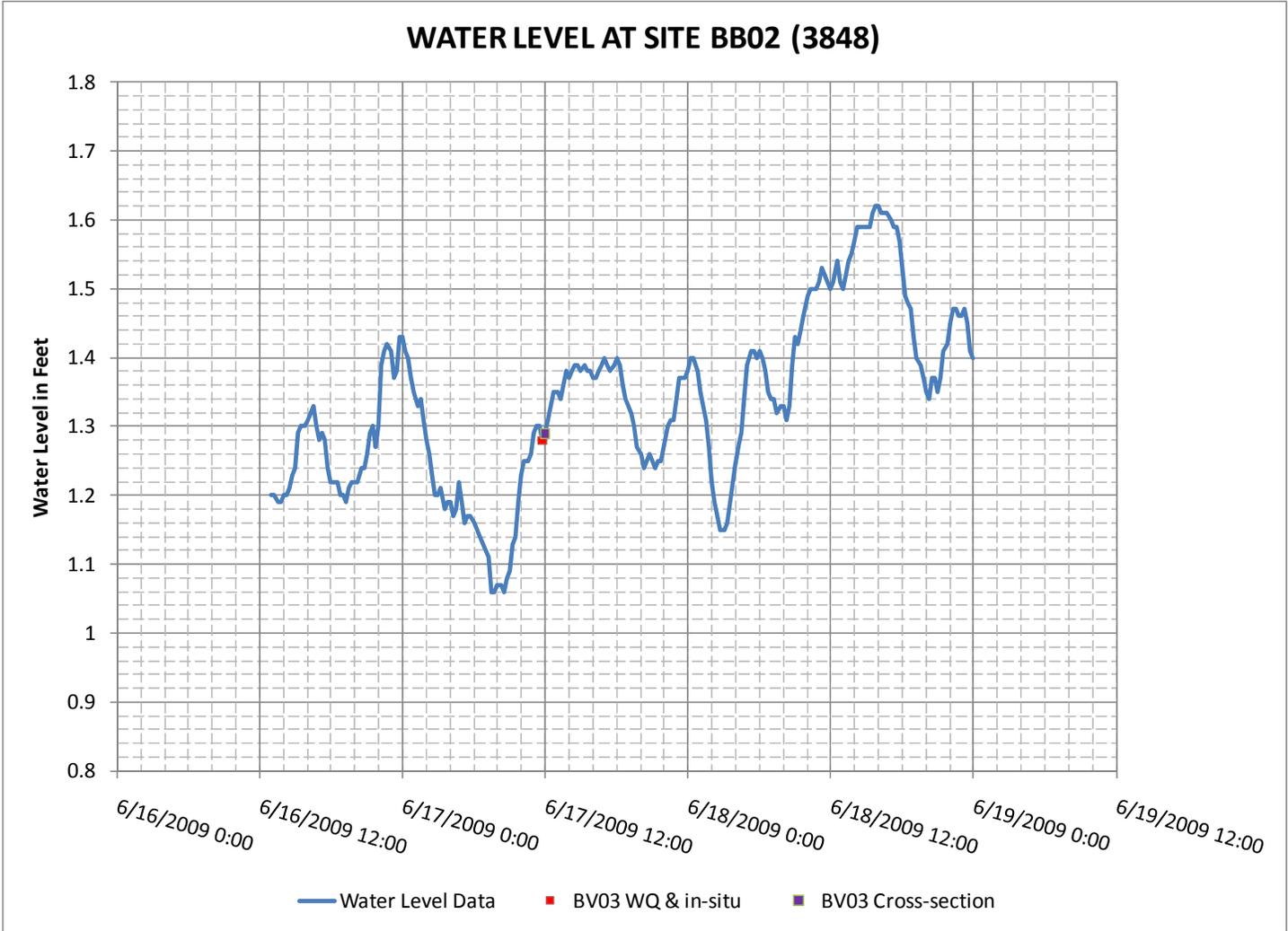
6/17/2009 22:45	2.01
6/17/2009 23:00	2.03
6/17/2009 23:15	2.05
6/17/2009 23:30	2.06
6/17/2009 23:45	2.06
6/18/2009	2.05
6/18/2009 0:15	2.03
6/18/2009 0:30	2.01
6/18/2009 0:45	1.98
6/18/2009 1:00	1.96
6/18/2009 1:15	1.95
6/18/2009 1:30	1.92
6/18/2009 1:45	1.89
6/18/2009 2:00	1.86
6/18/2009 2:15	1.86
6/18/2009 2:30	1.87
6/18/2009 2:45	1.9
6/18/2009 3:00	1.93
6/18/2009 3:15	1.95
6/18/2009 3:30	1.97
6/18/2009 3:45	1.97
6/18/2009 4:00	1.96
6/18/2009 4:15	1.99
6/18/2009 4:30	2.06
6/18/2009 4:45	2.1
6/18/2009 5:00	2.08
6/18/2009 5:15	2.03
6/18/2009 5:30	2
6/18/2009 5:45	2.01
6/18/2009 6:00	2.03
6/18/2009 6:15	2.03
6/18/2009 6:30	2.01
6/18/2009 6:45	2
6/18/2009 7:00	2.01
6/18/2009 7:15	2.04
6/18/2009 7:30	2.06
6/18/2009 7:45	2.05
6/18/2009 8:00	2.04
6/18/2009 8:15	2.08
6/18/2009 8:30	2.13
6/18/2009 8:45	2.13
6/18/2009 9:00	2.1
6/18/2009 9:15	2.07
6/18/2009 9:30	2.08
6/18/2009 9:45	2.11
6/18/2009 10:00	2.15

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/18/2009 10:15	2.14
6/18/2009 10:30	2.15
6/18/2009 10:45	2.14
6/18/2009 11:00	2.14
6/18/2009 11:15	2.17
6/18/2009 11:30	2.16
6/18/2009 11:45	2.17
6/18/2009 12:00	2.19
6/18/2009 12:15	2.19
6/18/2009 12:30	2.17
6/18/2009 12:45	2.19
6/18/2009 13:00	2.21
6/18/2009 13:15	2.24
6/18/2009 13:30	2.26
6/18/2009 13:45	2.26
6/18/2009 14:00	2.24
6/18/2009 14:15	2.21
6/18/2009 14:30	2.2
6/18/2009 14:45	2.22
6/18/2009 15:00	2.26
6/18/2009 15:15	2.27
6/18/2009 15:30	2.28
6/18/2009 15:45	2.27
6/18/2009 16:00	2.24
6/18/2009 16:15	2.24
6/18/2009 16:30	2.24
6/18/2009 16:45	2.26
6/18/2009 17:00	2.27
6/18/2009 17:15	2.24
6/18/2009 17:30	2.19
6/18/2009 17:45	2.16
6/18/2009 18:00	2.15
6/18/2009 18:15	2.16
6/18/2009 18:30	2.15
6/18/2009 18:45	2.12
6/18/2009 19:00	2.1
6/18/2009 19:15	2.08
6/18/2009 19:30	2.07
6/18/2009 19:45	2.07
6/18/2009 20:00	2.1
6/18/2009 20:15	2.1
6/18/2009 20:30	2.07
6/18/2009 20:45	2.06
6/18/2009 21:00	2.09
6/18/2009 21:15	2.13
6/18/2009 21:30	2.16

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/18/2009 21:45	2.16
6/18/2009 22:00	2.12
6/18/2009 22:15	2.09
6/18/2009 22:30	2.08
6/18/2009 22:45	2.11
6/18/2009 23:00	2.11
6/18/2009 23:15	2.08
6/18/2009 23:30	2.05
6/18/2009 23:45	2.03
6/19/2009	2



Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/16/2009 13:00	1.2
6/16/2009 13:15	1.2
6/16/2009 13:30	1.19
6/16/2009 13:45	1.19
6/16/2009 14:00	1.2
6/16/2009 14:15	1.2
6/16/2009 14:30	1.21
6/16/2009 14:45	1.23
6/16/2009 15:00	1.24
6/16/2009 15:15	1.29
6/16/2009 15:30	1.3
6/16/2009 15:45	1.3
6/16/2009 16:00	1.31
6/16/2009 16:15	1.32
6/16/2009 16:30	1.33
6/16/2009 16:45	1.3
6/16/2009 17:00	1.28
6/16/2009 17:15	1.29
6/16/2009 17:30	1.28
6/16/2009 17:45	1.24
6/16/2009 18:00	1.22
6/16/2009 18:15	1.22
6/16/2009 18:30	1.22
6/16/2009 18:45	1.2
6/16/2009 19:00	1.2
6/16/2009 19:15	1.19
6/16/2009 19:30	1.21
6/16/2009 19:45	1.22
6/16/2009 20:00	1.22
6/16/2009 20:15	1.22
6/16/2009 20:30	1.24
6/16/2009 20:45	1.24
6/16/2009 21:00	1.26
6/16/2009 21:15	1.29
6/16/2009 21:30	1.3
6/16/2009 21:45	1.27
6/16/2009 22:00	1.3
6/16/2009 22:15	1.39
6/16/2009 22:30	1.41
6/16/2009 22:45	1.42
6/16/2009 23:00	1.41
6/16/2009 23:15	1.37
6/16/2009 23:30	1.38
6/16/2009 23:45	1.43
6/17/2009	1.43
6/17/2009 0:15	1.41

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/17/2009 0:30	1.4
6/17/2009 0:45	1.37
6/17/2009 1:00	1.35
6/17/2009 1:15	1.33
6/17/2009 1:30	1.34
6/17/2009 1:45	1.31
6/17/2009 2:00	1.28
6/17/2009 2:15	1.26
6/17/2009 2:30	1.23
6/17/2009 2:45	1.2
6/17/2009 3:00	1.2
6/17/2009 3:15	1.21
6/17/2009 3:30	1.18
6/17/2009 3:45	1.19
6/17/2009 4:00	1.19
6/17/2009 4:15	1.17
6/17/2009 4:30	1.18
6/17/2009 4:45	1.22
6/17/2009 5:00	1.19
6/17/2009 5:15	1.16
6/17/2009 5:30	1.17
6/17/2009 5:45	1.17
6/17/2009 6:00	1.16
6/17/2009 6:15	1.15
6/17/2009 6:30	1.14
6/17/2009 6:45	1.13
6/17/2009 7:00	1.12
6/17/2009 7:15	1.11
6/17/2009 7:30	1.06
6/17/2009 7:45	1.06
6/17/2009 8:00	1.07
6/17/2009 8:15	1.07
6/17/2009 8:30	1.06
6/17/2009 8:45	1.08
6/17/2009 9:00	1.09
6/17/2009 9:15	1.13
6/17/2009 9:30	1.14
6/17/2009 9:45	1.19
6/17/2009 10:00	1.23
6/17/2009 10:15	1.25
6/17/2009 10:30	1.25
6/17/2009 10:45	1.26
6/17/2009 11:00	1.29
6/17/2009 11:15	1.3
6/17/2009 11:30	1.3
6/17/2009 11:45	1.28

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/17/2009 12:00	1.29
6/17/2009 12:15	1.31
6/17/2009 12:30	1.33
6/17/2009 12:45	1.35
6/17/2009 13:00	1.35
6/17/2009 13:15	1.34
6/17/2009 13:30	1.36
6/17/2009 13:45	1.38
6/17/2009 14:00	1.37
6/17/2009 14:15	1.38
6/17/2009 14:30	1.39
6/17/2009 14:45	1.39
6/17/2009 15:00	1.38
6/17/2009 15:15	1.39
6/17/2009 15:30	1.38
6/17/2009 15:45	1.38
6/17/2009 16:00	1.37
6/17/2009 16:15	1.37
6/17/2009 16:30	1.38
6/17/2009 16:45	1.39
6/17/2009 17:00	1.4
6/17/2009 17:15	1.39
6/17/2009 17:30	1.38
6/17/2009 17:45	1.39
6/17/2009 18:00	1.4
6/17/2009 18:15	1.39
6/17/2009 18:30	1.36
6/17/2009 18:45	1.34
6/17/2009 19:00	1.33
6/17/2009 19:15	1.32
6/17/2009 19:30	1.3
6/17/2009 19:45	1.27
6/17/2009 20:00	1.26
6/17/2009 20:15	1.24
6/17/2009 20:30	1.25
6/17/2009 20:45	1.26
6/17/2009 21:00	1.25
6/17/2009 21:15	1.24
6/17/2009 21:30	1.25
6/17/2009 21:45	1.25
6/17/2009 22:00	1.27
6/17/2009 22:15	1.3
6/17/2009 22:30	1.31
6/17/2009 22:45	1.31
6/17/2009 23:00	1.34
6/17/2009 23:15	1.37

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

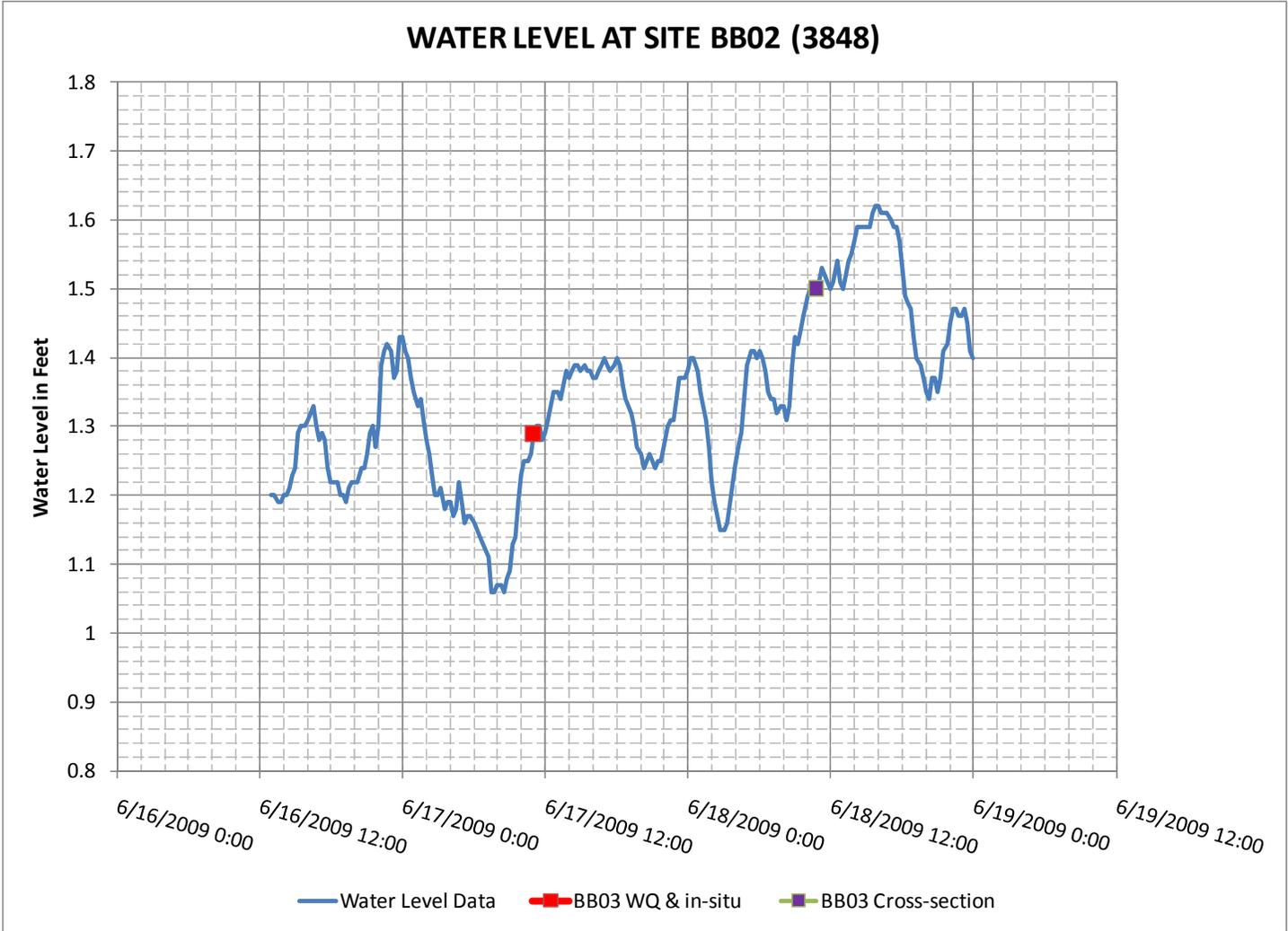
6/17/2009 23:30	1.37
6/17/2009 23:45	1.37
6/18/2009	1.38
6/18/2009 0:15	1.4
6/18/2009 0:30	1.4
6/18/2009 0:45	1.38
6/18/2009 1:00	1.35
6/18/2009 1:15	1.33
6/18/2009 1:30	1.31
6/18/2009 1:45	1.27
6/18/2009 2:00	1.22
6/18/2009 2:15	1.19
6/18/2009 2:30	1.17
6/18/2009 2:45	1.15
6/18/2009 3:00	1.15
6/18/2009 3:15	1.16
6/18/2009 3:30	1.19
6/18/2009 3:45	1.22
6/18/2009 4:00	1.25
6/18/2009 4:15	1.27
6/18/2009 4:30	1.29
6/18/2009 4:45	1.34
6/18/2009 5:00	1.39
6/18/2009 5:15	1.41
6/18/2009 5:30	1.41
6/18/2009 5:45	1.4
6/18/2009 6:00	1.41
6/18/2009 6:15	1.4
6/18/2009 6:30	1.38
6/18/2009 6:45	1.35
6/18/2009 7:00	1.34
6/18/2009 7:15	1.34
6/18/2009 7:30	1.32
6/18/2009 7:45	1.33
6/18/2009 8:00	1.33
6/18/2009 8:15	1.31
6/18/2009 8:30	1.33
6/18/2009 8:45	1.39
6/18/2009 9:00	1.43
6/18/2009 9:15	1.42
6/18/2009 9:30	1.44
6/18/2009 9:45	1.46
6/18/2009 10:00	1.49
6/18/2009 10:15	1.5
6/18/2009 10:30	1.5
6/18/2009 10:45	1.5

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/18/2009 11:00	1.51
6/18/2009 11:15	1.53
6/18/2009 11:30	1.52
6/18/2009 11:45	1.51
6/18/2009 12:00	1.5
6/18/2009 12:15	1.51
6/18/2009 12:30	1.54
6/18/2009 12:45	1.51
6/18/2009 13:00	1.5
6/18/2009 13:15	1.52
6/18/2009 13:30	1.54
6/18/2009 13:45	1.55
6/18/2009 14:00	1.57
6/18/2009 14:15	1.59
6/18/2009 14:30	1.59
6/18/2009 14:45	1.59
6/18/2009 15:00	1.59
6/18/2009 15:15	1.59
6/18/2009 15:30	1.61
6/18/2009 15:45	1.62
6/18/2009 16:00	1.62
6/18/2009 16:15	1.61
6/18/2009 16:30	1.61
6/18/2009 16:45	1.61
6/18/2009 17:00	1.6
6/18/2009 17:15	1.59
6/18/2009 17:30	1.59
6/18/2009 17:45	1.57
6/18/2009 18:00	1.53
6/18/2009 18:15	1.49
6/18/2009 18:30	1.48
6/18/2009 18:45	1.47
6/18/2009 19:00	1.43
6/18/2009 19:15	1.4
6/18/2009 19:30	1.39
6/18/2009 19:45	1.37
6/18/2009 20:00	1.35
6/18/2009 20:15	1.34
6/18/2009 20:30	1.37
6/18/2009 20:45	1.37
6/18/2009 21:00	1.35
6/18/2009 21:15	1.37
6/18/2009 21:30	1.41
6/18/2009 21:45	1.42
6/18/2009 22:00	1.45
6/18/2009 22:15	1.47

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/18/2009 22:30	1.47
6/18/2009 22:45	1.46
6/18/2009 23:00	1.46
6/18/2009 23:15	1.47
6/18/2009 23:30	1.45
6/18/2009 23:45	1.41
6/19/2009	1.4



Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/16/2009 13:00	1.2
6/16/2009 13:15	1.2
6/16/2009 13:30	1.19
6/16/2009 13:45	1.19
6/16/2009 14:00	1.2
6/16/2009 14:15	1.2
6/16/2009 14:30	1.21
6/16/2009 14:45	1.23
6/16/2009 15:00	1.24
6/16/2009 15:15	1.29
6/16/2009 15:30	1.3
6/16/2009 15:45	1.3
6/16/2009 16:00	1.31
6/16/2009 16:15	1.32
6/16/2009 16:30	1.33
6/16/2009 16:45	1.3
6/16/2009 17:00	1.28
6/16/2009 17:15	1.29
6/16/2009 17:30	1.28
6/16/2009 17:45	1.24
6/16/2009 18:00	1.22
6/16/2009 18:15	1.22
6/16/2009 18:30	1.22
6/16/2009 18:45	1.2
6/16/2009 19:00	1.2
6/16/2009 19:15	1.19
6/16/2009 19:30	1.21
6/16/2009 19:45	1.22
6/16/2009 20:00	1.22
6/16/2009 20:15	1.22
6/16/2009 20:30	1.24
6/16/2009 20:45	1.24
6/16/2009 21:00	1.26
6/16/2009 21:15	1.29
6/16/2009 21:30	1.3
6/16/2009 21:45	1.27
6/16/2009 22:00	1.3
6/16/2009 22:15	1.39
6/16/2009 22:30	1.41
6/16/2009 22:45	1.42
6/16/2009 23:00	1.41
6/16/2009 23:15	1.37
6/16/2009 23:30	1.38
6/16/2009 23:45	1.43
6/17/2009	1.43
6/17/2009 0:15	1.41

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/17/2009 0:30	1.4
6/17/2009 0:45	1.37
6/17/2009 1:00	1.35
6/17/2009 1:15	1.33
6/17/2009 1:30	1.34
6/17/2009 1:45	1.31
6/17/2009 2:00	1.28
6/17/2009 2:15	1.26
6/17/2009 2:30	1.23
6/17/2009 2:45	1.2
6/17/2009 3:00	1.2
6/17/2009 3:15	1.21
6/17/2009 3:30	1.18
6/17/2009 3:45	1.19
6/17/2009 4:00	1.19
6/17/2009 4:15	1.17
6/17/2009 4:30	1.18
6/17/2009 4:45	1.22
6/17/2009 5:00	1.19
6/17/2009 5:15	1.16
6/17/2009 5:30	1.17
6/17/2009 5:45	1.17
6/17/2009 6:00	1.16
6/17/2009 6:15	1.15
6/17/2009 6:30	1.14
6/17/2009 6:45	1.13
6/17/2009 7:00	1.12
6/17/2009 7:15	1.11
6/17/2009 7:30	1.06
6/17/2009 7:45	1.06
6/17/2009 8:00	1.07
6/17/2009 8:15	1.07
6/17/2009 8:30	1.06
6/17/2009 8:45	1.08
6/17/2009 9:00	1.09
6/17/2009 9:15	1.13
6/17/2009 9:30	1.14
6/17/2009 9:45	1.19
6/17/2009 10:00	1.23
6/17/2009 10:15	1.25
6/17/2009 10:30	1.25
6/17/2009 10:45	1.26
6/17/2009 11:00	1.29
6/17/2009 11:15	1.3
6/17/2009 11:30	1.3
6/17/2009 11:45	1.28

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/17/2009 12:00	1.29
6/17/2009 12:15	1.31
6/17/2009 12:30	1.33
6/17/2009 12:45	1.35
6/17/2009 13:00	1.35
6/17/2009 13:15	1.34
6/17/2009 13:30	1.36
6/17/2009 13:45	1.38
6/17/2009 14:00	1.37
6/17/2009 14:15	1.38
6/17/2009 14:30	1.39
6/17/2009 14:45	1.39
6/17/2009 15:00	1.38
6/17/2009 15:15	1.39
6/17/2009 15:30	1.38
6/17/2009 15:45	1.38
6/17/2009 16:00	1.37
6/17/2009 16:15	1.37
6/17/2009 16:30	1.38
6/17/2009 16:45	1.39
6/17/2009 17:00	1.4
6/17/2009 17:15	1.39
6/17/2009 17:30	1.38
6/17/2009 17:45	1.39
6/17/2009 18:00	1.4
6/17/2009 18:15	1.39
6/17/2009 18:30	1.36
6/17/2009 18:45	1.34
6/17/2009 19:00	1.33
6/17/2009 19:15	1.32
6/17/2009 19:30	1.3
6/17/2009 19:45	1.27
6/17/2009 20:00	1.26
6/17/2009 20:15	1.24
6/17/2009 20:30	1.25
6/17/2009 20:45	1.26
6/17/2009 21:00	1.25
6/17/2009 21:15	1.24
6/17/2009 21:30	1.25
6/17/2009 21:45	1.25
6/17/2009 22:00	1.27
6/17/2009 22:15	1.3
6/17/2009 22:30	1.31
6/17/2009 22:45	1.31
6/17/2009 23:00	1.34
6/17/2009 23:15	1.37

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

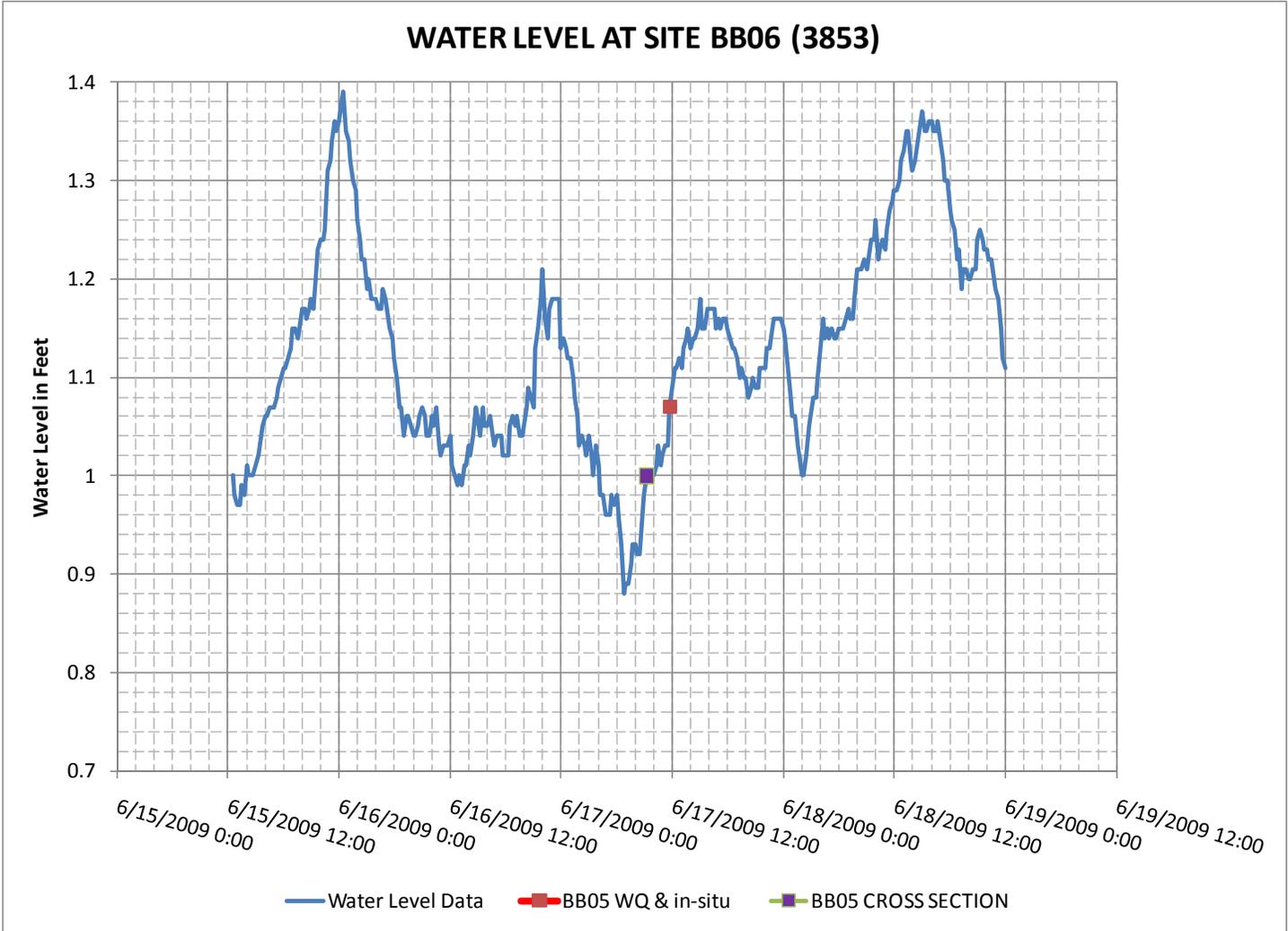
6/17/2009 23:30	1.37
6/17/2009 23:45	1.37
6/18/2009	1.38
6/18/2009 0:15	1.4
6/18/2009 0:30	1.4
6/18/2009 0:45	1.38
6/18/2009 1:00	1.35
6/18/2009 1:15	1.33
6/18/2009 1:30	1.31
6/18/2009 1:45	1.27
6/18/2009 2:00	1.22
6/18/2009 2:15	1.19
6/18/2009 2:30	1.17
6/18/2009 2:45	1.15
6/18/2009 3:00	1.15
6/18/2009 3:15	1.16
6/18/2009 3:30	1.19
6/18/2009 3:45	1.22
6/18/2009 4:00	1.25
6/18/2009 4:15	1.27
6/18/2009 4:30	1.29
6/18/2009 4:45	1.34
6/18/2009 5:00	1.39
6/18/2009 5:15	1.41
6/18/2009 5:30	1.41
6/18/2009 5:45	1.4
6/18/2009 6:00	1.41
6/18/2009 6:15	1.4
6/18/2009 6:30	1.38
6/18/2009 6:45	1.35
6/18/2009 7:00	1.34
6/18/2009 7:15	1.34
6/18/2009 7:30	1.32
6/18/2009 7:45	1.33
6/18/2009 8:00	1.33
6/18/2009 8:15	1.31
6/18/2009 8:30	1.33
6/18/2009 8:45	1.39
6/18/2009 9:00	1.43
6/18/2009 9:15	1.42
6/18/2009 9:30	1.44
6/18/2009 9:45	1.46
6/18/2009 10:00	1.49
6/18/2009 10:15	1.5
6/18/2009 10:30	1.5
6/18/2009 10:45	1.5

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/18/2009 11:00	1.51
6/18/2009 11:15	1.53
6/18/2009 11:30	1.52
6/18/2009 11:45	1.51
6/18/2009 12:00	1.5
6/18/2009 12:15	1.51
6/18/2009 12:30	1.54
6/18/2009 12:45	1.51
6/18/2009 13:00	1.5
6/18/2009 13:15	1.52
6/18/2009 13:30	1.54
6/18/2009 13:45	1.55
6/18/2009 14:00	1.57
6/18/2009 14:15	1.59
6/18/2009 14:30	1.59
6/18/2009 14:45	1.59
6/18/2009 15:00	1.59
6/18/2009 15:15	1.59
6/18/2009 15:30	1.61
6/18/2009 15:45	1.62
6/18/2009 16:00	1.62
6/18/2009 16:15	1.61
6/18/2009 16:30	1.61
6/18/2009 16:45	1.61
6/18/2009 17:00	1.6
6/18/2009 17:15	1.59
6/18/2009 17:30	1.59
6/18/2009 17:45	1.57
6/18/2009 18:00	1.53
6/18/2009 18:15	1.49
6/18/2009 18:30	1.48
6/18/2009 18:45	1.47
6/18/2009 19:00	1.43
6/18/2009 19:15	1.4
6/18/2009 19:30	1.39
6/18/2009 19:45	1.37
6/18/2009 20:00	1.35
6/18/2009 20:15	1.34
6/18/2009 20:30	1.37
6/18/2009 20:45	1.37
6/18/2009 21:00	1.35
6/18/2009 21:15	1.37
6/18/2009 21:30	1.41
6/18/2009 21:45	1.42
6/18/2009 22:00	1.45
6/18/2009 22:15	1.47

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/18/2009 22:30	1.47
6/18/2009 22:45	1.46
6/18/2009 23:00	1.46
6/18/2009 23:15	1.47
6/18/2009 23:30	1.45
6/18/2009 23:45	1.41
6/19/2009	1.4



Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/15/2009 12:30	1
6/15/2009 12:45	0.98
6/15/2009 13:00	0.97
6/15/2009 13:15	0.97
6/15/2009 13:30	0.99
6/15/2009 13:45	0.98
6/15/2009 14:00	1.01
6/15/2009 14:15	1
6/15/2009 14:30	1
6/15/2009 14:45	1
6/15/2009 15:00	1.01
6/15/2009 15:15	1.02
6/15/2009 15:30	1.03
6/15/2009 15:45	1.05
6/15/2009 16:00	1.06
6/15/2009 16:15	1.06
6/15/2009 16:30	1.07
6/15/2009 16:45	1.07
6/15/2009 17:00	1.07
6/15/2009 17:15	1.08
6/15/2009 17:30	1.09
6/15/2009 17:45	1.1
6/15/2009 18:00	1.11
6/15/2009 18:15	1.11
6/15/2009 18:30	1.12
6/15/2009 18:45	1.13
6/15/2009 19:00	1.15
6/15/2009 19:15	1.15
6/15/2009 19:30	1.14
6/15/2009 19:45	1.15
6/15/2009 20:00	1.17
6/15/2009 20:15	1.17
6/15/2009 20:30	1.16
6/15/2009 20:45	1.17
6/15/2009 21:00	1.18
6/15/2009 21:15	1.17
6/15/2009 21:30	1.21
6/15/2009 21:45	1.23
6/15/2009 22:00	1.24
6/15/2009 22:15	1.24
6/15/2009 22:30	1.25
6/15/2009 22:45	1.31
6/15/2009 23:00	1.32
6/15/2009 23:15	1.34
6/15/2009 23:30	1.36
6/15/2009 23:45	1.35

6/16/2009	1.36
6/16/2009 0:15	1.38
6/16/2009 0:30	1.39
6/16/2009 0:45	1.35
6/16/2009 1:00	1.34
6/16/2009 1:15	1.32
6/16/2009 1:30	1.3
6/16/2009 1:45	1.29
6/16/2009 2:00	1.26
6/16/2009 2:15	1.24
6/16/2009 2:30	1.22
6/16/2009 2:45	1.22
6/16/2009 3:00	1.19
6/16/2009 3:15	1.2
6/16/2009 3:30	1.18
6/16/2009 3:45	1.18
6/16/2009 4:00	1.18
6/16/2009 4:15	1.17
6/16/2009 4:30	1.17
6/16/2009 4:45	1.19
6/16/2009 5:00	1.18
6/16/2009 5:15	1.17
6/16/2009 5:30	1.15
6/16/2009 5:45	1.14
6/16/2009 6:00	1.12
6/16/2009 6:15	1.1
6/16/2009 6:30	1.07
6/16/2009 6:45	1.07
6/16/2009 7:00	1.04
6/16/2009 7:15	1.06
6/16/2009 7:30	1.06
6/16/2009 7:45	1.05
6/16/2009 8:00	1.04
6/16/2009 8:15	1.04
6/16/2009 8:30	1.05
6/16/2009 8:45	1.06
6/16/2009 9:00	1.07
6/16/2009 9:15	1.06
6/16/2009 9:30	1.04
6/16/2009 9:45	1.04
6/16/2009 10:00	1.06
6/16/2009 10:15	1.05
6/16/2009 10:30	1.07
6/16/2009 10:45	1.03
6/16/2009 11:00	1.02
6/16/2009 11:15	1.03

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/16/2009 11:30	1.03
6/16/2009 11:45	1.03
6/16/2009 12:00	1.04
6/16/2009 12:15	1.01
6/16/2009 12:30	1
6/16/2009 12:45	0.99
6/16/2009 13:00	1
6/16/2009 13:15	0.99
6/16/2009 13:30	1.01
6/16/2009 13:45	1.01
6/16/2009 14:00	1.03
6/16/2009 14:15	1.02
6/16/2009 14:30	1.04
6/16/2009 14:45	1.07
6/16/2009 15:00	1.06
6/16/2009 15:15	1.04
6/16/2009 15:30	1.07
6/16/2009 15:45	1.05
6/16/2009 16:00	1.05
6/16/2009 16:15	1.06
6/16/2009 16:30	1.05
6/16/2009 16:45	1.03
6/16/2009 17:00	1.04
6/16/2009 17:15	1.04
6/16/2009 17:30	1.04
6/16/2009 17:45	1.02
6/16/2009 18:00	1.02
6/16/2009 18:15	1.02
6/16/2009 18:30	1.05
6/16/2009 18:45	1.06
6/16/2009 19:00	1.05
6/16/2009 19:15	1.06
6/16/2009 19:30	1.04
6/16/2009 19:45	1.04
6/16/2009 20:00	1.05
6/16/2009 20:15	1.07
6/16/2009 20:30	1.09
6/16/2009 20:45	1.08
6/16/2009 21:00	1.07
6/16/2009 21:15	1.13
6/16/2009 21:30	1.15
6/16/2009 21:45	1.18
6/16/2009 22:00	1.21
6/16/2009 22:15	1.16
6/16/2009 22:30	1.14
6/16/2009 22:45	1.17

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/16/2009 23:00	1.18
6/16/2009 23:15	1.18
6/16/2009 23:30	1.18
6/16/2009 23:45	1.18
6/17/2009	1.13
6/17/2009 0:15	1.14
6/17/2009 0:30	1.13
6/17/2009 0:45	1.12
6/17/2009 1:00	1.12
6/17/2009 1:15	1.1
6/17/2009 1:30	1.08
6/17/2009 1:45	1.06
6/17/2009 2:00	1.03
6/17/2009 2:15	1.04
6/17/2009 2:30	1.03
6/17/2009 2:45	1.02
6/17/2009 3:00	1.04
6/17/2009 3:15	1.02
6/17/2009 3:30	1
6/17/2009 3:45	1.03
6/17/2009 4:00	1.01
6/17/2009 4:15	0.98
6/17/2009 4:30	0.98
6/17/2009 4:45	0.96
6/17/2009 5:00	0.96
6/17/2009 5:15	0.96
6/17/2009 5:30	0.98
6/17/2009 5:45	0.97
6/17/2009 6:00	0.98
6/17/2009 6:15	0.96
6/17/2009 6:30	0.93
6/17/2009 6:45	0.88
6/17/2009 7:00	0.89
6/17/2009 7:15	0.89
6/17/2009 7:30	0.91
6/17/2009 7:45	0.93
6/17/2009 8:00	0.93
6/17/2009 8:15	0.92
6/17/2009 8:30	0.92
6/17/2009 8:45	0.96
6/17/2009 9:00	0.98
6/17/2009 9:15	1
6/17/2009 9:30	1
6/17/2009 9:45	1
6/17/2009 10:00	1
6/17/2009 10:15	1.01

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/17/2009 10:30	1.03
6/17/2009 10:45	1.01
6/17/2009 11:00	1.02
6/17/2009 11:15	1.03
6/17/2009 11:30	1.03
6/17/2009 11:45	1.07
6/17/2009 12:00	1.09
6/17/2009 12:15	1.11
6/17/2009 12:30	1.11
6/17/2009 12:45	1.12
6/17/2009 13:00	1.11
6/17/2009 13:15	1.13
6/17/2009 13:30	1.14
6/17/2009 13:45	1.15
6/17/2009 14:00	1.13
6/17/2009 14:15	1.14
6/17/2009 14:30	1.14
6/17/2009 14:45	1.15
6/17/2009 15:00	1.18
6/17/2009 15:15	1.15
6/17/2009 15:30	1.15
6/17/2009 15:45	1.17
6/17/2009 16:00	1.17
6/17/2009 16:15	1.17
6/17/2009 16:30	1.17
6/17/2009 16:45	1.15
6/17/2009 17:00	1.16
6/17/2009 17:15	1.15
6/17/2009 17:30	1.16
6/17/2009 17:45	1.16
6/17/2009 18:00	1.15
6/17/2009 18:15	1.14
6/17/2009 18:30	1.13
6/17/2009 18:45	1.13
6/17/2009 19:00	1.12
6/17/2009 19:15	1.1
6/17/2009 19:30	1.11
6/17/2009 19:45	1.1
6/17/2009 20:00	1.1
6/17/2009 20:15	1.08
6/17/2009 20:30	1.09
6/17/2009 20:45	1.1
6/17/2009 21:00	1.09
6/17/2009 21:15	1.09
6/17/2009 21:30	1.11
6/17/2009 21:45	1.11

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

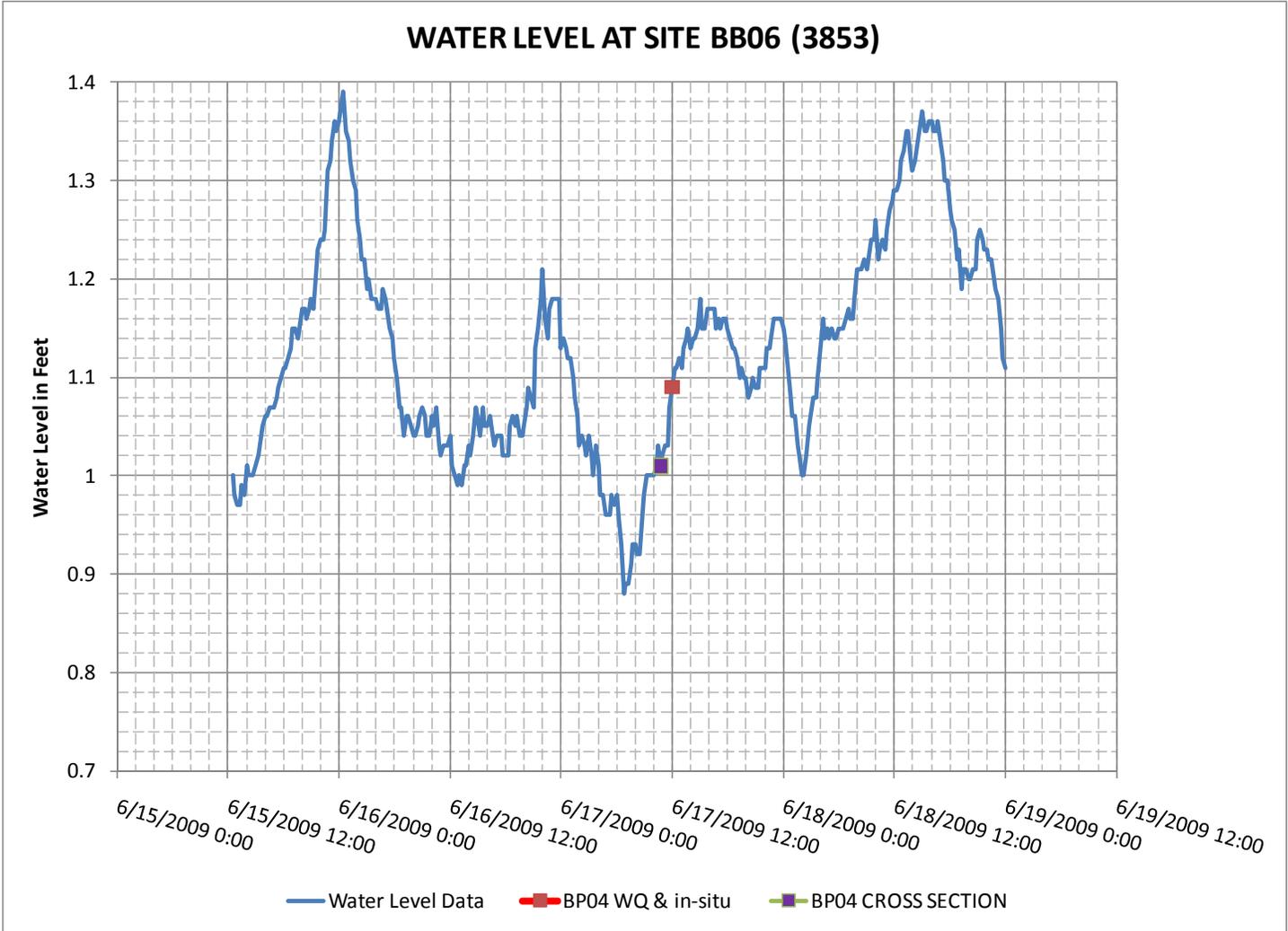
6/17/2009 22:00	1.11
6/17/2009 22:15	1.13
6/17/2009 22:30	1.13
6/17/2009 22:45	1.14
6/17/2009 23:00	1.16
6/17/2009 23:15	1.16
6/17/2009 23:30	1.16
6/17/2009 23:45	1.16
6/18/2009	1.15
6/18/2009 0:15	1.14
6/18/2009 0:30	1.11
6/18/2009 0:45	1.08
6/18/2009 1:00	1.06
6/18/2009 1:15	1.06
6/18/2009 1:30	1.03
6/18/2009 1:45	1.02
6/18/2009 2:00	1
6/18/2009 2:15	1
6/18/2009 2:30	1.02
6/18/2009 2:45	1.05
6/18/2009 3:00	1.06
6/18/2009 3:15	1.08
6/18/2009 3:30	1.08
6/18/2009 3:45	1.1
6/18/2009 4:00	1.13
6/18/2009 4:15	1.16
6/18/2009 4:30	1.14
6/18/2009 4:45	1.15
6/18/2009 5:00	1.14
6/18/2009 5:15	1.15
6/18/2009 5:30	1.14
6/18/2009 5:45	1.14
6/18/2009 6:00	1.15
6/18/2009 6:15	1.15
6/18/2009 6:30	1.15
6/18/2009 6:45	1.16
6/18/2009 7:00	1.17
6/18/2009 7:15	1.16
6/18/2009 7:30	1.16
6/18/2009 7:45	1.18
6/18/2009 8:00	1.21
6/18/2009 8:15	1.21
6/18/2009 8:30	1.21
6/18/2009 8:45	1.22
6/18/2009 9:00	1.21
6/18/2009 9:15	1.22

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/18/2009 9:30	1.24
6/18/2009 9:45	1.24
6/18/2009 10:00	1.26
6/18/2009 10:15	1.22
6/18/2009 10:30	1.23
6/18/2009 10:45	1.24
6/18/2009 11:00	1.23
6/18/2009 11:15	1.25
6/18/2009 11:30	1.27
6/18/2009 11:45	1.28
6/18/2009 12:00	1.29
6/18/2009 12:15	1.29
6/18/2009 12:30	1.3
6/18/2009 12:45	1.32
6/18/2009 13:00	1.33
6/18/2009 13:15	1.35
6/18/2009 13:30	1.35
6/18/2009 13:45	1.32
6/18/2009 14:00	1.31
6/18/2009 14:15	1.32
6/18/2009 14:30	1.34
6/18/2009 14:45	1.35
6/18/2009 15:00	1.37
6/18/2009 15:15	1.35
6/18/2009 15:30	1.35
6/18/2009 15:45	1.36
6/18/2009 16:00	1.36
6/18/2009 16:15	1.35
6/18/2009 16:30	1.35
6/18/2009 16:45	1.36
6/18/2009 17:00	1.34
6/18/2009 17:15	1.32
6/18/2009 17:30	1.3
6/18/2009 17:45	1.3
6/18/2009 18:00	1.27
6/18/2009 18:15	1.26
6/18/2009 18:30	1.25
6/18/2009 18:45	1.22
6/18/2009 19:00	1.23
6/18/2009 19:15	1.19
6/18/2009 19:30	1.21
6/18/2009 19:45	1.21
6/18/2009 20:00	1.2
6/18/2009 20:15	1.2
6/18/2009 20:30	1.21
6/18/2009 20:45	1.21

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/18/2009 21:00	1.24
6/18/2009 21:15	1.25
6/18/2009 21:30	1.24
6/18/2009 21:45	1.23
6/18/2009 22:00	1.23
6/18/2009 22:15	1.22
6/18/2009 22:30	1.22
6/18/2009 22:45	1.2
6/18/2009 23:00	1.19
6/18/2009 23:15	1.18
6/18/2009 23:30	1.15
6/18/2009 23:45	1.12
6/19/2009	1.11



Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/15/2009 12:30	1
6/15/2009 12:45	0.98
6/15/2009 13:00	0.97
6/15/2009 13:15	0.97
6/15/2009 13:30	0.99
6/15/2009 13:45	0.98
6/15/2009 14:00	1.01
6/15/2009 14:15	1
6/15/2009 14:30	1
6/15/2009 14:45	1
6/15/2009 15:00	1.01
6/15/2009 15:15	1.02
6/15/2009 15:30	1.03
6/15/2009 15:45	1.05
6/15/2009 16:00	1.06
6/15/2009 16:15	1.06
6/15/2009 16:30	1.07
6/15/2009 16:45	1.07
6/15/2009 17:00	1.07
6/15/2009 17:15	1.08
6/15/2009 17:30	1.09
6/15/2009 17:45	1.1
6/15/2009 18:00	1.11
6/15/2009 18:15	1.11
6/15/2009 18:30	1.12
6/15/2009 18:45	1.13
6/15/2009 19:00	1.15
6/15/2009 19:15	1.15
6/15/2009 19:30	1.14
6/15/2009 19:45	1.15
6/15/2009 20:00	1.17
6/15/2009 20:15	1.17
6/15/2009 20:30	1.16
6/15/2009 20:45	1.17
6/15/2009 21:00	1.18
6/15/2009 21:15	1.17
6/15/2009 21:30	1.21
6/15/2009 21:45	1.23
6/15/2009 22:00	1.24
6/15/2009 22:15	1.24
6/15/2009 22:30	1.25
6/15/2009 22:45	1.31
6/15/2009 23:00	1.32
6/15/2009 23:15	1.34
6/15/2009 23:30	1.36
6/15/2009 23:45	1.35

6/16/2009	1.36
6/16/2009 0:15	1.38
6/16/2009 0:30	1.39
6/16/2009 0:45	1.35
6/16/2009 1:00	1.34
6/16/2009 1:15	1.32
6/16/2009 1:30	1.3
6/16/2009 1:45	1.29
6/16/2009 2:00	1.26
6/16/2009 2:15	1.24
6/16/2009 2:30	1.22
6/16/2009 2:45	1.22
6/16/2009 3:00	1.19
6/16/2009 3:15	1.2
6/16/2009 3:30	1.18
6/16/2009 3:45	1.18
6/16/2009 4:00	1.18
6/16/2009 4:15	1.17
6/16/2009 4:30	1.17
6/16/2009 4:45	1.19
6/16/2009 5:00	1.18
6/16/2009 5:15	1.17
6/16/2009 5:30	1.15
6/16/2009 5:45	1.14
6/16/2009 6:00	1.12
6/16/2009 6:15	1.1
6/16/2009 6:30	1.07
6/16/2009 6:45	1.07
6/16/2009 7:00	1.04
6/16/2009 7:15	1.06
6/16/2009 7:30	1.06
6/16/2009 7:45	1.05
6/16/2009 8:00	1.04
6/16/2009 8:15	1.04
6/16/2009 8:30	1.05
6/16/2009 8:45	1.06
6/16/2009 9:00	1.07
6/16/2009 9:15	1.06
6/16/2009 9:30	1.04
6/16/2009 9:45	1.04
6/16/2009 10:00	1.06
6/16/2009 10:15	1.05
6/16/2009 10:30	1.07
6/16/2009 10:45	1.03
6/16/2009 11:00	1.02
6/16/2009 11:15	1.03

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/16/2009 11:30	1.03
6/16/2009 11:45	1.03
6/16/2009 12:00	1.04
6/16/2009 12:15	1.01
6/16/2009 12:30	1
6/16/2009 12:45	0.99
6/16/2009 13:00	1
6/16/2009 13:15	0.99
6/16/2009 13:30	1.01
6/16/2009 13:45	1.01
6/16/2009 14:00	1.03
6/16/2009 14:15	1.02
6/16/2009 14:30	1.04
6/16/2009 14:45	1.07
6/16/2009 15:00	1.06
6/16/2009 15:15	1.04
6/16/2009 15:30	1.07
6/16/2009 15:45	1.05
6/16/2009 16:00	1.05
6/16/2009 16:15	1.06
6/16/2009 16:30	1.05
6/16/2009 16:45	1.03
6/16/2009 17:00	1.04
6/16/2009 17:15	1.04
6/16/2009 17:30	1.04
6/16/2009 17:45	1.02
6/16/2009 18:00	1.02
6/16/2009 18:15	1.02
6/16/2009 18:30	1.05
6/16/2009 18:45	1.06
6/16/2009 19:00	1.05
6/16/2009 19:15	1.06
6/16/2009 19:30	1.04
6/16/2009 19:45	1.04
6/16/2009 20:00	1.05
6/16/2009 20:15	1.07
6/16/2009 20:30	1.09
6/16/2009 20:45	1.08
6/16/2009 21:00	1.07
6/16/2009 21:15	1.13
6/16/2009 21:30	1.15
6/16/2009 21:45	1.18
6/16/2009 22:00	1.21
6/16/2009 22:15	1.16
6/16/2009 22:30	1.14
6/16/2009 22:45	1.17

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/16/2009 23:00	1.18
6/16/2009 23:15	1.18
6/16/2009 23:30	1.18
6/16/2009 23:45	1.18
6/17/2009	1.13
6/17/2009 0:15	1.14
6/17/2009 0:30	1.13
6/17/2009 0:45	1.12
6/17/2009 1:00	1.12
6/17/2009 1:15	1.1
6/17/2009 1:30	1.08
6/17/2009 1:45	1.06
6/17/2009 2:00	1.03
6/17/2009 2:15	1.04
6/17/2009 2:30	1.03
6/17/2009 2:45	1.02
6/17/2009 3:00	1.04
6/17/2009 3:15	1.02
6/17/2009 3:30	1
6/17/2009 3:45	1.03
6/17/2009 4:00	1.01
6/17/2009 4:15	0.98
6/17/2009 4:30	0.98
6/17/2009 4:45	0.96
6/17/2009 5:00	0.96
6/17/2009 5:15	0.96
6/17/2009 5:30	0.98
6/17/2009 5:45	0.97
6/17/2009 6:00	0.98
6/17/2009 6:15	0.96
6/17/2009 6:30	0.93
6/17/2009 6:45	0.88
6/17/2009 7:00	0.89
6/17/2009 7:15	0.89
6/17/2009 7:30	0.91
6/17/2009 7:45	0.93
6/17/2009 8:00	0.93
6/17/2009 8:15	0.92
6/17/2009 8:30	0.92
6/17/2009 8:45	0.96
6/17/2009 9:00	0.98
6/17/2009 9:15	1
6/17/2009 9:30	1
6/17/2009 9:45	1
6/17/2009 10:00	1
6/17/2009 10:15	1.01

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/17/2009 10:30	1.03
6/17/2009 10:45	1.01
6/17/2009 11:00	1.02
6/17/2009 11:15	1.03
6/17/2009 11:30	1.03
6/17/2009 11:45	1.07
6/17/2009 12:00	1.09
6/17/2009 12:15	1.11
6/17/2009 12:30	1.11
6/17/2009 12:45	1.12
6/17/2009 13:00	1.11
6/17/2009 13:15	1.13
6/17/2009 13:30	1.14
6/17/2009 13:45	1.15
6/17/2009 14:00	1.13
6/17/2009 14:15	1.14
6/17/2009 14:30	1.14
6/17/2009 14:45	1.15
6/17/2009 15:00	1.18
6/17/2009 15:15	1.15
6/17/2009 15:30	1.15
6/17/2009 15:45	1.17
6/17/2009 16:00	1.17
6/17/2009 16:15	1.17
6/17/2009 16:30	1.17
6/17/2009 16:45	1.15
6/17/2009 17:00	1.16
6/17/2009 17:15	1.15
6/17/2009 17:30	1.16
6/17/2009 17:45	1.16
6/17/2009 18:00	1.15
6/17/2009 18:15	1.14
6/17/2009 18:30	1.13
6/17/2009 18:45	1.13
6/17/2009 19:00	1.12
6/17/2009 19:15	1.1
6/17/2009 19:30	1.11
6/17/2009 19:45	1.1
6/17/2009 20:00	1.1
6/17/2009 20:15	1.08
6/17/2009 20:30	1.09
6/17/2009 20:45	1.1
6/17/2009 21:00	1.09
6/17/2009 21:15	1.09
6/17/2009 21:30	1.11
6/17/2009 21:45	1.11

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

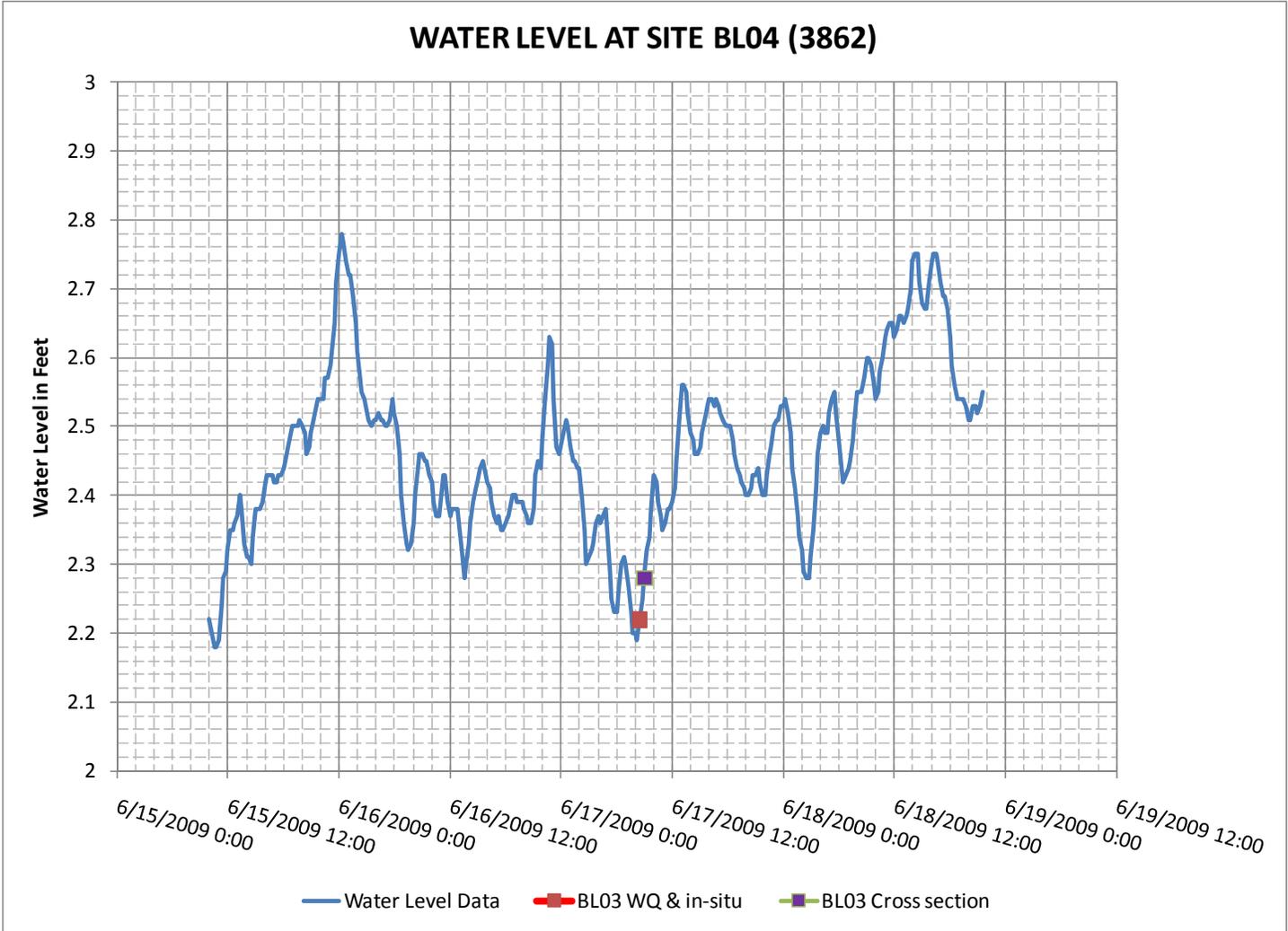
6/17/2009 22:00	1.11
6/17/2009 22:15	1.13
6/17/2009 22:30	1.13
6/17/2009 22:45	1.14
6/17/2009 23:00	1.16
6/17/2009 23:15	1.16
6/17/2009 23:30	1.16
6/17/2009 23:45	1.16
6/18/2009	1.15
6/18/2009 0:15	1.14
6/18/2009 0:30	1.11
6/18/2009 0:45	1.08
6/18/2009 1:00	1.06
6/18/2009 1:15	1.06
6/18/2009 1:30	1.03
6/18/2009 1:45	1.02
6/18/2009 2:00	1
6/18/2009 2:15	1
6/18/2009 2:30	1.02
6/18/2009 2:45	1.05
6/18/2009 3:00	1.06
6/18/2009 3:15	1.08
6/18/2009 3:30	1.08
6/18/2009 3:45	1.1
6/18/2009 4:00	1.13
6/18/2009 4:15	1.16
6/18/2009 4:30	1.14
6/18/2009 4:45	1.15
6/18/2009 5:00	1.14
6/18/2009 5:15	1.15
6/18/2009 5:30	1.14
6/18/2009 5:45	1.14
6/18/2009 6:00	1.15
6/18/2009 6:15	1.15
6/18/2009 6:30	1.15
6/18/2009 6:45	1.16
6/18/2009 7:00	1.17
6/18/2009 7:15	1.16
6/18/2009 7:30	1.16
6/18/2009 7:45	1.18
6/18/2009 8:00	1.21
6/18/2009 8:15	1.21
6/18/2009 8:30	1.21
6/18/2009 8:45	1.22
6/18/2009 9:00	1.21
6/18/2009 9:15	1.22

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/18/2009 9:30	1.24
6/18/2009 9:45	1.24
6/18/2009 10:00	1.26
6/18/2009 10:15	1.22
6/18/2009 10:30	1.23
6/18/2009 10:45	1.24
6/18/2009 11:00	1.23
6/18/2009 11:15	1.25
6/18/2009 11:30	1.27
6/18/2009 11:45	1.28
6/18/2009 12:00	1.29
6/18/2009 12:15	1.29
6/18/2009 12:30	1.3
6/18/2009 12:45	1.32
6/18/2009 13:00	1.33
6/18/2009 13:15	1.35
6/18/2009 13:30	1.35
6/18/2009 13:45	1.32
6/18/2009 14:00	1.31
6/18/2009 14:15	1.32
6/18/2009 14:30	1.34
6/18/2009 14:45	1.35
6/18/2009 15:00	1.37
6/18/2009 15:15	1.35
6/18/2009 15:30	1.35
6/18/2009 15:45	1.36
6/18/2009 16:00	1.36
6/18/2009 16:15	1.35
6/18/2009 16:30	1.35
6/18/2009 16:45	1.36
6/18/2009 17:00	1.34
6/18/2009 17:15	1.32
6/18/2009 17:30	1.3
6/18/2009 17:45	1.3
6/18/2009 18:00	1.27
6/18/2009 18:15	1.26
6/18/2009 18:30	1.25
6/18/2009 18:45	1.22
6/18/2009 19:00	1.23
6/18/2009 19:15	1.19
6/18/2009 19:30	1.21
6/18/2009 19:45	1.21
6/18/2009 20:00	1.2
6/18/2009 20:15	1.2
6/18/2009 20:30	1.21
6/18/2009 20:45	1.21

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/18/2009 21:00	1.24
6/18/2009 21:15	1.25
6/18/2009 21:30	1.24
6/18/2009 21:45	1.23
6/18/2009 22:00	1.23
6/18/2009 22:15	1.22
6/18/2009 22:30	1.22
6/18/2009 22:45	1.2
6/18/2009 23:00	1.19
6/18/2009 23:15	1.18
6/18/2009 23:30	1.15
6/18/2009 23:45	1.12
6/19/2009	1.11



Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/15/2009 10:00	2.22
6/15/2009 10:15	2.2
6/15/2009 10:30	2.18
6/15/2009 10:45	2.18
6/15/2009 11:00	2.19
6/15/2009 11:15	2.24
6/15/2009 11:30	2.28
6/15/2009 11:45	2.29
6/15/2009 12:00	2.32
6/15/2009 12:15	2.35
6/15/2009 12:30	2.35
6/15/2009 12:45	2.36
6/15/2009 13:00	2.37
6/15/2009 13:15	2.4
6/15/2009 13:30	2.38
6/15/2009 13:45	2.33
6/15/2009 14:00	2.31
6/15/2009 14:15	2.31
6/15/2009 14:30	2.3
6/15/2009 14:45	2.34
6/15/2009 15:00	2.38
6/15/2009 15:15	2.38
6/15/2009 15:30	2.38
6/15/2009 15:45	2.39
6/15/2009 16:00	2.42
6/15/2009 16:15	2.43
6/15/2009 16:30	2.43
6/15/2009 16:45	2.43
6/15/2009 17:00	2.42
6/15/2009 17:15	2.42
6/15/2009 17:30	2.43
6/15/2009 17:45	2.43
6/15/2009 18:00	2.44
6/15/2009 18:15	2.45
6/15/2009 18:30	2.47
6/15/2009 18:45	2.49
6/15/2009 19:00	2.5
6/15/2009 19:15	2.5
6/15/2009 19:30	2.5
6/15/2009 19:45	2.51
6/15/2009 20:00	2.5
6/15/2009 20:15	2.49
6/15/2009 20:30	2.46
6/15/2009 20:45	2.47
6/15/2009 21:00	2.49
6/15/2009 21:15	2.51

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/15/2009 21:30	2.53
6/15/2009 21:45	2.54
6/15/2009 22:00	2.54
6/15/2009 22:15	2.54
6/15/2009 22:30	2.57
6/15/2009 22:45	2.57
6/15/2009 23:00	2.59
6/15/2009 23:15	2.61
6/15/2009 23:30	2.65
6/15/2009 23:45	2.71
6/16/2009	2.75
6/16/2009 0:15	2.78
6/16/2009 0:30	2.77
6/16/2009 0:45	2.74
6/16/2009 1:00	2.72
6/16/2009 1:15	2.72
6/16/2009 1:30	2.69
6/16/2009 1:45	2.65
6/16/2009 2:00	2.61
6/16/2009 2:15	2.57
6/16/2009 2:30	2.55
6/16/2009 2:45	2.54
6/16/2009 3:00	2.52
6/16/2009 3:15	2.51
6/16/2009 3:30	2.5
6/16/2009 3:45	2.51
6/16/2009 4:00	2.51
6/16/2009 4:15	2.52
6/16/2009 4:30	2.51
6/16/2009 4:45	2.51
6/16/2009 5:00	2.5
6/16/2009 5:15	2.5
6/16/2009 5:30	2.51
6/16/2009 5:45	2.54
6/16/2009 6:00	2.52
6/16/2009 6:15	2.5
6/16/2009 6:30	2.46
6/16/2009 6:45	2.4
6/16/2009 7:00	2.36
6/16/2009 7:15	2.33
6/16/2009 7:30	2.32
6/16/2009 7:45	2.33
6/16/2009 8:00	2.36
6/16/2009 8:15	2.4
6/16/2009 8:30	2.44
6/16/2009 8:45	2.46

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/16/2009 9:00	2.46
6/16/2009 9:15	2.45
6/16/2009 9:30	2.45
6/16/2009 9:45	2.43
6/16/2009 10:00	2.42
6/16/2009 10:15	2.39
6/16/2009 10:30	2.37
6/16/2009 10:45	2.37
6/16/2009 11:00	2.39
6/16/2009 11:15	2.43
6/16/2009 11:30	2.43
6/16/2009 11:45	2.39
6/16/2009 12:00	2.37
6/16/2009 12:15	2.38
6/16/2009 12:30	2.38
6/16/2009 12:45	2.38
6/16/2009 13:00	2.36
6/16/2009 13:15	2.32
6/16/2009 13:30	2.28
6/16/2009 13:45	2.3
6/16/2009 14:00	2.33
6/16/2009 14:15	2.36
6/16/2009 14:30	2.39
6/16/2009 14:45	2.41
6/16/2009 15:00	2.42
6/16/2009 15:15	2.44
6/16/2009 15:30	2.45
6/16/2009 15:45	2.44
6/16/2009 16:00	2.42
6/16/2009 16:15	2.41
6/16/2009 16:30	2.39
6/16/2009 16:45	2.37
6/16/2009 17:00	2.36
6/16/2009 17:15	2.37
6/16/2009 17:30	2.35
6/16/2009 17:45	2.35
6/16/2009 18:00	2.36
6/16/2009 18:15	2.37
6/16/2009 18:30	2.38
6/16/2009 18:45	2.4
6/16/2009 19:00	2.4
6/16/2009 19:15	2.39
6/16/2009 19:30	2.39
6/16/2009 19:45	2.39
6/16/2009 20:00	2.38
6/16/2009 20:15	2.37

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/16/2009 20:30	2.36
6/16/2009 20:45	2.36
6/16/2009 21:00	2.38
6/16/2009 21:15	2.43
6/16/2009 21:30	2.45
6/16/2009 21:45	2.44
6/16/2009 22:00	2.48
6/16/2009 22:15	2.54
6/16/2009 22:30	2.59
6/16/2009 22:45	2.63
6/16/2009 23:00	2.62
6/16/2009 23:15	2.54
6/16/2009 23:30	2.47
6/16/2009 23:45	2.46
6/17/2009	2.47
6/17/2009 0:15	2.49
6/17/2009 0:30	2.51
6/17/2009 0:45	2.5
6/17/2009 1:00	2.47
6/17/2009 1:15	2.45
6/17/2009 1:30	2.45
6/17/2009 1:45	2.44
6/17/2009 2:00	2.44
6/17/2009 2:15	2.4
6/17/2009 2:30	2.35
6/17/2009 2:45	2.3
6/17/2009 3:00	2.31
6/17/2009 3:15	2.32
6/17/2009 3:30	2.33
6/17/2009 3:45	2.36
6/17/2009 4:00	2.37
6/17/2009 4:15	2.36
6/17/2009 4:30	2.37
6/17/2009 4:45	2.38
6/17/2009 5:00	2.35
6/17/2009 5:15	2.29
6/17/2009 5:30	2.25
6/17/2009 5:45	2.23
6/17/2009 6:00	2.23
6/17/2009 6:15	2.26
6/17/2009 6:30	2.3
6/17/2009 6:45	2.31
6/17/2009 7:00	2.3
6/17/2009 7:15	2.27
6/17/2009 7:30	2.23
6/17/2009 7:45	2.2

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/17/2009 8:00	2.2
6/17/2009 8:15	2.19
6/17/2009 8:30	2.22
6/17/2009 8:45	2.25
6/17/2009 9:00	2.28
6/17/2009 9:15	2.32
6/17/2009 9:30	2.34
6/17/2009 9:45	2.38
6/17/2009 10:00	2.43
6/17/2009 10:15	2.42
6/17/2009 10:30	2.39
6/17/2009 10:45	2.37
6/17/2009 11:00	2.35
6/17/2009 11:15	2.36
6/17/2009 11:30	2.38
6/17/2009 11:45	2.38
6/17/2009 12:00	2.39
6/17/2009 12:15	2.41
6/17/2009 12:30	2.45
6/17/2009 12:45	2.51
6/17/2009 13:00	2.56
6/17/2009 13:15	2.56
6/17/2009 13:30	2.55
6/17/2009 13:45	2.52
6/17/2009 14:00	2.49
6/17/2009 14:15	2.48
6/17/2009 14:30	2.46
6/17/2009 14:45	2.46
6/17/2009 15:00	2.47
6/17/2009 15:15	2.49
6/17/2009 15:30	2.51
6/17/2009 15:45	2.53
6/17/2009 16:00	2.54
6/17/2009 16:15	2.54
6/17/2009 16:30	2.53
6/17/2009 16:45	2.54
6/17/2009 17:00	2.53
6/17/2009 17:15	2.52
6/17/2009 17:30	2.51
6/17/2009 17:45	2.5
6/17/2009 18:00	2.5
6/17/2009 18:15	2.5
6/17/2009 18:30	2.48
6/17/2009 18:45	2.46
6/17/2009 19:00	2.44
6/17/2009 19:15	2.43

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

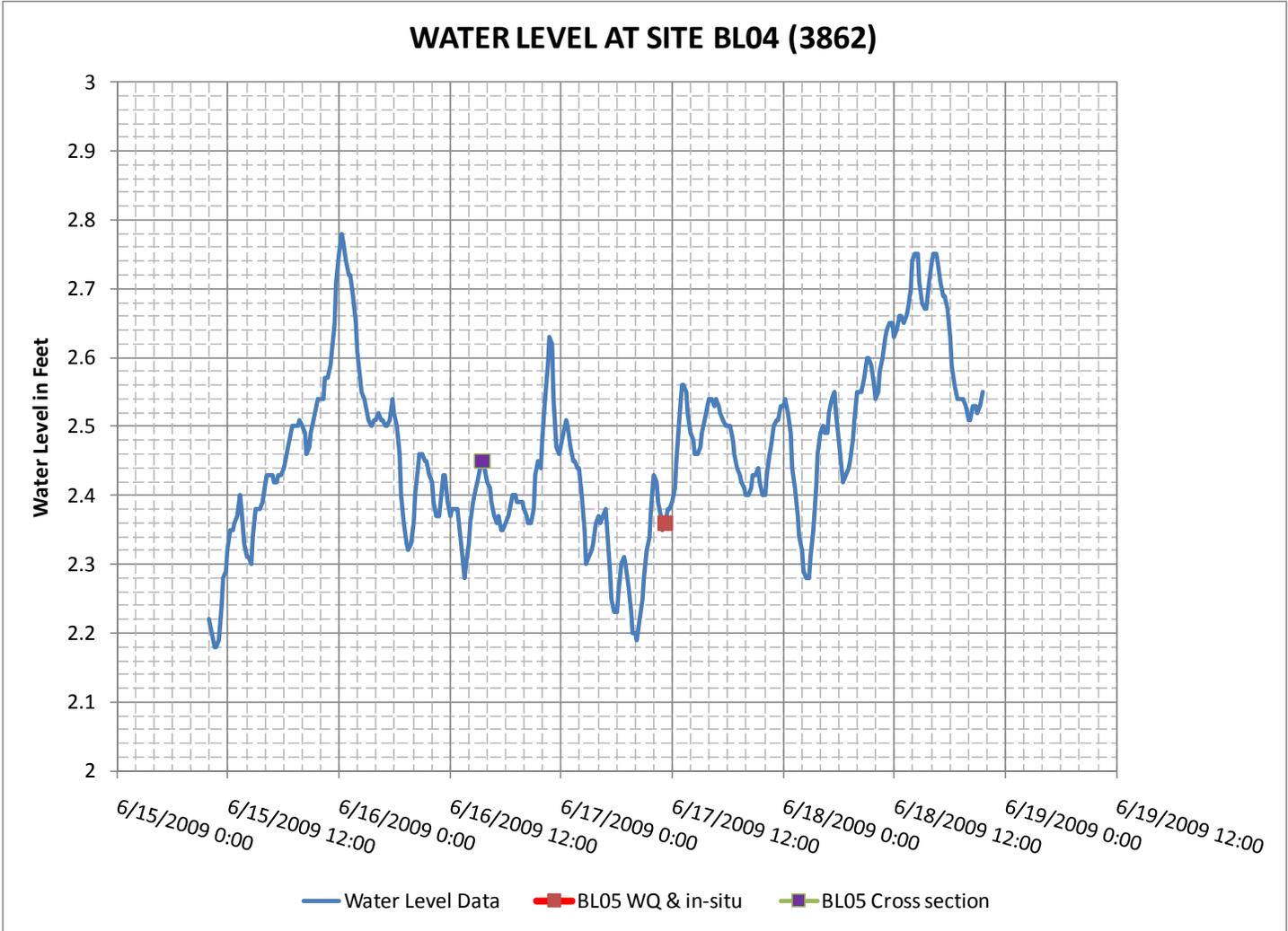
6/17/2009 19:30	2.42
6/17/2009 19:45	2.41
6/17/2009 20:00	2.4
6/17/2009 20:15	2.4
6/17/2009 20:30	2.41
6/17/2009 20:45	2.43
6/17/2009 21:00	2.43
6/17/2009 21:15	2.44
6/17/2009 21:30	2.42
6/17/2009 21:45	2.4
6/17/2009 22:00	2.4
6/17/2009 22:15	2.43
6/17/2009 22:30	2.46
6/17/2009 22:45	2.47
6/17/2009 23:00	2.5
6/17/2009 23:15	2.51
6/17/2009 23:30	2.51
6/17/2009 23:45	2.53
6/18/2009	2.53
6/18/2009 0:15	2.54
6/18/2009 0:30	2.52
6/18/2009 0:45	2.49
6/18/2009 1:00	2.44
6/18/2009 1:15	2.41
6/18/2009 1:30	2.37
6/18/2009 1:45	2.34
6/18/2009 2:00	2.32
6/18/2009 2:15	2.29
6/18/2009 2:30	2.28
6/18/2009 2:45	2.28
6/18/2009 3:00	2.31
6/18/2009 3:15	2.35
6/18/2009 3:30	2.41
6/18/2009 3:45	2.46
6/18/2009 4:00	2.49
6/18/2009 4:15	2.5
6/18/2009 4:30	2.49
6/18/2009 4:45	2.49
6/18/2009 5:00	2.52
6/18/2009 5:15	2.54
6/18/2009 5:30	2.55
6/18/2009 5:45	2.52
6/18/2009 6:00	2.48
6/18/2009 6:15	2.44
6/18/2009 6:30	2.42
6/18/2009 6:45	2.43

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/18/2009 7:00	2.44
6/18/2009 7:15	2.45
6/18/2009 7:30	2.48
6/18/2009 7:45	2.51
6/18/2009 8:00	2.55
6/18/2009 8:15	2.55
6/18/2009 8:30	2.55
6/18/2009 8:45	2.57
6/18/2009 9:00	2.6
6/18/2009 9:15	2.6
6/18/2009 9:30	2.59
6/18/2009 9:45	2.56
6/18/2009 10:00	2.54
6/18/2009 10:15	2.55
6/18/2009 10:30	2.58
6/18/2009 10:45	2.6
6/18/2009 11:00	2.63
6/18/2009 11:15	2.64
6/18/2009 11:30	2.65
6/18/2009 11:45	2.65
6/18/2009 12:00	2.63
6/18/2009 12:15	2.64
6/18/2009 12:30	2.66
6/18/2009 12:45	2.66
6/18/2009 13:00	2.65
6/18/2009 13:15	2.66
6/18/2009 13:30	2.67
6/18/2009 13:45	2.7
6/18/2009 14:00	2.74
6/18/2009 14:15	2.75
6/18/2009 14:30	2.75
6/18/2009 14:45	2.71
6/18/2009 15:00	2.68
6/18/2009 15:15	2.67
6/18/2009 15:30	2.67
6/18/2009 15:45	2.71
6/18/2009 16:00	2.74
6/18/2009 16:15	2.75
6/18/2009 16:30	2.75
6/18/2009 16:45	2.74
6/18/2009 17:00	2.71
6/18/2009 17:15	2.69
6/18/2009 17:30	2.69
6/18/2009 17:45	2.67
6/18/2009 18:00	2.63
6/18/2009 18:15	2.59

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/18/2009 18:30	2.56
6/18/2009 18:45	2.54
6/18/2009 19:00	2.54
6/18/2009 19:15	2.54
6/18/2009 19:30	2.54
6/18/2009 19:45	2.53
6/18/2009 20:00	2.51
6/18/2009 20:15	2.51
6/18/2009 20:30	2.53
6/18/2009 20:45	2.53
6/18/2009 21:00	2.52
6/18/2009 21:15	2.53
6/18/2009 21:30	2.55
6/18/2009 21:45	2.57
6/18/2009 22:00	2.62
6/18/2009 22:15	2.63
6/18/2009 22:30	2.62
6/18/2009 22:45	2.58
6/18/2009 23:00	2.54
6/18/2009 23:15	2.53
6/18/2009 23:30	2.49
6/18/2009 23:45	2.48
6/19/2009	2.47



Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/15/2009 10:00	2.22
6/15/2009 10:15	2.2
6/15/2009 10:30	2.18
6/15/2009 10:45	2.18
6/15/2009 11:00	2.19
6/15/2009 11:15	2.24
6/15/2009 11:30	2.28
6/15/2009 11:45	2.29
6/15/2009 12:00	2.32
6/15/2009 12:15	2.35
6/15/2009 12:30	2.35
6/15/2009 12:45	2.36
6/15/2009 13:00	2.37
6/15/2009 13:15	2.4
6/15/2009 13:30	2.38
6/15/2009 13:45	2.33
6/15/2009 14:00	2.31
6/15/2009 14:15	2.31
6/15/2009 14:30	2.3
6/15/2009 14:45	2.34
6/15/2009 15:00	2.38
6/15/2009 15:15	2.38
6/15/2009 15:30	2.38
6/15/2009 15:45	2.39
6/15/2009 16:00	2.42
6/15/2009 16:15	2.43
6/15/2009 16:30	2.43
6/15/2009 16:45	2.43
6/15/2009 17:00	2.42
6/15/2009 17:15	2.42
6/15/2009 17:30	2.43
6/15/2009 17:45	2.43
6/15/2009 18:00	2.44
6/15/2009 18:15	2.45
6/15/2009 18:30	2.47
6/15/2009 18:45	2.49
6/15/2009 19:00	2.5
6/15/2009 19:15	2.5
6/15/2009 19:30	2.5
6/15/2009 19:45	2.51
6/15/2009 20:00	2.5
6/15/2009 20:15	2.49
6/15/2009 20:30	2.46
6/15/2009 20:45	2.47
6/15/2009 21:00	2.49
6/15/2009 21:15	2.51

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/15/2009 21:30	2.53
6/15/2009 21:45	2.54
6/15/2009 22:00	2.54
6/15/2009 22:15	2.54
6/15/2009 22:30	2.57
6/15/2009 22:45	2.57
6/15/2009 23:00	2.59
6/15/2009 23:15	2.61
6/15/2009 23:30	2.65
6/15/2009 23:45	2.71
6/16/2009	2.75
6/16/2009 0:15	2.78
6/16/2009 0:30	2.77
6/16/2009 0:45	2.74
6/16/2009 1:00	2.72
6/16/2009 1:15	2.72
6/16/2009 1:30	2.69
6/16/2009 1:45	2.65
6/16/2009 2:00	2.61
6/16/2009 2:15	2.57
6/16/2009 2:30	2.55
6/16/2009 2:45	2.54
6/16/2009 3:00	2.52
6/16/2009 3:15	2.51
6/16/2009 3:30	2.5
6/16/2009 3:45	2.51
6/16/2009 4:00	2.51
6/16/2009 4:15	2.52
6/16/2009 4:30	2.51
6/16/2009 4:45	2.51
6/16/2009 5:00	2.5
6/16/2009 5:15	2.5
6/16/2009 5:30	2.51
6/16/2009 5:45	2.54
6/16/2009 6:00	2.52
6/16/2009 6:15	2.5
6/16/2009 6:30	2.46
6/16/2009 6:45	2.4
6/16/2009 7:00	2.36
6/16/2009 7:15	2.33
6/16/2009 7:30	2.32
6/16/2009 7:45	2.33
6/16/2009 8:00	2.36
6/16/2009 8:15	2.4
6/16/2009 8:30	2.44
6/16/2009 8:45	2.46

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/16/2009 9:00	2.46
6/16/2009 9:15	2.45
6/16/2009 9:30	2.45
6/16/2009 9:45	2.43
6/16/2009 10:00	2.42
6/16/2009 10:15	2.39
6/16/2009 10:30	2.37
6/16/2009 10:45	2.37
6/16/2009 11:00	2.39
6/16/2009 11:15	2.43
6/16/2009 11:30	2.43
6/16/2009 11:45	2.39
6/16/2009 12:00	2.37
6/16/2009 12:15	2.38
6/16/2009 12:30	2.38
6/16/2009 12:45	2.38
6/16/2009 13:00	2.36
6/16/2009 13:15	2.32
6/16/2009 13:30	2.28
6/16/2009 13:45	2.3
6/16/2009 14:00	2.33
6/16/2009 14:15	2.36
6/16/2009 14:30	2.39
6/16/2009 14:45	2.41
6/16/2009 15:00	2.42
6/16/2009 15:15	2.44
6/16/2009 15:30	2.45
6/16/2009 15:45	2.44
6/16/2009 16:00	2.42
6/16/2009 16:15	2.41
6/16/2009 16:30	2.39
6/16/2009 16:45	2.37
6/16/2009 17:00	2.36
6/16/2009 17:15	2.37
6/16/2009 17:30	2.35
6/16/2009 17:45	2.35
6/16/2009 18:00	2.36
6/16/2009 18:15	2.37
6/16/2009 18:30	2.38
6/16/2009 18:45	2.4
6/16/2009 19:00	2.4
6/16/2009 19:15	2.39
6/16/2009 19:30	2.39
6/16/2009 19:45	2.39
6/16/2009 20:00	2.38
6/16/2009 20:15	2.37

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/16/2009 20:30	2.36
6/16/2009 20:45	2.36
6/16/2009 21:00	2.38
6/16/2009 21:15	2.43
6/16/2009 21:30	2.45
6/16/2009 21:45	2.44
6/16/2009 22:00	2.48
6/16/2009 22:15	2.54
6/16/2009 22:30	2.59
6/16/2009 22:45	2.63
6/16/2009 23:00	2.62
6/16/2009 23:15	2.54
6/16/2009 23:30	2.47
6/16/2009 23:45	2.46
6/17/2009	2.47
6/17/2009 0:15	2.49
6/17/2009 0:30	2.51
6/17/2009 0:45	2.5
6/17/2009 1:00	2.47
6/17/2009 1:15	2.45
6/17/2009 1:30	2.45
6/17/2009 1:45	2.44
6/17/2009 2:00	2.44
6/17/2009 2:15	2.4
6/17/2009 2:30	2.35
6/17/2009 2:45	2.3
6/17/2009 3:00	2.31
6/17/2009 3:15	2.32
6/17/2009 3:30	2.33
6/17/2009 3:45	2.36
6/17/2009 4:00	2.37
6/17/2009 4:15	2.36
6/17/2009 4:30	2.37
6/17/2009 4:45	2.38
6/17/2009 5:00	2.35
6/17/2009 5:15	2.29
6/17/2009 5:30	2.25
6/17/2009 5:45	2.23
6/17/2009 6:00	2.23
6/17/2009 6:15	2.26
6/17/2009 6:30	2.3
6/17/2009 6:45	2.31
6/17/2009 7:00	2.3
6/17/2009 7:15	2.27
6/17/2009 7:30	2.23
6/17/2009 7:45	2.2

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/17/2009 8:00	2.2
6/17/2009 8:15	2.19
6/17/2009 8:30	2.22
6/17/2009 8:45	2.25
6/17/2009 9:00	2.28
6/17/2009 9:15	2.32
6/17/2009 9:30	2.34
6/17/2009 9:45	2.38
6/17/2009 10:00	2.43
6/17/2009 10:15	2.42
6/17/2009 10:30	2.39
6/17/2009 10:45	2.37
6/17/2009 11:00	2.35
6/17/2009 11:15	2.36
6/17/2009 11:30	2.38
6/17/2009 11:45	2.38
6/17/2009 12:00	2.39
6/17/2009 12:15	2.41
6/17/2009 12:30	2.45
6/17/2009 12:45	2.51
6/17/2009 13:00	2.56
6/17/2009 13:15	2.56
6/17/2009 13:30	2.55
6/17/2009 13:45	2.52
6/17/2009 14:00	2.49
6/17/2009 14:15	2.48
6/17/2009 14:30	2.46
6/17/2009 14:45	2.46
6/17/2009 15:00	2.47
6/17/2009 15:15	2.49
6/17/2009 15:30	2.51
6/17/2009 15:45	2.53
6/17/2009 16:00	2.54
6/17/2009 16:15	2.54
6/17/2009 16:30	2.53
6/17/2009 16:45	2.54
6/17/2009 17:00	2.53
6/17/2009 17:15	2.52
6/17/2009 17:30	2.51
6/17/2009 17:45	2.5
6/17/2009 18:00	2.5
6/17/2009 18:15	2.5
6/17/2009 18:30	2.48
6/17/2009 18:45	2.46
6/17/2009 19:00	2.44
6/17/2009 19:15	2.43

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

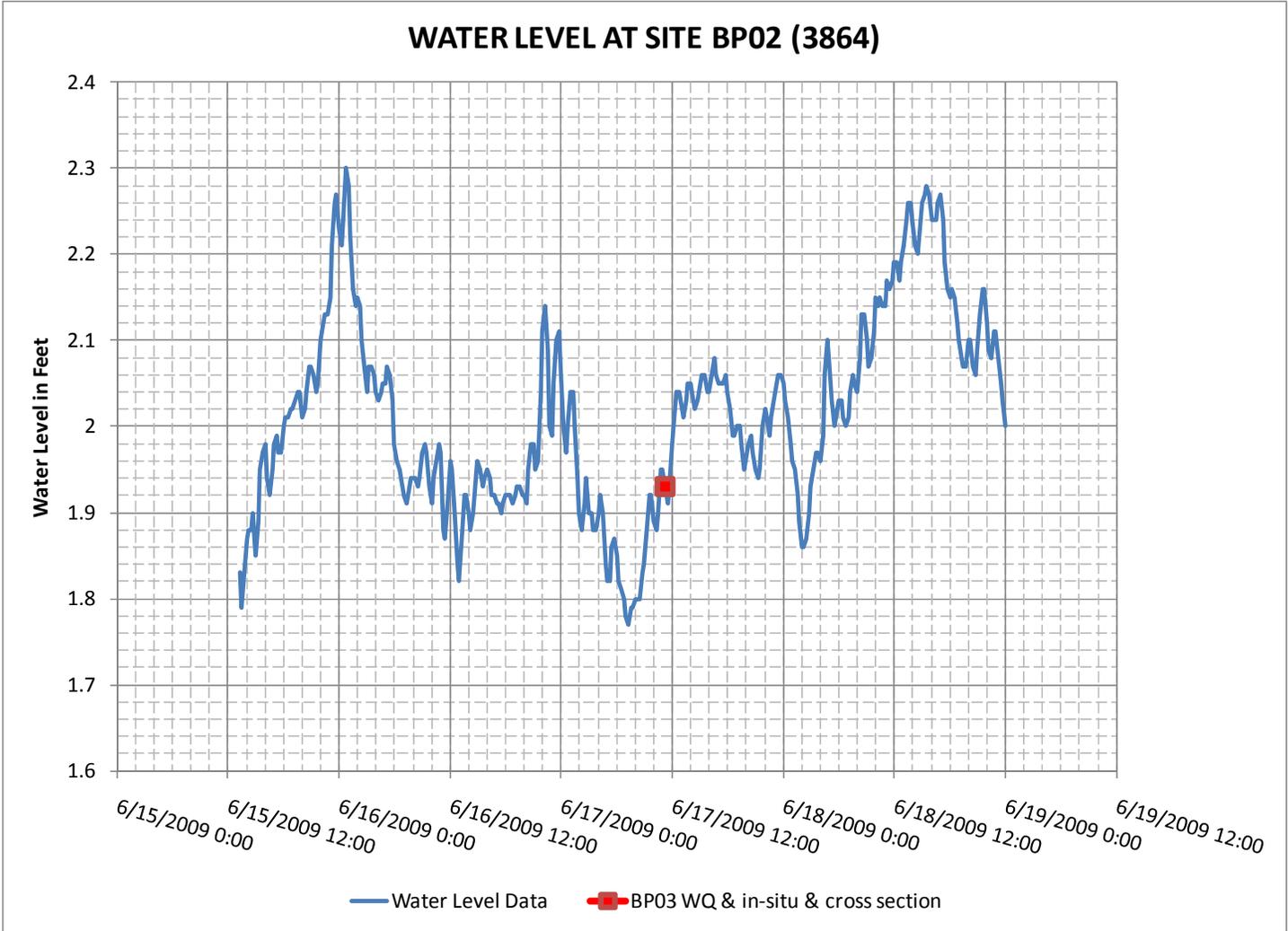
6/17/2009 19:30	2.42
6/17/2009 19:45	2.41
6/17/2009 20:00	2.4
6/17/2009 20:15	2.4
6/17/2009 20:30	2.41
6/17/2009 20:45	2.43
6/17/2009 21:00	2.43
6/17/2009 21:15	2.44
6/17/2009 21:30	2.42
6/17/2009 21:45	2.4
6/17/2009 22:00	2.4
6/17/2009 22:15	2.43
6/17/2009 22:30	2.46
6/17/2009 22:45	2.47
6/17/2009 23:00	2.5
6/17/2009 23:15	2.51
6/17/2009 23:30	2.51
6/17/2009 23:45	2.53
6/18/2009	2.53
6/18/2009 0:15	2.54
6/18/2009 0:30	2.52
6/18/2009 0:45	2.49
6/18/2009 1:00	2.44
6/18/2009 1:15	2.41
6/18/2009 1:30	2.37
6/18/2009 1:45	2.34
6/18/2009 2:00	2.32
6/18/2009 2:15	2.29
6/18/2009 2:30	2.28
6/18/2009 2:45	2.28
6/18/2009 3:00	2.31
6/18/2009 3:15	2.35
6/18/2009 3:30	2.41
6/18/2009 3:45	2.46
6/18/2009 4:00	2.49
6/18/2009 4:15	2.5
6/18/2009 4:30	2.49
6/18/2009 4:45	2.49
6/18/2009 5:00	2.52
6/18/2009 5:15	2.54
6/18/2009 5:30	2.55
6/18/2009 5:45	2.52
6/18/2009 6:00	2.48
6/18/2009 6:15	2.44
6/18/2009 6:30	2.42
6/18/2009 6:45	2.43

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/18/2009 7:00	2.44
6/18/2009 7:15	2.45
6/18/2009 7:30	2.48
6/18/2009 7:45	2.51
6/18/2009 8:00	2.55
6/18/2009 8:15	2.55
6/18/2009 8:30	2.55
6/18/2009 8:45	2.57
6/18/2009 9:00	2.6
6/18/2009 9:15	2.6
6/18/2009 9:30	2.59
6/18/2009 9:45	2.56
6/18/2009 10:00	2.54
6/18/2009 10:15	2.55
6/18/2009 10:30	2.58
6/18/2009 10:45	2.6
6/18/2009 11:00	2.63
6/18/2009 11:15	2.64
6/18/2009 11:30	2.65
6/18/2009 11:45	2.65
6/18/2009 12:00	2.63
6/18/2009 12:15	2.64
6/18/2009 12:30	2.66
6/18/2009 12:45	2.66
6/18/2009 13:00	2.65
6/18/2009 13:15	2.66
6/18/2009 13:30	2.67
6/18/2009 13:45	2.7
6/18/2009 14:00	2.74
6/18/2009 14:15	2.75
6/18/2009 14:30	2.75
6/18/2009 14:45	2.71
6/18/2009 15:00	2.68
6/18/2009 15:15	2.67
6/18/2009 15:30	2.67
6/18/2009 15:45	2.71
6/18/2009 16:00	2.74
6/18/2009 16:15	2.75
6/18/2009 16:30	2.75
6/18/2009 16:45	2.74
6/18/2009 17:00	2.71
6/18/2009 17:15	2.69
6/18/2009 17:30	2.69
6/18/2009 17:45	2.67
6/18/2009 18:00	2.63
6/18/2009 18:15	2.59

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/18/2009 18:30	2.56
6/18/2009 18:45	2.54
6/18/2009 19:00	2.54
6/18/2009 19:15	2.54
6/18/2009 19:30	2.54
6/18/2009 19:45	2.53
6/18/2009 20:00	2.51
6/18/2009 20:15	2.51
6/18/2009 20:30	2.53
6/18/2009 20:45	2.53
6/18/2009 21:00	2.52
6/18/2009 21:15	2.53
6/18/2009 21:30	2.55
6/18/2009 21:45	2.57
6/18/2009 22:00	2.62
6/18/2009 22:15	2.63
6/18/2009 22:30	2.62
6/18/2009 22:45	2.58
6/18/2009 23:00	2.54
6/18/2009 23:15	2.53
6/18/2009 23:30	2.49
6/18/2009 23:45	2.48
6/19/2009	2.47



Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/15/2009 13:15	1.83
6/15/2009 13:30	1.79
6/15/2009 13:45	1.83
6/15/2009 14:00	1.87
6/15/2009 14:15	1.88
6/15/2009 14:30	1.88
6/15/2009 14:45	1.9
6/15/2009 15:00	1.85
6/15/2009 15:15	1.89
6/15/2009 15:30	1.95
6/15/2009 15:45	1.97
6/15/2009 16:00	1.98
6/15/2009 16:15	1.94
6/15/2009 16:30	1.92
6/15/2009 16:45	1.95
6/15/2009 17:00	1.98
6/15/2009 17:15	1.99
6/15/2009 17:30	1.97
6/15/2009 17:45	1.97
6/15/2009 18:00	2
6/15/2009 18:15	2.01
6/15/2009 18:30	2.01
6/15/2009 18:45	2.02
6/15/2009 19:00	2.02
6/15/2009 19:15	2.03
6/15/2009 19:30	2.04
6/15/2009 19:45	2.04
6/15/2009 20:00	2.01
6/15/2009 20:15	2.02
6/15/2009 20:30	2.04
6/15/2009 20:45	2.07
6/15/2009 21:00	2.07
6/15/2009 21:15	2.06
6/15/2009 21:30	2.04
6/15/2009 21:45	2.05
6/15/2009 22:00	2.1
6/15/2009 22:15	2.12
6/15/2009 22:30	2.13
6/15/2009 22:45	2.13
6/15/2009 23:00	2.15
6/15/2009 23:15	2.21
6/15/2009 23:30	2.26
6/15/2009 23:45	2.27
6/16/2009	2.23
6/16/2009 0:15	2.21
6/16/2009 0:30	2.24

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/16/2009 0:45	2.3
6/16/2009 1:00	2.28
6/16/2009 1:15	2.22
6/16/2009 1:30	2.16
6/16/2009 1:45	2.14
6/16/2009 2:00	2.15
6/16/2009 2:15	2.14
6/16/2009 2:30	2.1
6/16/2009 2:45	2.07
6/16/2009 3:00	2.04
6/16/2009 3:15	2.07
6/16/2009 3:30	2.07
6/16/2009 3:45	2.06
6/16/2009 4:00	2.04
6/16/2009 4:15	2.03
6/16/2009 4:30	2.04
6/16/2009 4:45	2.05
6/16/2009 5:00	2.05
6/16/2009 5:15	2.07
6/16/2009 5:30	2.06
6/16/2009 5:45	2.03
6/16/2009 6:00	1.98
6/16/2009 6:15	1.96
6/16/2009 6:30	1.95
6/16/2009 6:45	1.94
6/16/2009 7:00	1.92
6/16/2009 7:15	1.91
6/16/2009 7:30	1.92
6/16/2009 7:45	1.94
6/16/2009 8:00	1.94
6/16/2009 8:15	1.94
6/16/2009 8:30	1.93
6/16/2009 8:45	1.94
6/16/2009 9:00	1.97
6/16/2009 9:15	1.98
6/16/2009 9:30	1.97
6/16/2009 9:45	1.93
6/16/2009 10:00	1.91
6/16/2009 10:15	1.94
6/16/2009 10:30	1.96
6/16/2009 10:45	1.98
6/16/2009 11:00	1.97
6/16/2009 11:15	1.88
6/16/2009 11:30	1.87
6/16/2009 11:45	1.91
6/16/2009 12:00	1.96

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/16/2009 12:15	1.95
6/16/2009 12:30	1.9
6/16/2009 12:45	1.84
6/16/2009 13:00	1.82
6/16/2009 13:15	1.87
6/16/2009 13:30	1.92
6/16/2009 13:45	1.92
6/16/2009 14:00	1.9
6/16/2009 14:15	1.88
6/16/2009 14:30	1.9
6/16/2009 14:45	1.94
6/16/2009 15:00	1.96
6/16/2009 15:15	1.95
6/16/2009 15:30	1.93
6/16/2009 15:45	1.94
6/16/2009 16:00	1.95
6/16/2009 16:15	1.94
6/16/2009 16:30	1.92
6/16/2009 16:45	1.92
6/16/2009 17:00	1.91
6/16/2009 17:15	1.91
6/16/2009 17:30	1.9
6/16/2009 17:45	1.91
6/16/2009 18:00	1.92
6/16/2009 18:15	1.92
6/16/2009 18:30	1.92
6/16/2009 18:45	1.91
6/16/2009 19:00	1.92
6/16/2009 19:15	1.93
6/16/2009 19:30	1.93
6/16/2009 19:45	1.92
6/16/2009 20:00	1.92
6/16/2009 20:15	1.91
6/16/2009 20:30	1.95
6/16/2009 20:45	1.98
6/16/2009 21:00	1.98
6/16/2009 21:15	1.95
6/16/2009 21:30	1.96
6/16/2009 21:45	2.04
6/16/2009 22:00	2.11
6/16/2009 22:15	2.14
6/16/2009 22:30	2.09
6/16/2009 22:45	2
6/16/2009 23:00	1.99
6/16/2009 23:15	2.05
6/16/2009 23:30	2.1

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/16/2009 23:45	2.11
6/17/2009	2.07
6/17/2009 0:15	2
6/17/2009 0:30	1.97
6/17/2009 0:45	2
6/17/2009 1:00	2.04
6/17/2009 1:15	2.04
6/17/2009 1:30	2
6/17/2009 1:45	1.94
6/17/2009 2:00	1.9
6/17/2009 2:15	1.88
6/17/2009 2:30	1.91
6/17/2009 2:45	1.94
6/17/2009 3:00	1.9
6/17/2009 3:15	1.9
6/17/2009 3:30	1.88
6/17/2009 3:45	1.88
6/17/2009 4:00	1.9
6/17/2009 4:15	1.92
6/17/2009 4:30	1.9
6/17/2009 4:45	1.84
6/17/2009 5:00	1.82
6/17/2009 5:15	1.82
6/17/2009 5:30	1.86
6/17/2009 5:45	1.87
6/17/2009 6:00	1.85
6/17/2009 6:15	1.82
6/17/2009 6:30	1.81
6/17/2009 6:45	1.8
6/17/2009 7:00	1.78
6/17/2009 7:15	1.77
6/17/2009 7:30	1.79
6/17/2009 7:45	1.79
6/17/2009 8:00	1.8
6/17/2009 8:15	1.8
6/17/2009 8:30	1.8
6/17/2009 8:45	1.83
6/17/2009 9:00	1.84
6/17/2009 9:15	1.88
6/17/2009 9:30	1.92
6/17/2009 9:45	1.92
6/17/2009 10:00	1.89
6/17/2009 10:15	1.88
6/17/2009 10:30	1.9
6/17/2009 10:45	1.95
6/17/2009 11:00	1.95

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/17/2009 11:15	1.93
6/17/2009 11:30	1.91
6/17/2009 11:45	1.93
6/17/2009 12:00	1.98
6/17/2009 12:15	2.02
6/17/2009 12:30	2.04
6/17/2009 12:45	2.04
6/17/2009 13:00	2.02
6/17/2009 13:15	2.01
6/17/2009 13:30	2.03
6/17/2009 13:45	2.05
6/17/2009 14:00	2.05
6/17/2009 14:15	2.03
6/17/2009 14:30	2.02
6/17/2009 14:45	2.03
6/17/2009 15:00	2.05
6/17/2009 15:15	2.06
6/17/2009 15:30	2.06
6/17/2009 15:45	2.04
6/17/2009 16:00	2.04
6/17/2009 16:15	2.06
6/17/2009 16:30	2.08
6/17/2009 16:45	2.06
6/17/2009 17:00	2.05
6/17/2009 17:15	2.05
6/17/2009 17:30	2.05
6/17/2009 17:45	2.06
6/17/2009 18:00	2.04
6/17/2009 18:15	2.02
6/17/2009 18:30	1.99
6/17/2009 18:45	1.99
6/17/2009 19:00	2
6/17/2009 19:15	2
6/17/2009 19:30	1.98
6/17/2009 19:45	1.95
6/17/2009 20:00	1.96
6/17/2009 20:15	1.98
6/17/2009 20:30	1.99
6/17/2009 20:45	1.97
6/17/2009 21:00	1.95
6/17/2009 21:15	1.94
6/17/2009 21:30	1.95
6/17/2009 21:45	2
6/17/2009 22:00	2.02
6/17/2009 22:15	2.01
6/17/2009 22:30	1.99

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

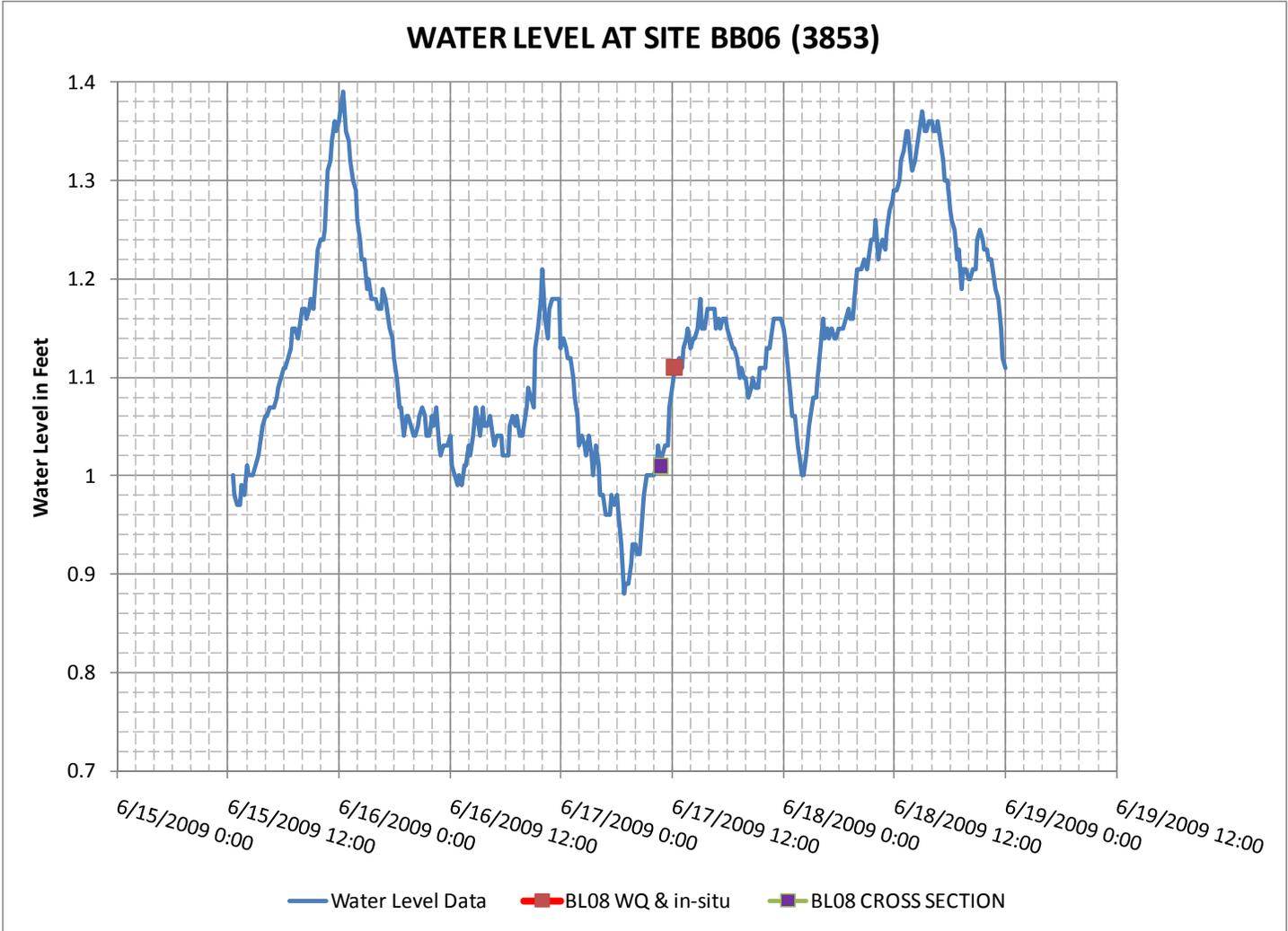
6/17/2009 22:45	2.01
6/17/2009 23:00	2.03
6/17/2009 23:15	2.05
6/17/2009 23:30	2.06
6/17/2009 23:45	2.06
6/18/2009	2.05
6/18/2009 0:15	2.03
6/18/2009 0:30	2.01
6/18/2009 0:45	1.98
6/18/2009 1:00	1.96
6/18/2009 1:15	1.95
6/18/2009 1:30	1.92
6/18/2009 1:45	1.89
6/18/2009 2:00	1.86
6/18/2009 2:15	1.86
6/18/2009 2:30	1.87
6/18/2009 2:45	1.9
6/18/2009 3:00	1.93
6/18/2009 3:15	1.95
6/18/2009 3:30	1.97
6/18/2009 3:45	1.97
6/18/2009 4:00	1.96
6/18/2009 4:15	1.99
6/18/2009 4:30	2.06
6/18/2009 4:45	2.1
6/18/2009 5:00	2.08
6/18/2009 5:15	2.03
6/18/2009 5:30	2
6/18/2009 5:45	2.01
6/18/2009 6:00	2.03
6/18/2009 6:15	2.03
6/18/2009 6:30	2.01
6/18/2009 6:45	2
6/18/2009 7:00	2.01
6/18/2009 7:15	2.04
6/18/2009 7:30	2.06
6/18/2009 7:45	2.05
6/18/2009 8:00	2.04
6/18/2009 8:15	2.08
6/18/2009 8:30	2.13
6/18/2009 8:45	2.13
6/18/2009 9:00	2.1
6/18/2009 9:15	2.07
6/18/2009 9:30	2.08
6/18/2009 9:45	2.11
6/18/2009 10:00	2.15

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/18/2009 10:15	2.14
6/18/2009 10:30	2.15
6/18/2009 10:45	2.14
6/18/2009 11:00	2.14
6/18/2009 11:15	2.17
6/18/2009 11:30	2.16
6/18/2009 11:45	2.17
6/18/2009 12:00	2.19
6/18/2009 12:15	2.19
6/18/2009 12:30	2.17
6/18/2009 12:45	2.19
6/18/2009 13:00	2.21
6/18/2009 13:15	2.24
6/18/2009 13:30	2.26
6/18/2009 13:45	2.26
6/18/2009 14:00	2.24
6/18/2009 14:15	2.21
6/18/2009 14:30	2.2
6/18/2009 14:45	2.22
6/18/2009 15:00	2.26
6/18/2009 15:15	2.27
6/18/2009 15:30	2.28
6/18/2009 15:45	2.27
6/18/2009 16:00	2.24
6/18/2009 16:15	2.24
6/18/2009 16:30	2.24
6/18/2009 16:45	2.26
6/18/2009 17:00	2.27
6/18/2009 17:15	2.24
6/18/2009 17:30	2.19
6/18/2009 17:45	2.16
6/18/2009 18:00	2.15
6/18/2009 18:15	2.16
6/18/2009 18:30	2.15
6/18/2009 18:45	2.12
6/18/2009 19:00	2.1
6/18/2009 19:15	2.08
6/18/2009 19:30	2.07
6/18/2009 19:45	2.07
6/18/2009 20:00	2.1
6/18/2009 20:15	2.1
6/18/2009 20:30	2.07
6/18/2009 20:45	2.06
6/18/2009 21:00	2.09
6/18/2009 21:15	2.13
6/18/2009 21:30	2.16

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/18/2009 21:45	2.16
6/18/2009 22:00	2.12
6/18/2009 22:15	2.09
6/18/2009 22:30	2.08
6/18/2009 22:45	2.11
6/18/2009 23:00	2.11
6/18/2009 23:15	2.08
6/18/2009 23:30	2.05
6/18/2009 23:45	2.03
6/19/2009	2



Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/15/2009 12:30	1
6/15/2009 12:45	0.98
6/15/2009 13:00	0.97
6/15/2009 13:15	0.97
6/15/2009 13:30	0.99
6/15/2009 13:45	0.98
6/15/2009 14:00	1.01
6/15/2009 14:15	1
6/15/2009 14:30	1
6/15/2009 14:45	1
6/15/2009 15:00	1.01
6/15/2009 15:15	1.02
6/15/2009 15:30	1.03
6/15/2009 15:45	1.05
6/15/2009 16:00	1.06
6/15/2009 16:15	1.06
6/15/2009 16:30	1.07
6/15/2009 16:45	1.07
6/15/2009 17:00	1.07
6/15/2009 17:15	1.08
6/15/2009 17:30	1.09
6/15/2009 17:45	1.1
6/15/2009 18:00	1.11
6/15/2009 18:15	1.11
6/15/2009 18:30	1.12
6/15/2009 18:45	1.13
6/15/2009 19:00	1.15
6/15/2009 19:15	1.15
6/15/2009 19:30	1.14
6/15/2009 19:45	1.15
6/15/2009 20:00	1.17
6/15/2009 20:15	1.17
6/15/2009 20:30	1.16
6/15/2009 20:45	1.17
6/15/2009 21:00	1.18
6/15/2009 21:15	1.17
6/15/2009 21:30	1.21
6/15/2009 21:45	1.23
6/15/2009 22:00	1.24
6/15/2009 22:15	1.24
6/15/2009 22:30	1.25
6/15/2009 22:45	1.31
6/15/2009 23:00	1.32
6/15/2009 23:15	1.34
6/15/2009 23:30	1.36
6/15/2009 23:45	1.35

6/16/2009	1.36
6/16/2009 0:15	1.38
6/16/2009 0:30	1.39
6/16/2009 0:45	1.35
6/16/2009 1:00	1.34
6/16/2009 1:15	1.32
6/16/2009 1:30	1.3
6/16/2009 1:45	1.29
6/16/2009 2:00	1.26
6/16/2009 2:15	1.24
6/16/2009 2:30	1.22
6/16/2009 2:45	1.22
6/16/2009 3:00	1.19
6/16/2009 3:15	1.2
6/16/2009 3:30	1.18
6/16/2009 3:45	1.18
6/16/2009 4:00	1.18
6/16/2009 4:15	1.17
6/16/2009 4:30	1.17
6/16/2009 4:45	1.19
6/16/2009 5:00	1.18
6/16/2009 5:15	1.17
6/16/2009 5:30	1.15
6/16/2009 5:45	1.14
6/16/2009 6:00	1.12
6/16/2009 6:15	1.1
6/16/2009 6:30	1.07
6/16/2009 6:45	1.07
6/16/2009 7:00	1.04
6/16/2009 7:15	1.06
6/16/2009 7:30	1.06
6/16/2009 7:45	1.05
6/16/2009 8:00	1.04
6/16/2009 8:15	1.04
6/16/2009 8:30	1.05
6/16/2009 8:45	1.06
6/16/2009 9:00	1.07
6/16/2009 9:15	1.06
6/16/2009 9:30	1.04
6/16/2009 9:45	1.04
6/16/2009 10:00	1.06
6/16/2009 10:15	1.05
6/16/2009 10:30	1.07
6/16/2009 10:45	1.03
6/16/2009 11:00	1.02
6/16/2009 11:15	1.03

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/16/2009 11:30	1.03
6/16/2009 11:45	1.03
6/16/2009 12:00	1.04
6/16/2009 12:15	1.01
6/16/2009 12:30	1
6/16/2009 12:45	0.99
6/16/2009 13:00	1
6/16/2009 13:15	0.99
6/16/2009 13:30	1.01
6/16/2009 13:45	1.01
6/16/2009 14:00	1.03
6/16/2009 14:15	1.02
6/16/2009 14:30	1.04
6/16/2009 14:45	1.07
6/16/2009 15:00	1.06
6/16/2009 15:15	1.04
6/16/2009 15:30	1.07
6/16/2009 15:45	1.05
6/16/2009 16:00	1.05
6/16/2009 16:15	1.06
6/16/2009 16:30	1.05
6/16/2009 16:45	1.03
6/16/2009 17:00	1.04
6/16/2009 17:15	1.04
6/16/2009 17:30	1.04
6/16/2009 17:45	1.02
6/16/2009 18:00	1.02
6/16/2009 18:15	1.02
6/16/2009 18:30	1.05
6/16/2009 18:45	1.06
6/16/2009 19:00	1.05
6/16/2009 19:15	1.06
6/16/2009 19:30	1.04
6/16/2009 19:45	1.04
6/16/2009 20:00	1.05
6/16/2009 20:15	1.07
6/16/2009 20:30	1.09
6/16/2009 20:45	1.08
6/16/2009 21:00	1.07
6/16/2009 21:15	1.13
6/16/2009 21:30	1.15
6/16/2009 21:45	1.18
6/16/2009 22:00	1.21
6/16/2009 22:15	1.16
6/16/2009 22:30	1.14
6/16/2009 22:45	1.17

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/16/2009 23:00	1.18
6/16/2009 23:15	1.18
6/16/2009 23:30	1.18
6/16/2009 23:45	1.18
6/17/2009	1.13
6/17/2009 0:15	1.14
6/17/2009 0:30	1.13
6/17/2009 0:45	1.12
6/17/2009 1:00	1.12
6/17/2009 1:15	1.1
6/17/2009 1:30	1.08
6/17/2009 1:45	1.06
6/17/2009 2:00	1.03
6/17/2009 2:15	1.04
6/17/2009 2:30	1.03
6/17/2009 2:45	1.02
6/17/2009 3:00	1.04
6/17/2009 3:15	1.02
6/17/2009 3:30	1
6/17/2009 3:45	1.03
6/17/2009 4:00	1.01
6/17/2009 4:15	0.98
6/17/2009 4:30	0.98
6/17/2009 4:45	0.96
6/17/2009 5:00	0.96
6/17/2009 5:15	0.96
6/17/2009 5:30	0.98
6/17/2009 5:45	0.97
6/17/2009 6:00	0.98
6/17/2009 6:15	0.96
6/17/2009 6:30	0.93
6/17/2009 6:45	0.88
6/17/2009 7:00	0.89
6/17/2009 7:15	0.89
6/17/2009 7:30	0.91
6/17/2009 7:45	0.93
6/17/2009 8:00	0.93
6/17/2009 8:15	0.92
6/17/2009 8:30	0.92
6/17/2009 8:45	0.96
6/17/2009 9:00	0.98
6/17/2009 9:15	1
6/17/2009 9:30	1
6/17/2009 9:45	1
6/17/2009 10:00	1
6/17/2009 10:15	1.01

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/17/2009 10:30	1.03
6/17/2009 10:45	1.01
6/17/2009 11:00	1.02
6/17/2009 11:15	1.03
6/17/2009 11:30	1.03
6/17/2009 11:45	1.07
6/17/2009 12:00	1.09
6/17/2009 12:15	1.11
6/17/2009 12:30	1.11
6/17/2009 12:45	1.12
6/17/2009 13:00	1.11
6/17/2009 13:15	1.13
6/17/2009 13:30	1.14
6/17/2009 13:45	1.15
6/17/2009 14:00	1.13
6/17/2009 14:15	1.14
6/17/2009 14:30	1.14
6/17/2009 14:45	1.15
6/17/2009 15:00	1.18
6/17/2009 15:15	1.15
6/17/2009 15:30	1.15
6/17/2009 15:45	1.17
6/17/2009 16:00	1.17
6/17/2009 16:15	1.17
6/17/2009 16:30	1.17
6/17/2009 16:45	1.15
6/17/2009 17:00	1.16
6/17/2009 17:15	1.15
6/17/2009 17:30	1.16
6/17/2009 17:45	1.16
6/17/2009 18:00	1.15
6/17/2009 18:15	1.14
6/17/2009 18:30	1.13
6/17/2009 18:45	1.13
6/17/2009 19:00	1.12
6/17/2009 19:15	1.1
6/17/2009 19:30	1.11
6/17/2009 19:45	1.1
6/17/2009 20:00	1.1
6/17/2009 20:15	1.08
6/17/2009 20:30	1.09
6/17/2009 20:45	1.1
6/17/2009 21:00	1.09
6/17/2009 21:15	1.09
6/17/2009 21:30	1.11
6/17/2009 21:45	1.11

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

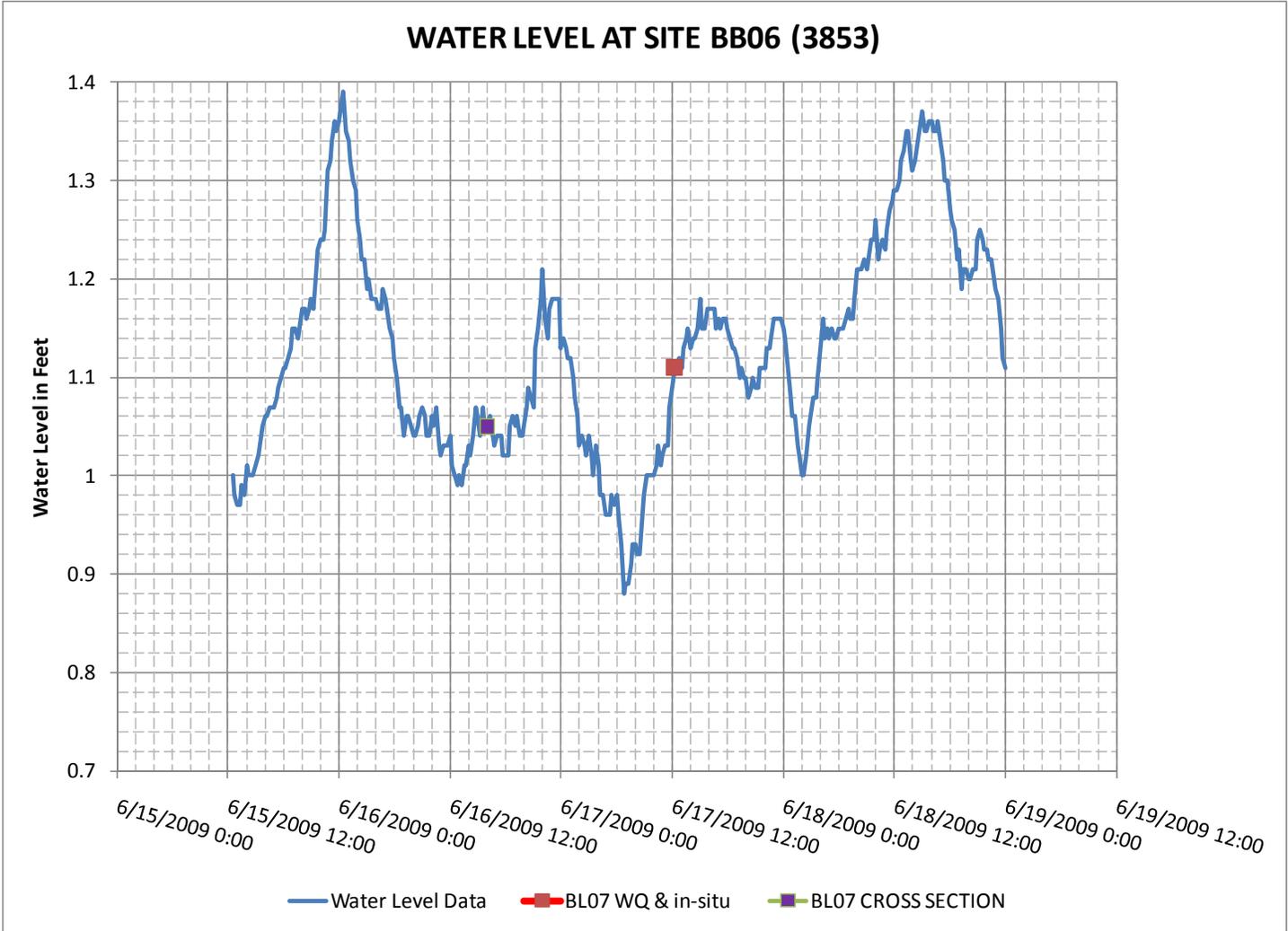
6/17/2009 22:00	1.11
6/17/2009 22:15	1.13
6/17/2009 22:30	1.13
6/17/2009 22:45	1.14
6/17/2009 23:00	1.16
6/17/2009 23:15	1.16
6/17/2009 23:30	1.16
6/17/2009 23:45	1.16
6/18/2009	1.15
6/18/2009 0:15	1.14
6/18/2009 0:30	1.11
6/18/2009 0:45	1.08
6/18/2009 1:00	1.06
6/18/2009 1:15	1.06
6/18/2009 1:30	1.03
6/18/2009 1:45	1.02
6/18/2009 2:00	1
6/18/2009 2:15	1
6/18/2009 2:30	1.02
6/18/2009 2:45	1.05
6/18/2009 3:00	1.06
6/18/2009 3:15	1.08
6/18/2009 3:30	1.08
6/18/2009 3:45	1.1
6/18/2009 4:00	1.13
6/18/2009 4:15	1.16
6/18/2009 4:30	1.14
6/18/2009 4:45	1.15
6/18/2009 5:00	1.14
6/18/2009 5:15	1.15
6/18/2009 5:30	1.14
6/18/2009 5:45	1.14
6/18/2009 6:00	1.15
6/18/2009 6:15	1.15
6/18/2009 6:30	1.15
6/18/2009 6:45	1.16
6/18/2009 7:00	1.17
6/18/2009 7:15	1.16
6/18/2009 7:30	1.16
6/18/2009 7:45	1.18
6/18/2009 8:00	1.21
6/18/2009 8:15	1.21
6/18/2009 8:30	1.21
6/18/2009 8:45	1.22
6/18/2009 9:00	1.21
6/18/2009 9:15	1.22

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/18/2009 9:30	1.24
6/18/2009 9:45	1.24
6/18/2009 10:00	1.26
6/18/2009 10:15	1.22
6/18/2009 10:30	1.23
6/18/2009 10:45	1.24
6/18/2009 11:00	1.23
6/18/2009 11:15	1.25
6/18/2009 11:30	1.27
6/18/2009 11:45	1.28
6/18/2009 12:00	1.29
6/18/2009 12:15	1.29
6/18/2009 12:30	1.3
6/18/2009 12:45	1.32
6/18/2009 13:00	1.33
6/18/2009 13:15	1.35
6/18/2009 13:30	1.35
6/18/2009 13:45	1.32
6/18/2009 14:00	1.31
6/18/2009 14:15	1.32
6/18/2009 14:30	1.34
6/18/2009 14:45	1.35
6/18/2009 15:00	1.37
6/18/2009 15:15	1.35
6/18/2009 15:30	1.35
6/18/2009 15:45	1.36
6/18/2009 16:00	1.36
6/18/2009 16:15	1.35
6/18/2009 16:30	1.35
6/18/2009 16:45	1.36
6/18/2009 17:00	1.34
6/18/2009 17:15	1.32
6/18/2009 17:30	1.3
6/18/2009 17:45	1.3
6/18/2009 18:00	1.27
6/18/2009 18:15	1.26
6/18/2009 18:30	1.25
6/18/2009 18:45	1.22
6/18/2009 19:00	1.23
6/18/2009 19:15	1.19
6/18/2009 19:30	1.21
6/18/2009 19:45	1.21
6/18/2009 20:00	1.2
6/18/2009 20:15	1.2
6/18/2009 20:30	1.21
6/18/2009 20:45	1.21

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/18/2009 21:00	1.24
6/18/2009 21:15	1.25
6/18/2009 21:30	1.24
6/18/2009 21:45	1.23
6/18/2009 22:00	1.23
6/18/2009 22:15	1.22
6/18/2009 22:30	1.22
6/18/2009 22:45	1.2
6/18/2009 23:00	1.19
6/18/2009 23:15	1.18
6/18/2009 23:30	1.15
6/18/2009 23:45	1.12
6/19/2009	1.11



Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/15/2009 12:30	1
6/15/2009 12:45	0.98
6/15/2009 13:00	0.97
6/15/2009 13:15	0.97
6/15/2009 13:30	0.99
6/15/2009 13:45	0.98
6/15/2009 14:00	1.01
6/15/2009 14:15	1
6/15/2009 14:30	1
6/15/2009 14:45	1
6/15/2009 15:00	1.01
6/15/2009 15:15	1.02
6/15/2009 15:30	1.03
6/15/2009 15:45	1.05
6/15/2009 16:00	1.06
6/15/2009 16:15	1.06
6/15/2009 16:30	1.07
6/15/2009 16:45	1.07
6/15/2009 17:00	1.07
6/15/2009 17:15	1.08
6/15/2009 17:30	1.09
6/15/2009 17:45	1.1
6/15/2009 18:00	1.11
6/15/2009 18:15	1.11
6/15/2009 18:30	1.12
6/15/2009 18:45	1.13
6/15/2009 19:00	1.15
6/15/2009 19:15	1.15
6/15/2009 19:30	1.14
6/15/2009 19:45	1.15
6/15/2009 20:00	1.17
6/15/2009 20:15	1.17
6/15/2009 20:30	1.16
6/15/2009 20:45	1.17
6/15/2009 21:00	1.18
6/15/2009 21:15	1.17
6/15/2009 21:30	1.21
6/15/2009 21:45	1.23
6/15/2009 22:00	1.24
6/15/2009 22:15	1.24
6/15/2009 22:30	1.25
6/15/2009 22:45	1.31
6/15/2009 23:00	1.32
6/15/2009 23:15	1.34
6/15/2009 23:30	1.36
6/15/2009 23:45	1.35

6/16/2009	1.36
6/16/2009 0:15	1.38
6/16/2009 0:30	1.39
6/16/2009 0:45	1.35
6/16/2009 1:00	1.34
6/16/2009 1:15	1.32
6/16/2009 1:30	1.3
6/16/2009 1:45	1.29
6/16/2009 2:00	1.26
6/16/2009 2:15	1.24
6/16/2009 2:30	1.22
6/16/2009 2:45	1.22
6/16/2009 3:00	1.19
6/16/2009 3:15	1.2
6/16/2009 3:30	1.18
6/16/2009 3:45	1.18
6/16/2009 4:00	1.18
6/16/2009 4:15	1.17
6/16/2009 4:30	1.17
6/16/2009 4:45	1.19
6/16/2009 5:00	1.18
6/16/2009 5:15	1.17
6/16/2009 5:30	1.15
6/16/2009 5:45	1.14
6/16/2009 6:00	1.12
6/16/2009 6:15	1.1
6/16/2009 6:30	1.07
6/16/2009 6:45	1.07
6/16/2009 7:00	1.04
6/16/2009 7:15	1.06
6/16/2009 7:30	1.06
6/16/2009 7:45	1.05
6/16/2009 8:00	1.04
6/16/2009 8:15	1.04
6/16/2009 8:30	1.05
6/16/2009 8:45	1.06
6/16/2009 9:00	1.07
6/16/2009 9:15	1.06
6/16/2009 9:30	1.04
6/16/2009 9:45	1.04
6/16/2009 10:00	1.06
6/16/2009 10:15	1.05
6/16/2009 10:30	1.07
6/16/2009 10:45	1.03
6/16/2009 11:00	1.02
6/16/2009 11:15	1.03

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/16/2009 11:30	1.03
6/16/2009 11:45	1.03
6/16/2009 12:00	1.04
6/16/2009 12:15	1.01
6/16/2009 12:30	1
6/16/2009 12:45	0.99
6/16/2009 13:00	1
6/16/2009 13:15	0.99
6/16/2009 13:30	1.01
6/16/2009 13:45	1.01
6/16/2009 14:00	1.03
6/16/2009 14:15	1.02
6/16/2009 14:30	1.04
6/16/2009 14:45	1.07
6/16/2009 15:00	1.06
6/16/2009 15:15	1.04
6/16/2009 15:30	1.07
6/16/2009 15:45	1.05
6/16/2009 16:00	1.05
6/16/2009 16:15	1.06
6/16/2009 16:30	1.05
6/16/2009 16:45	1.03
6/16/2009 17:00	1.04
6/16/2009 17:15	1.04
6/16/2009 17:30	1.04
6/16/2009 17:45	1.02
6/16/2009 18:00	1.02
6/16/2009 18:15	1.02
6/16/2009 18:30	1.05
6/16/2009 18:45	1.06
6/16/2009 19:00	1.05
6/16/2009 19:15	1.06
6/16/2009 19:30	1.04
6/16/2009 19:45	1.04
6/16/2009 20:00	1.05
6/16/2009 20:15	1.07
6/16/2009 20:30	1.09
6/16/2009 20:45	1.08
6/16/2009 21:00	1.07
6/16/2009 21:15	1.13
6/16/2009 21:30	1.15
6/16/2009 21:45	1.18
6/16/2009 22:00	1.21
6/16/2009 22:15	1.16
6/16/2009 22:30	1.14
6/16/2009 22:45	1.17

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/16/2009 23:00	1.18
6/16/2009 23:15	1.18
6/16/2009 23:30	1.18
6/16/2009 23:45	1.18
6/17/2009	1.13
6/17/2009 0:15	1.14
6/17/2009 0:30	1.13
6/17/2009 0:45	1.12
6/17/2009 1:00	1.12
6/17/2009 1:15	1.1
6/17/2009 1:30	1.08
6/17/2009 1:45	1.06
6/17/2009 2:00	1.03
6/17/2009 2:15	1.04
6/17/2009 2:30	1.03
6/17/2009 2:45	1.02
6/17/2009 3:00	1.04
6/17/2009 3:15	1.02
6/17/2009 3:30	1
6/17/2009 3:45	1.03
6/17/2009 4:00	1.01
6/17/2009 4:15	0.98
6/17/2009 4:30	0.98
6/17/2009 4:45	0.96
6/17/2009 5:00	0.96
6/17/2009 5:15	0.96
6/17/2009 5:30	0.98
6/17/2009 5:45	0.97
6/17/2009 6:00	0.98
6/17/2009 6:15	0.96
6/17/2009 6:30	0.93
6/17/2009 6:45	0.88
6/17/2009 7:00	0.89
6/17/2009 7:15	0.89
6/17/2009 7:30	0.91
6/17/2009 7:45	0.93
6/17/2009 8:00	0.93
6/17/2009 8:15	0.92
6/17/2009 8:30	0.92
6/17/2009 8:45	0.96
6/17/2009 9:00	0.98
6/17/2009 9:15	1
6/17/2009 9:30	1
6/17/2009 9:45	1
6/17/2009 10:00	1
6/17/2009 10:15	1.01

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/17/2009 10:30	1.03
6/17/2009 10:45	1.01
6/17/2009 11:00	1.02
6/17/2009 11:15	1.03
6/17/2009 11:30	1.03
6/17/2009 11:45	1.07
6/17/2009 12:00	1.09
6/17/2009 12:15	1.11
6/17/2009 12:30	1.11
6/17/2009 12:45	1.12
6/17/2009 13:00	1.11
6/17/2009 13:15	1.13
6/17/2009 13:30	1.14
6/17/2009 13:45	1.15
6/17/2009 14:00	1.13
6/17/2009 14:15	1.14
6/17/2009 14:30	1.14
6/17/2009 14:45	1.15
6/17/2009 15:00	1.18
6/17/2009 15:15	1.15
6/17/2009 15:30	1.15
6/17/2009 15:45	1.17
6/17/2009 16:00	1.17
6/17/2009 16:15	1.17
6/17/2009 16:30	1.17
6/17/2009 16:45	1.15
6/17/2009 17:00	1.16
6/17/2009 17:15	1.15
6/17/2009 17:30	1.16
6/17/2009 17:45	1.16
6/17/2009 18:00	1.15
6/17/2009 18:15	1.14
6/17/2009 18:30	1.13
6/17/2009 18:45	1.13
6/17/2009 19:00	1.12
6/17/2009 19:15	1.1
6/17/2009 19:30	1.11
6/17/2009 19:45	1.1
6/17/2009 20:00	1.1
6/17/2009 20:15	1.08
6/17/2009 20:30	1.09
6/17/2009 20:45	1.1
6/17/2009 21:00	1.09
6/17/2009 21:15	1.09
6/17/2009 21:30	1.11
6/17/2009 21:45	1.11

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

6/17/2009 22:00	1.11
6/17/2009 22:15	1.13
6/17/2009 22:30	1.13
6/17/2009 22:45	1.14
6/17/2009 23:00	1.16
6/17/2009 23:15	1.16
6/17/2009 23:30	1.16
6/17/2009 23:45	1.16
6/18/2009	1.15
6/18/2009 0:15	1.14
6/18/2009 0:30	1.11
6/18/2009 0:45	1.08
6/18/2009 1:00	1.06
6/18/2009 1:15	1.06
6/18/2009 1:30	1.03
6/18/2009 1:45	1.02
6/18/2009 2:00	1
6/18/2009 2:15	1
6/18/2009 2:30	1.02
6/18/2009 2:45	1.05
6/18/2009 3:00	1.06
6/18/2009 3:15	1.08
6/18/2009 3:30	1.08
6/18/2009 3:45	1.1
6/18/2009 4:00	1.13
6/18/2009 4:15	1.16
6/18/2009 4:30	1.14
6/18/2009 4:45	1.15
6/18/2009 5:00	1.14
6/18/2009 5:15	1.15
6/18/2009 5:30	1.14
6/18/2009 5:45	1.14
6/18/2009 6:00	1.15
6/18/2009 6:15	1.15
6/18/2009 6:30	1.15
6/18/2009 6:45	1.16
6/18/2009 7:00	1.17
6/18/2009 7:15	1.16
6/18/2009 7:30	1.16
6/18/2009 7:45	1.18
6/18/2009 8:00	1.21
6/18/2009 8:15	1.21
6/18/2009 8:30	1.21
6/18/2009 8:45	1.22
6/18/2009 9:00	1.21
6/18/2009 9:15	1.22

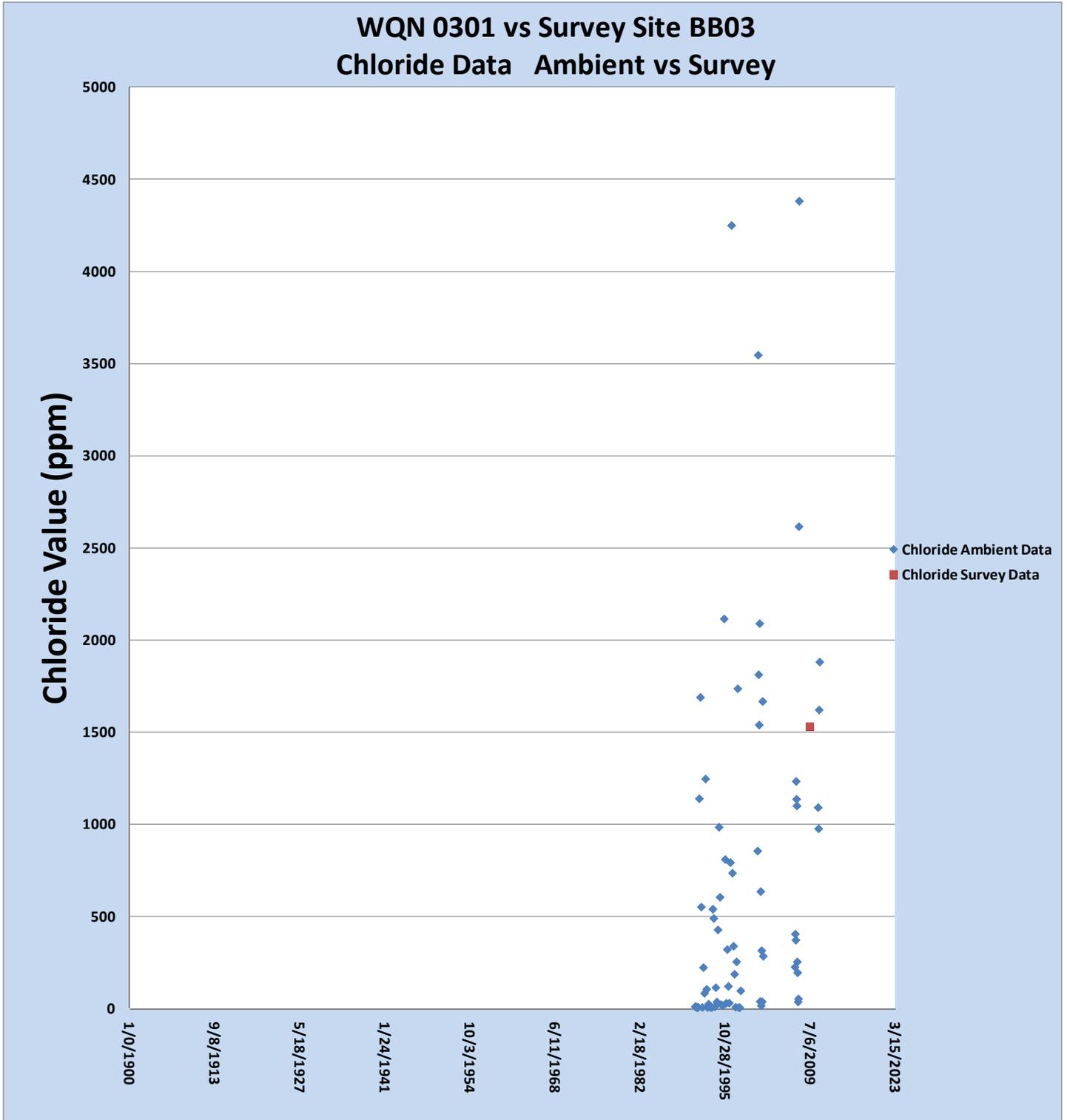
Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

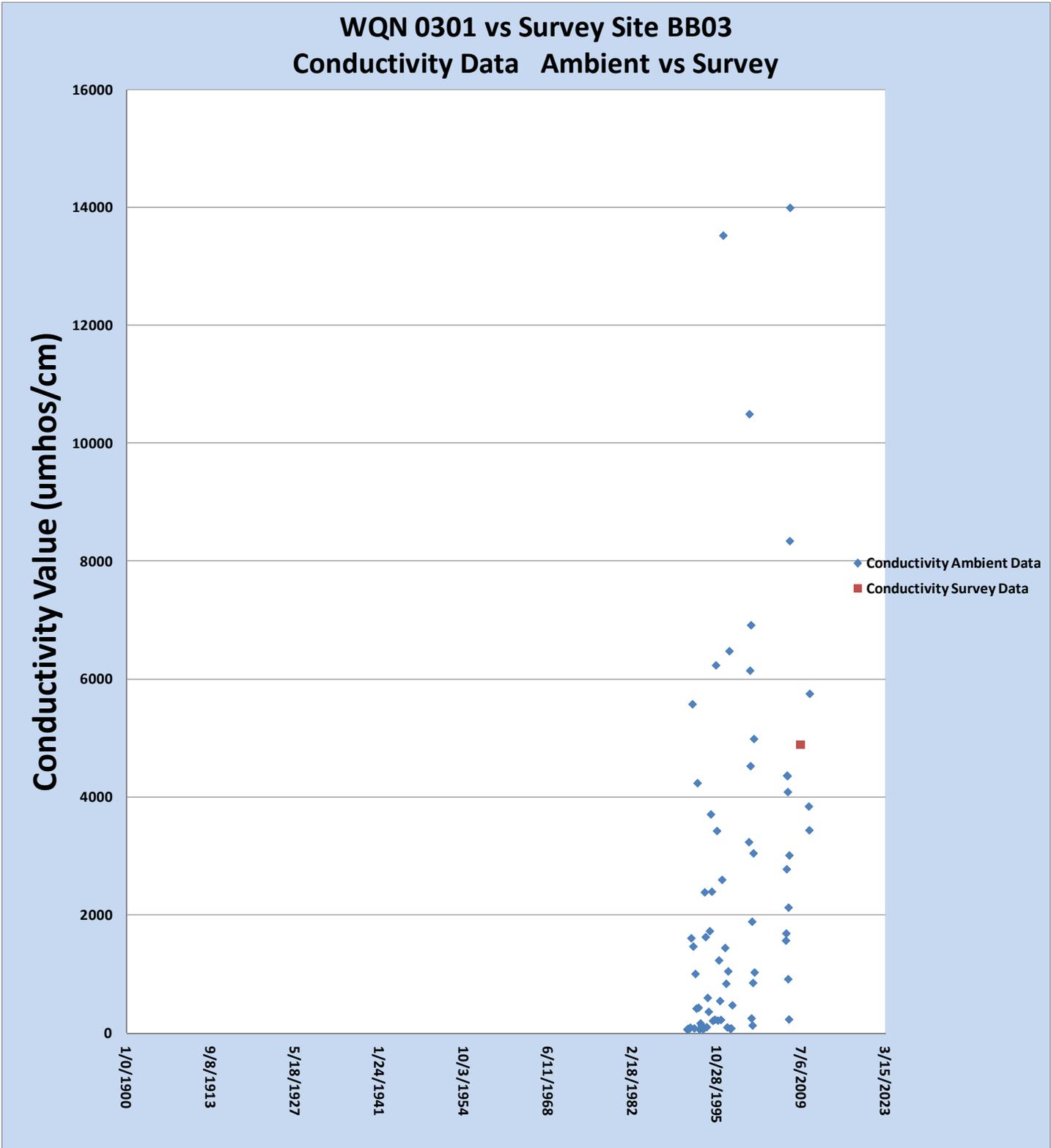
6/18/2009 9:30	1.24
6/18/2009 9:45	1.24
6/18/2009 10:00	1.26
6/18/2009 10:15	1.22
6/18/2009 10:30	1.23
6/18/2009 10:45	1.24
6/18/2009 11:00	1.23
6/18/2009 11:15	1.25
6/18/2009 11:30	1.27
6/18/2009 11:45	1.28
6/18/2009 12:00	1.29
6/18/2009 12:15	1.29
6/18/2009 12:30	1.3
6/18/2009 12:45	1.32
6/18/2009 13:00	1.33
6/18/2009 13:15	1.35
6/18/2009 13:30	1.35
6/18/2009 13:45	1.32
6/18/2009 14:00	1.31
6/18/2009 14:15	1.32
6/18/2009 14:30	1.34
6/18/2009 14:45	1.35
6/18/2009 15:00	1.37
6/18/2009 15:15	1.35
6/18/2009 15:30	1.35
6/18/2009 15:45	1.36
6/18/2009 16:00	1.36
6/18/2009 16:15	1.35
6/18/2009 16:30	1.35
6/18/2009 16:45	1.36
6/18/2009 17:00	1.34
6/18/2009 17:15	1.32
6/18/2009 17:30	1.3
6/18/2009 17:45	1.3
6/18/2009 18:00	1.27
6/18/2009 18:15	1.26
6/18/2009 18:30	1.25
6/18/2009 18:45	1.22
6/18/2009 19:00	1.23
6/18/2009 19:15	1.19
6/18/2009 19:30	1.21
6/18/2009 19:45	1.21
6/18/2009 20:00	1.2
6/18/2009 20:15	1.2
6/18/2009 20:30	1.21
6/18/2009 20:45	1.21

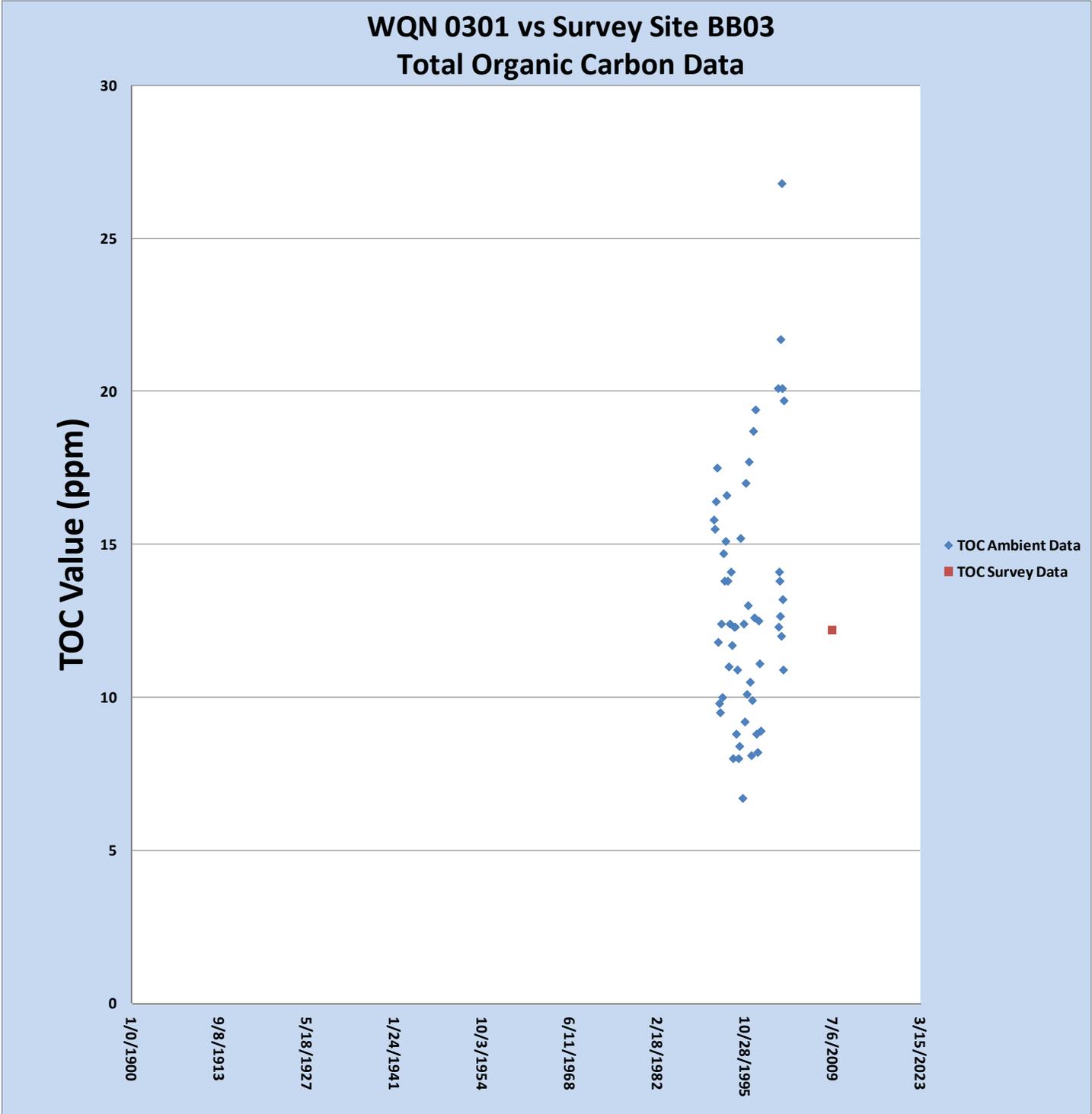
Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

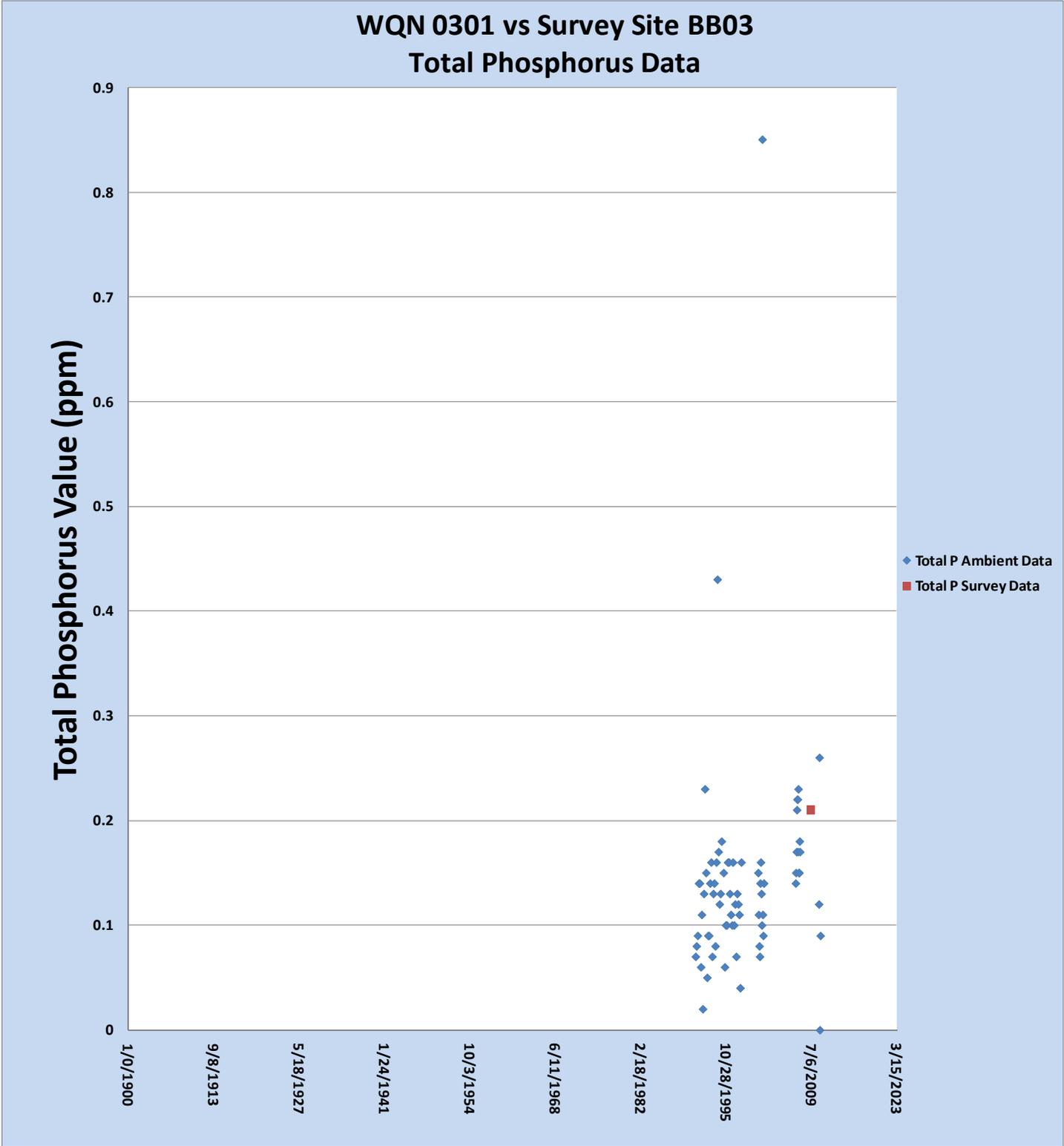
6/18/2009 21:00	1.24
6/18/2009 21:15	1.25
6/18/2009 21:30	1.24
6/18/2009 21:45	1.23
6/18/2009 22:00	1.23
6/18/2009 22:15	1.22
6/18/2009 22:30	1.22
6/18/2009 22:45	1.2
6/18/2009 23:00	1.19
6/18/2009 23:15	1.18
6/18/2009 23:30	1.15
6/18/2009 23:45	1.12
6/19/2009	1.11

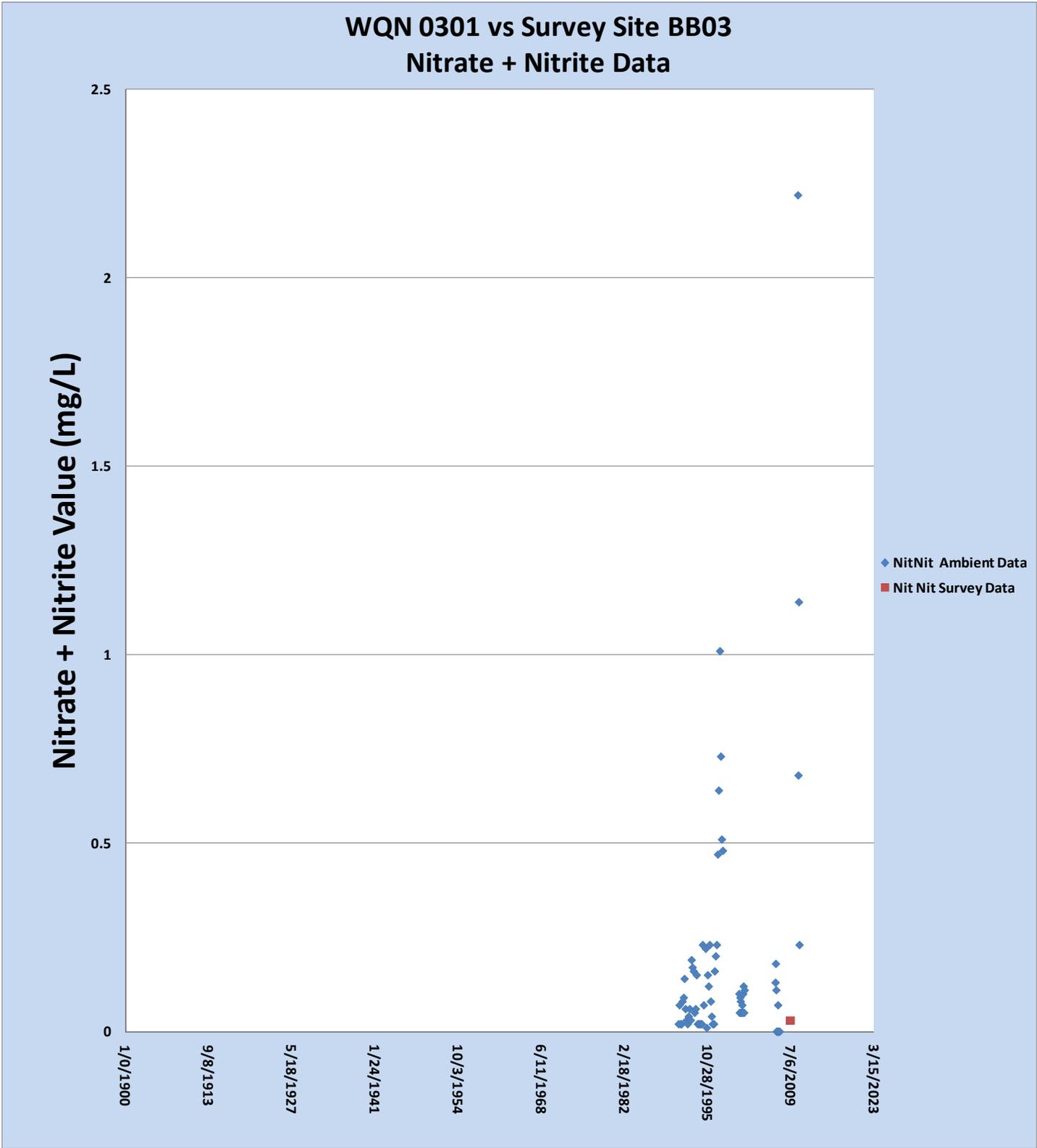
Appendix G5 – Ambient vs Survey Data Graphs

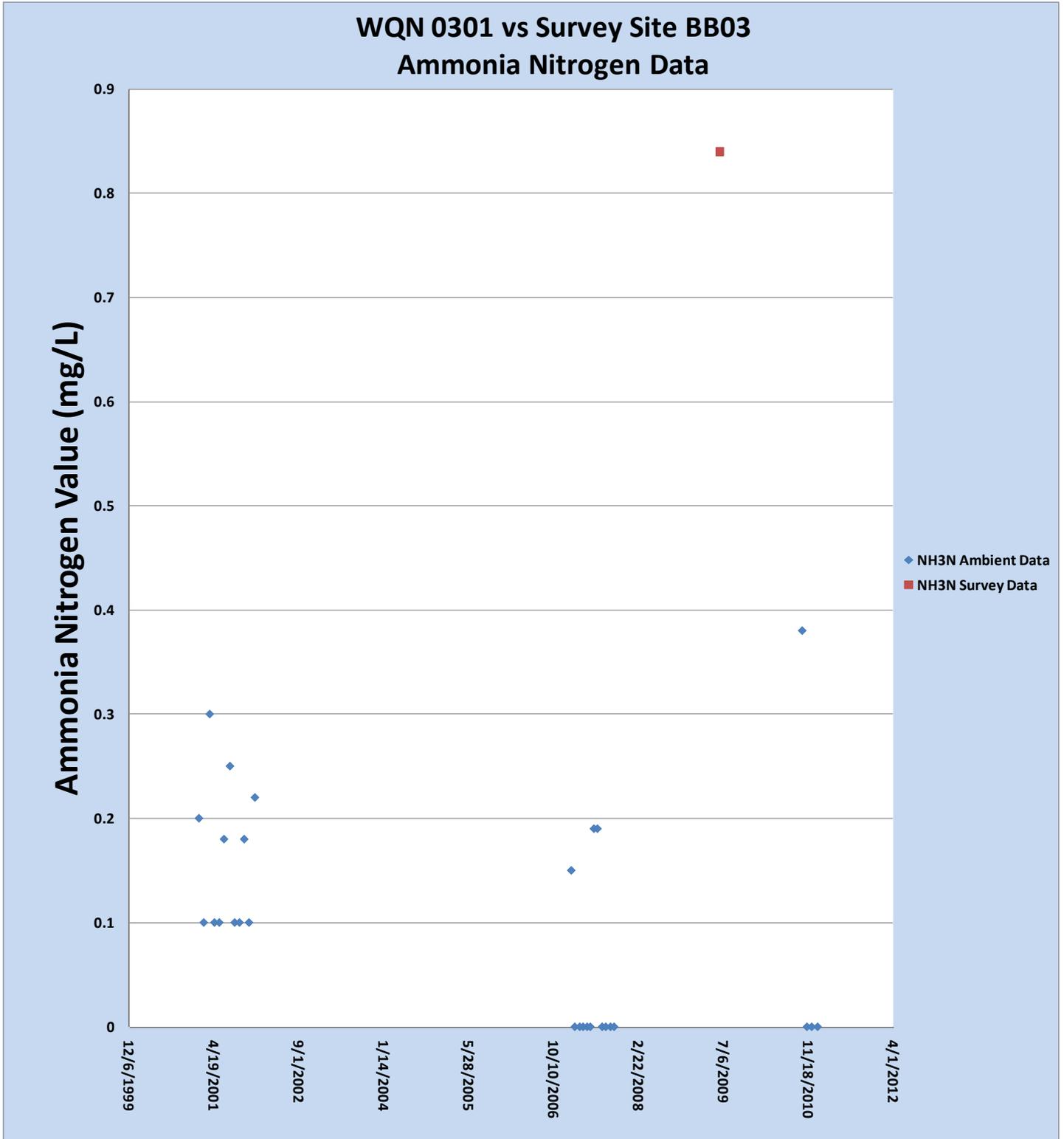


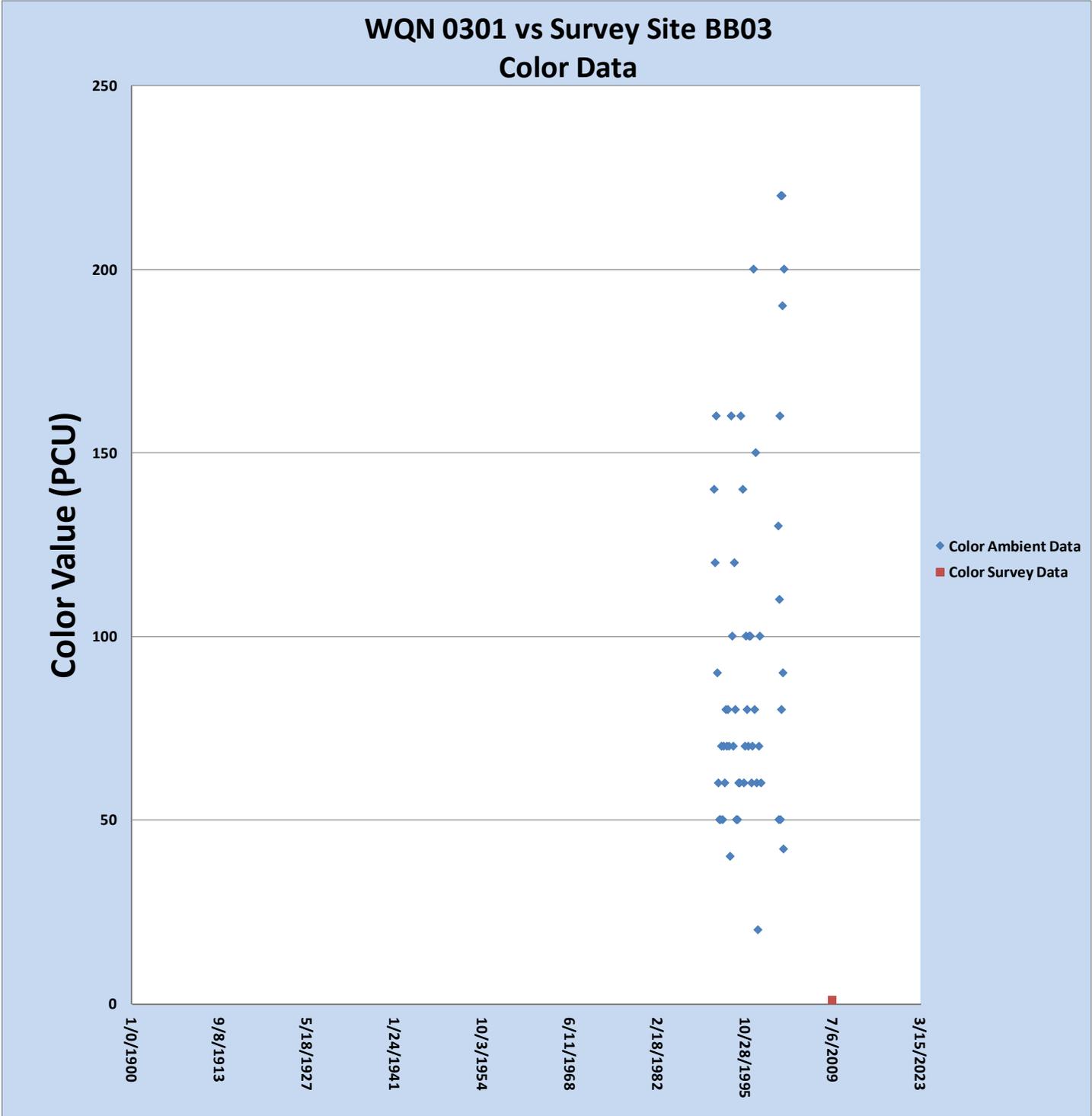


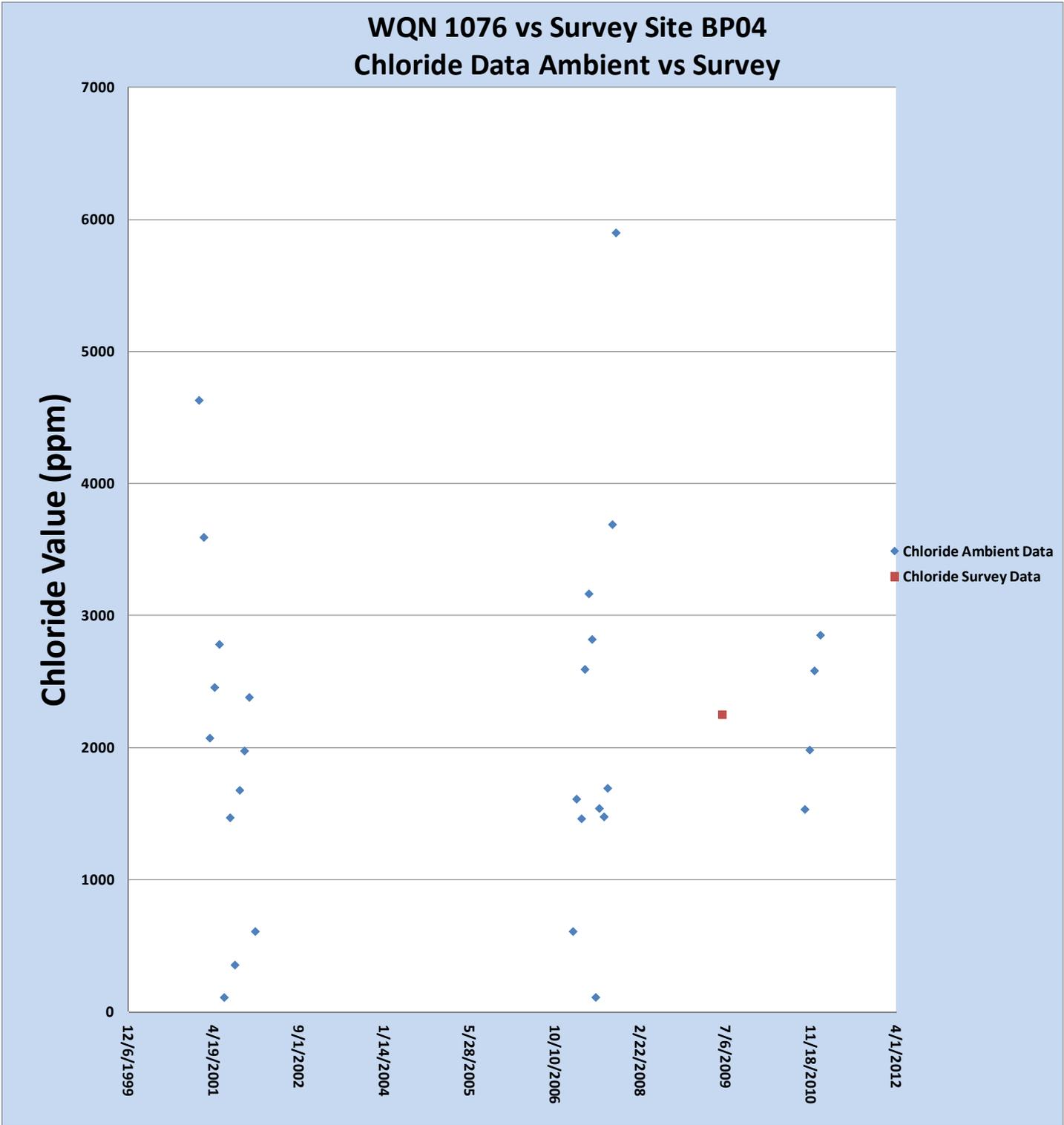


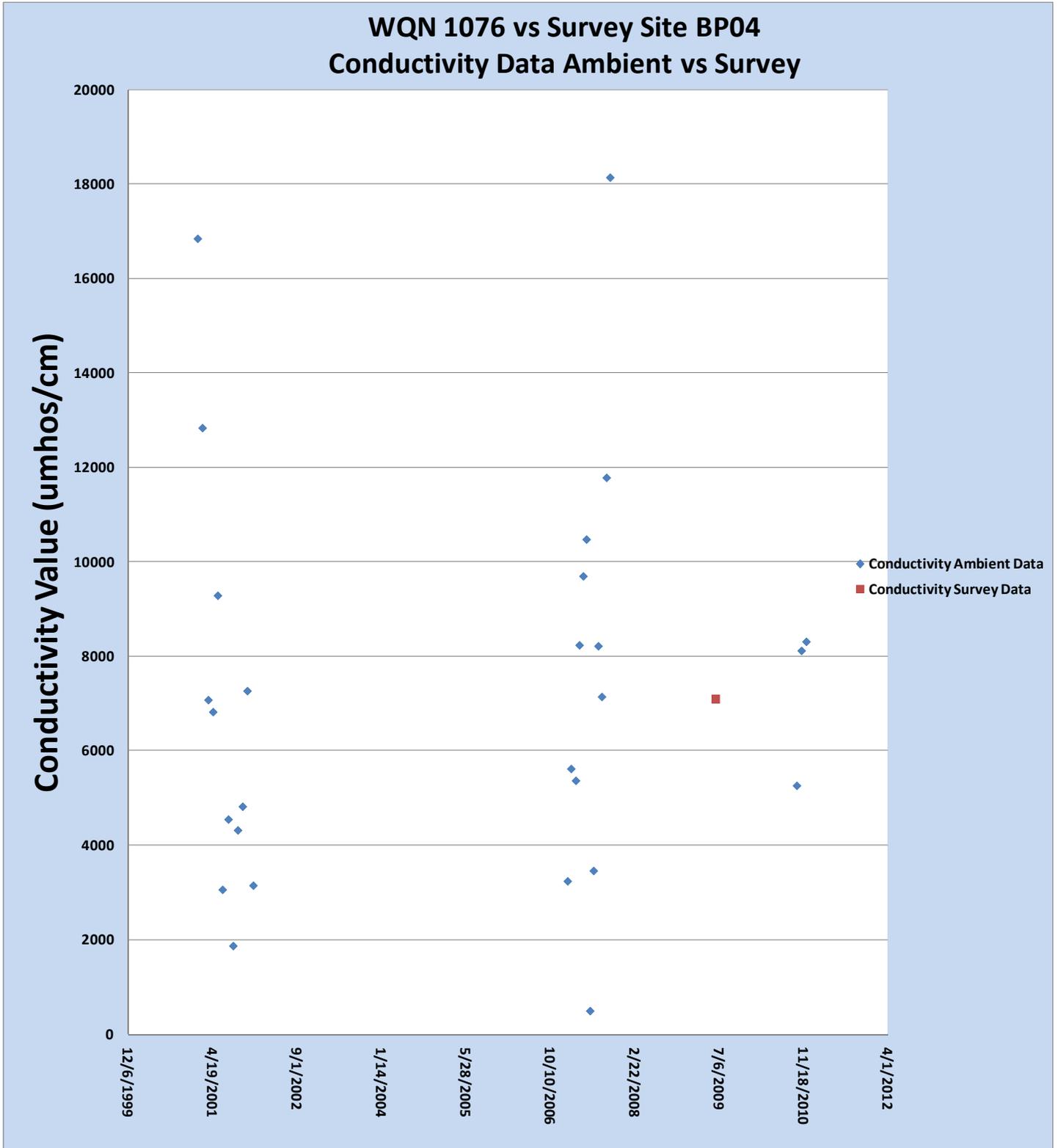


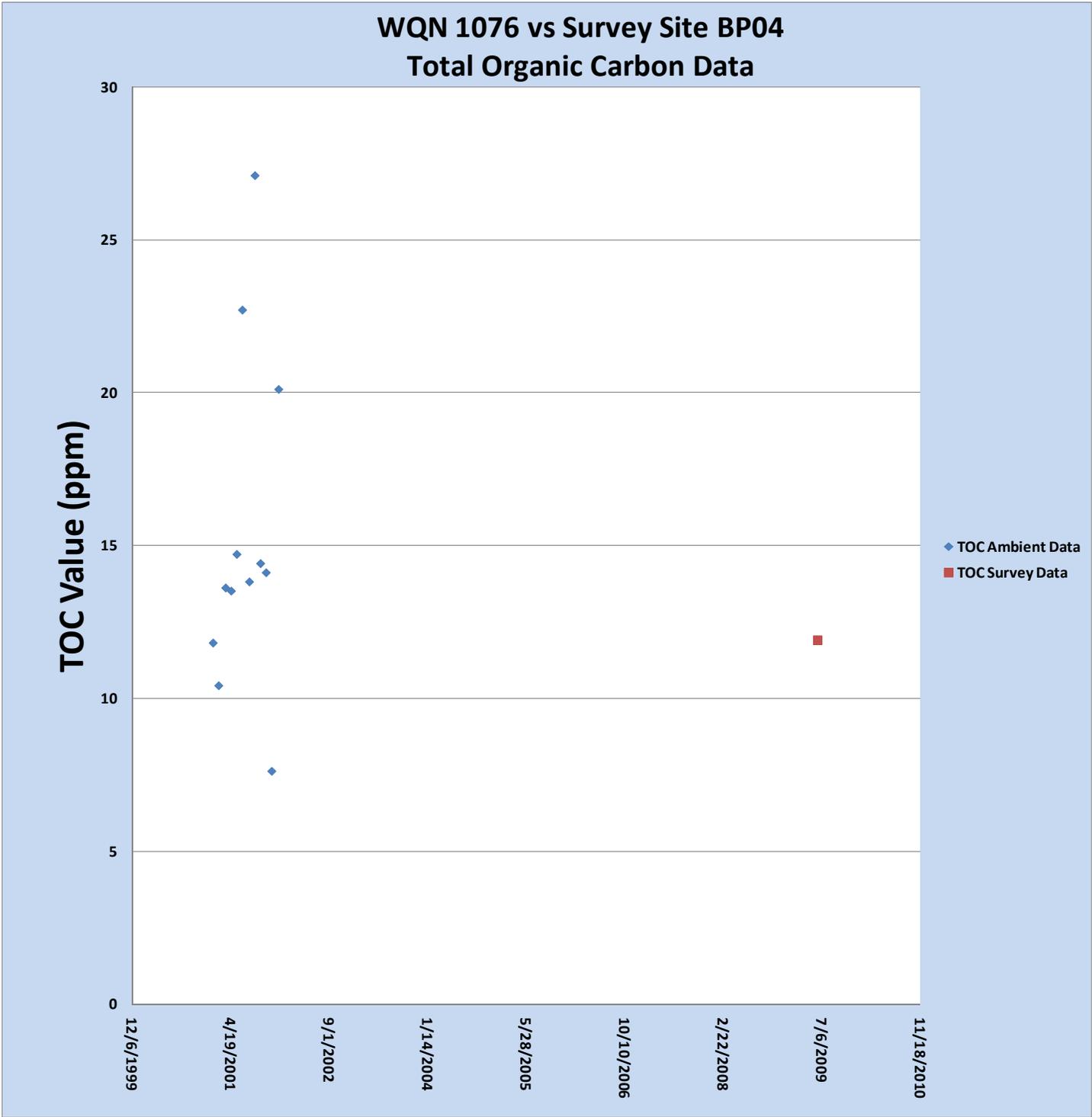


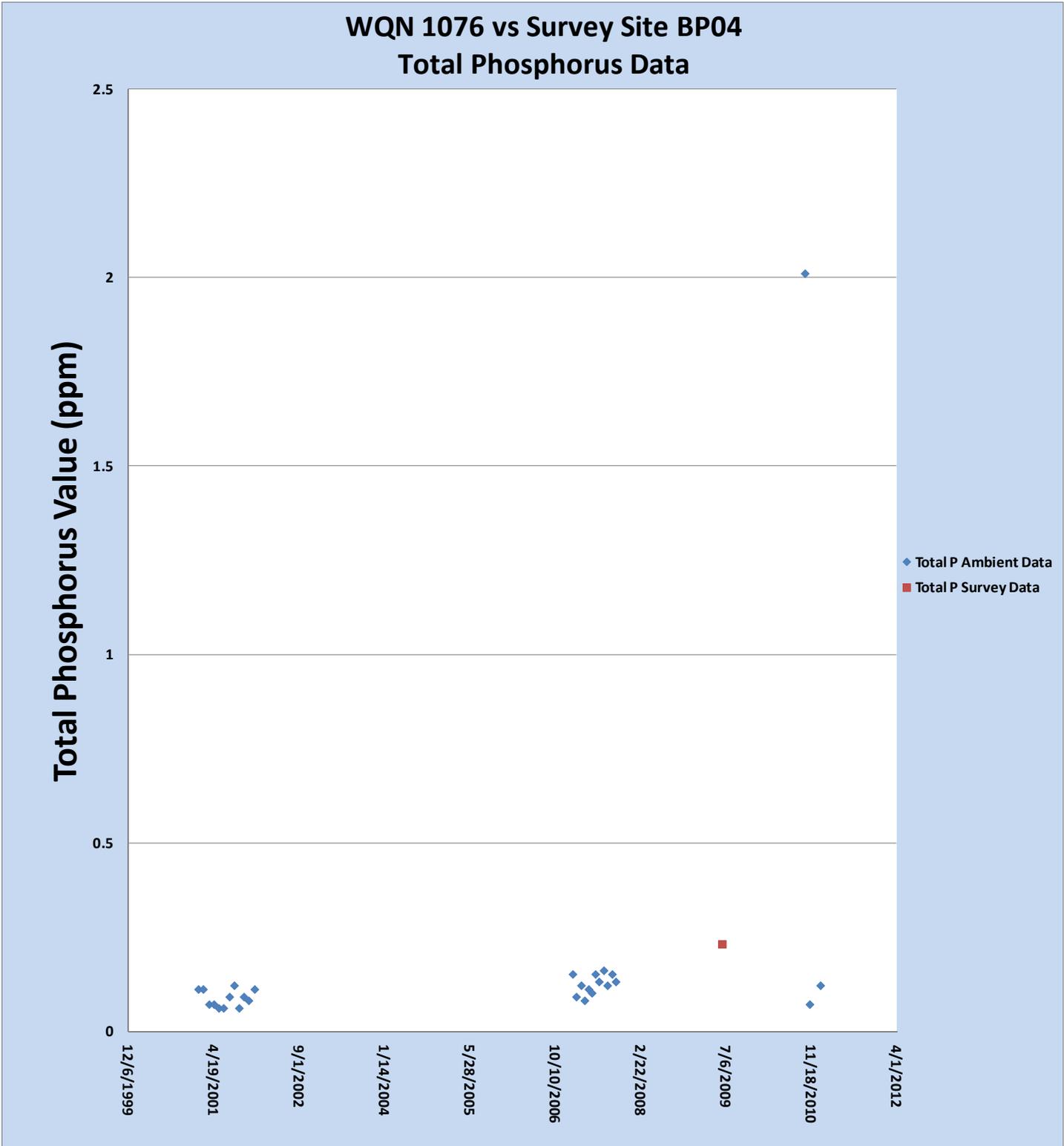


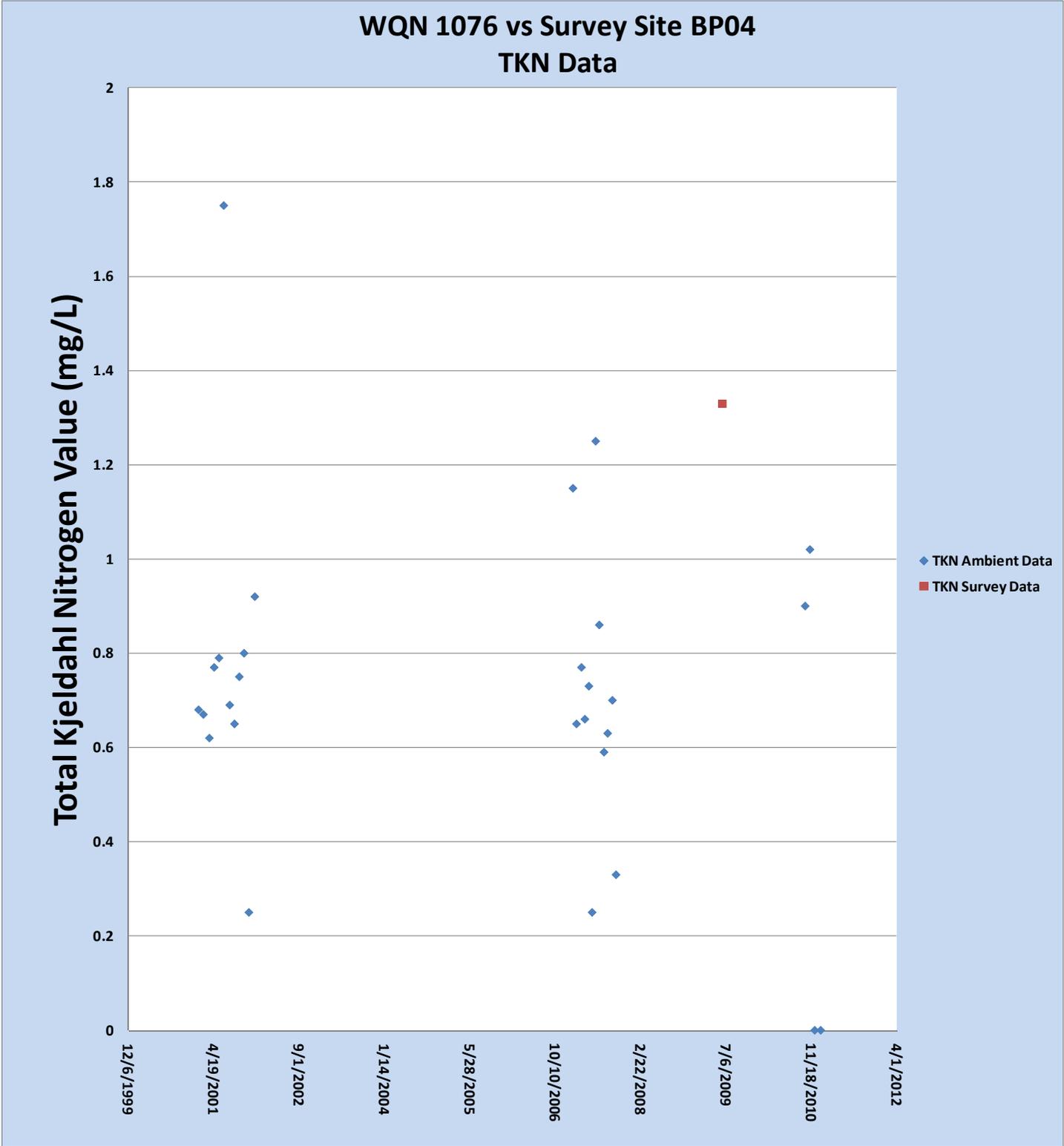


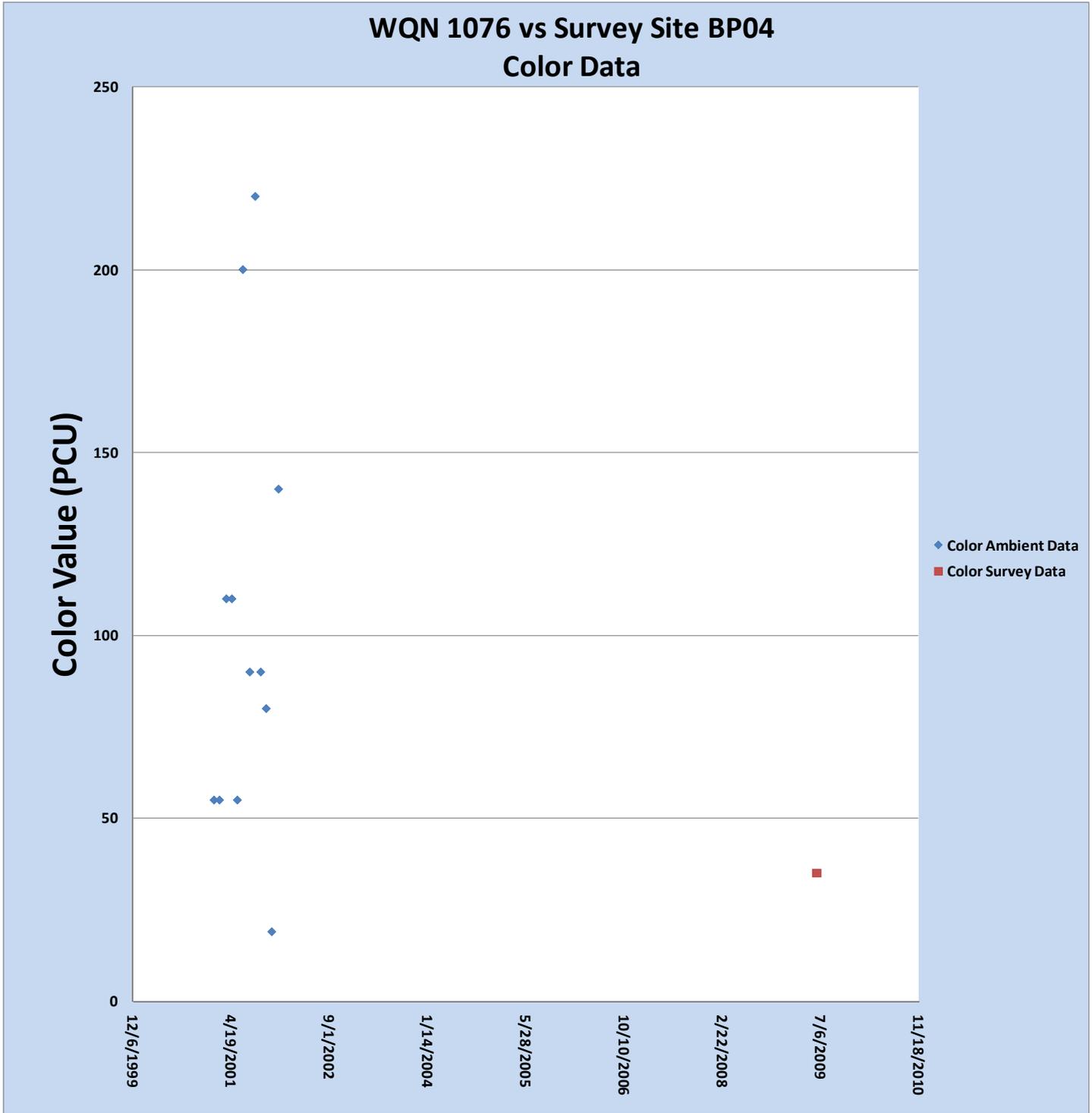


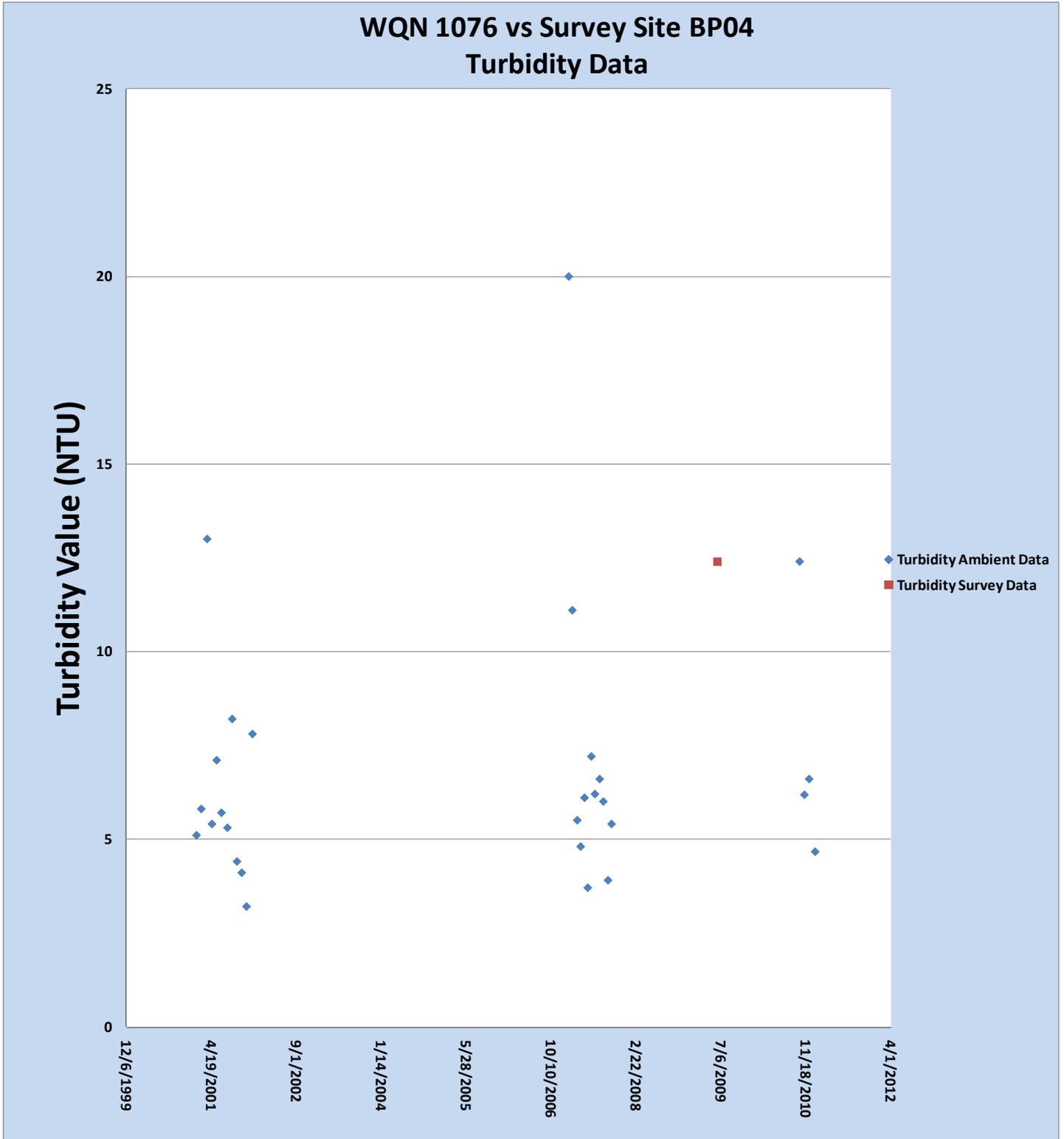


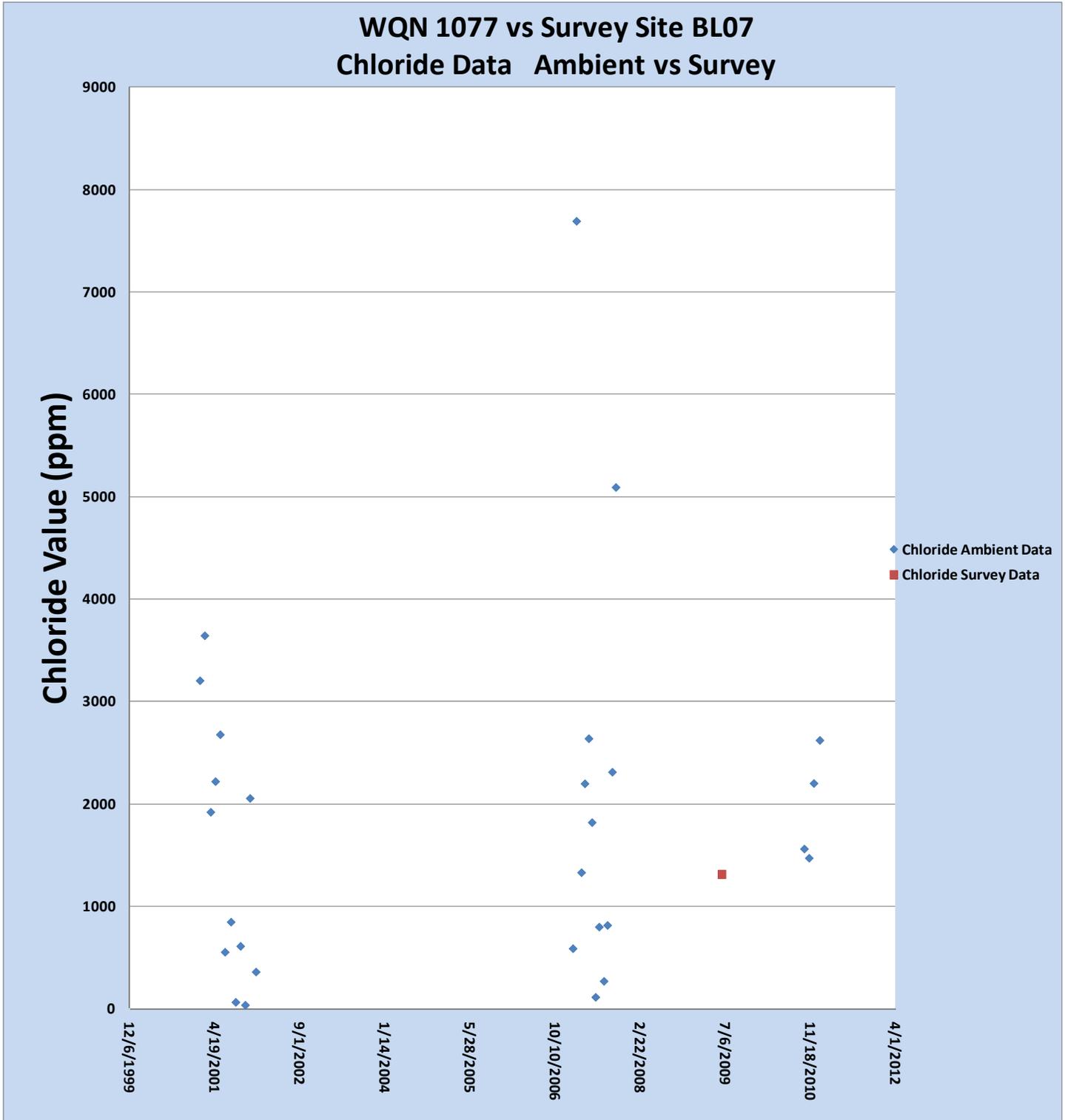


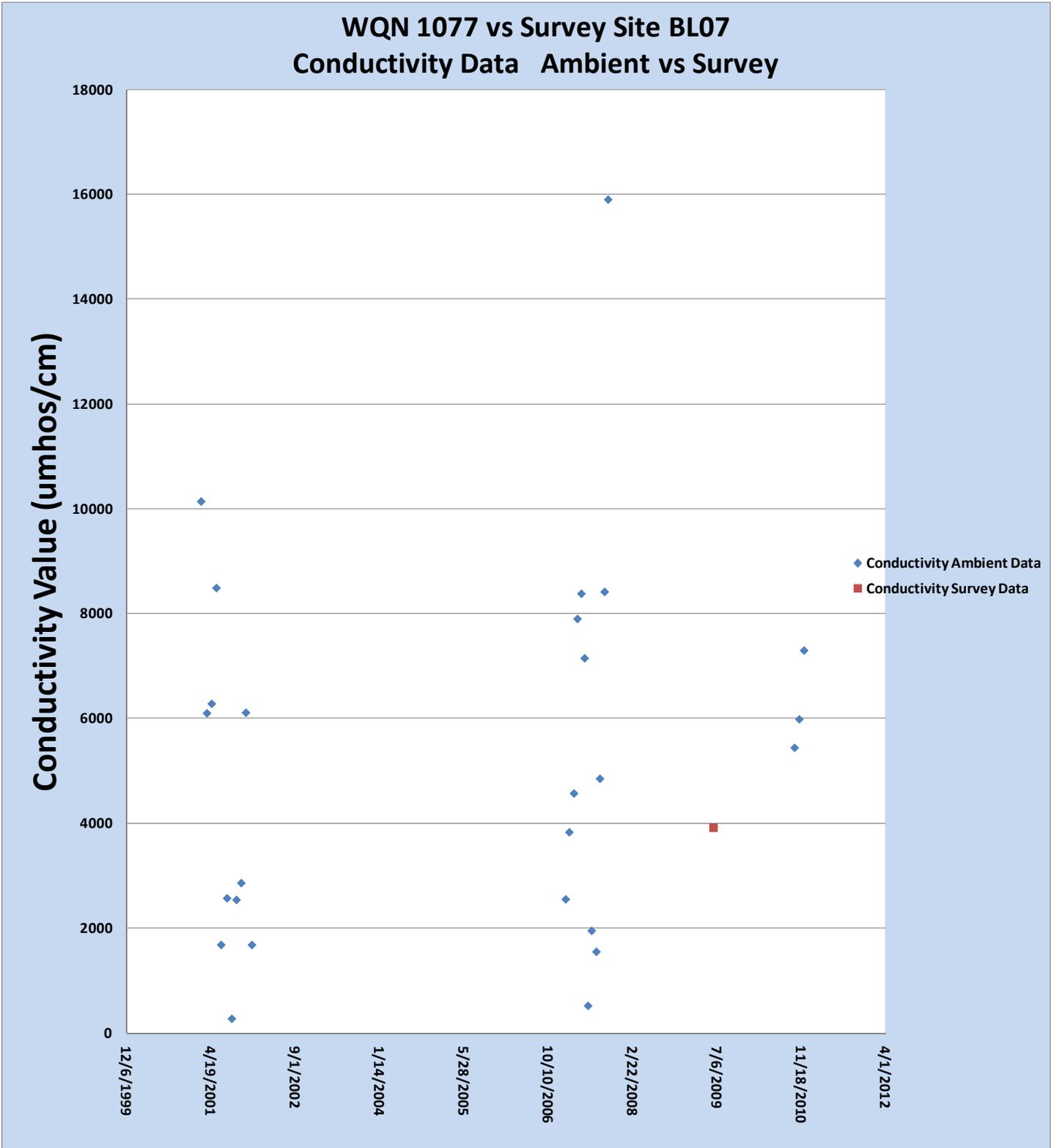


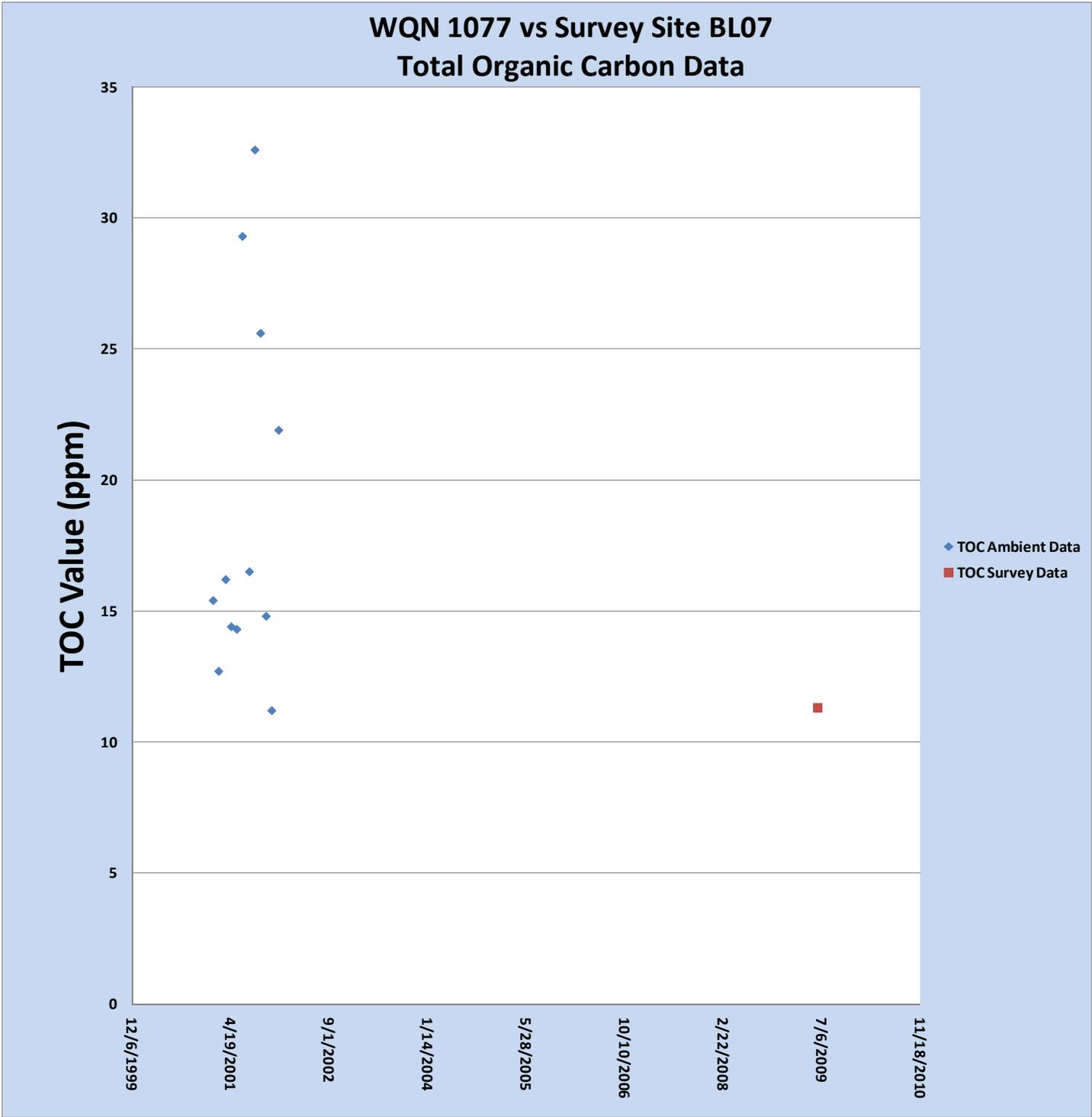


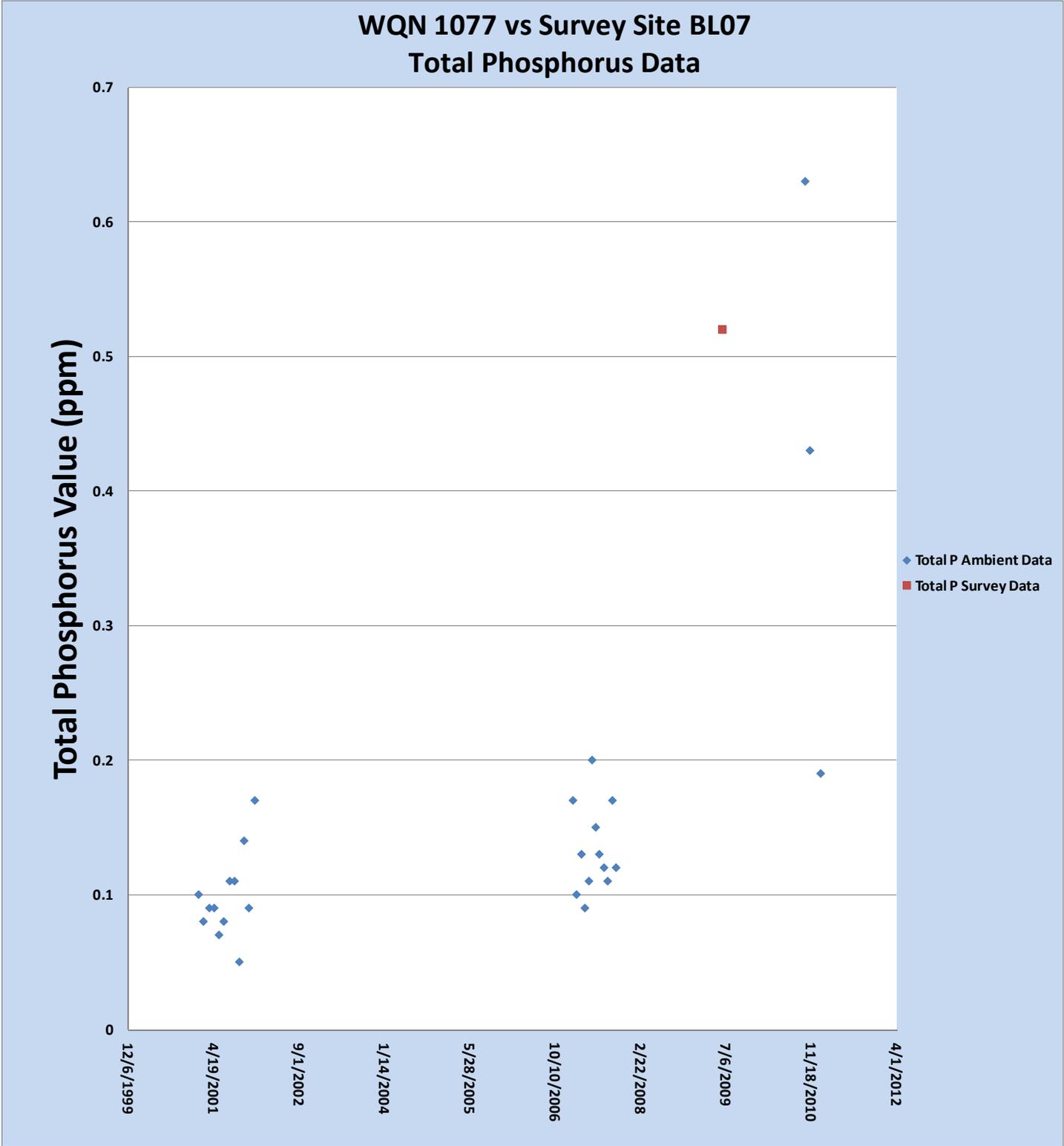


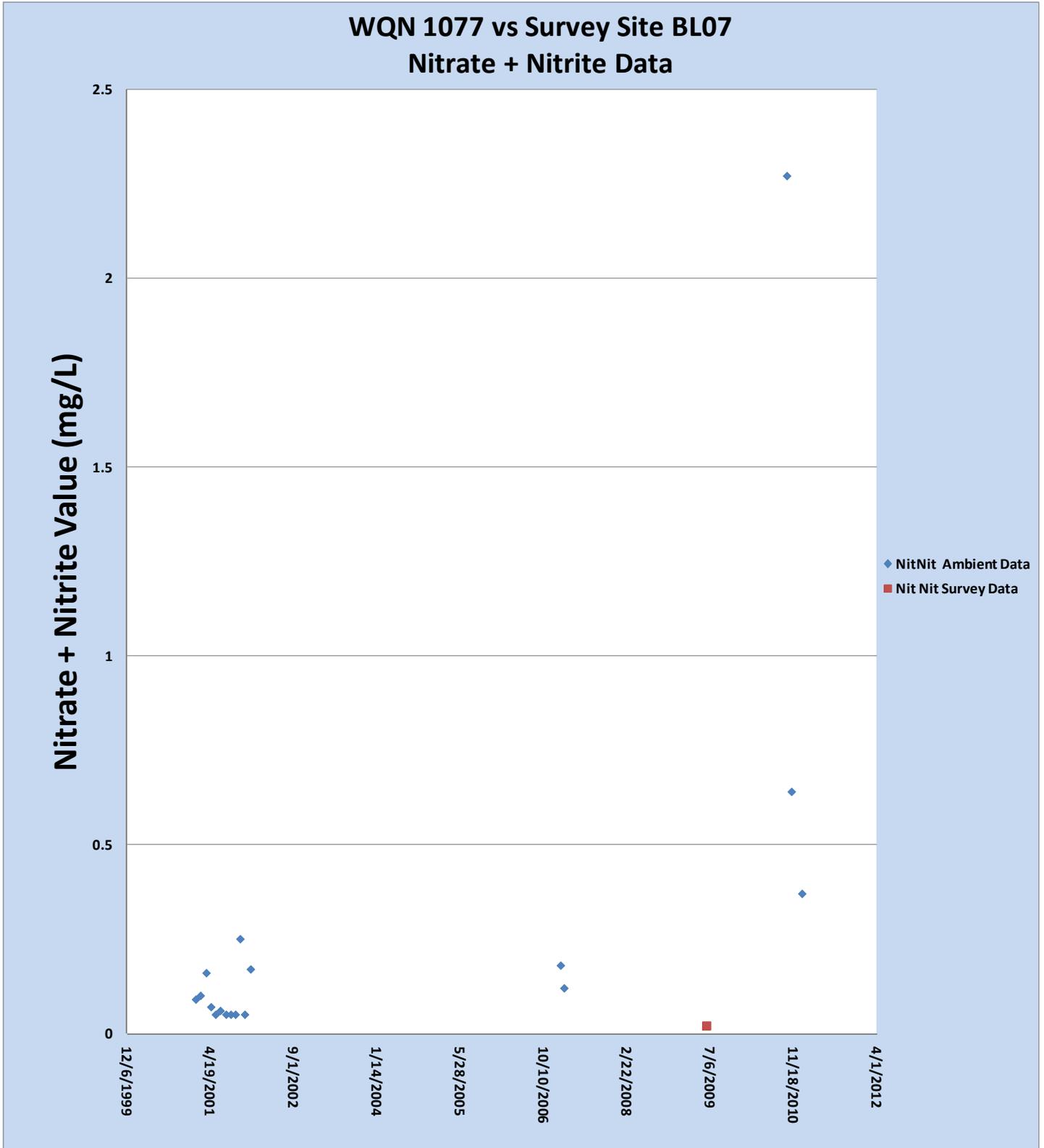


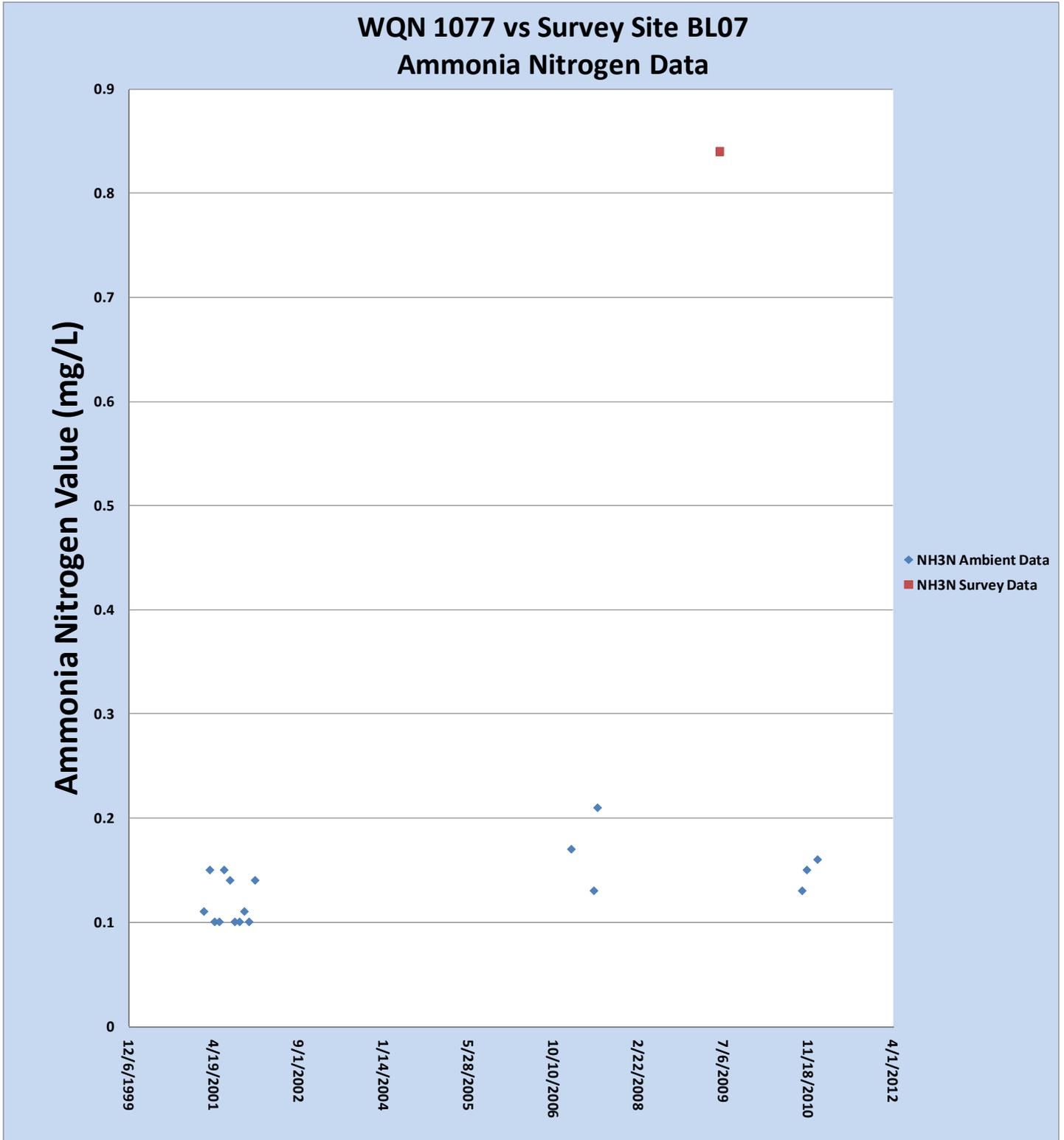


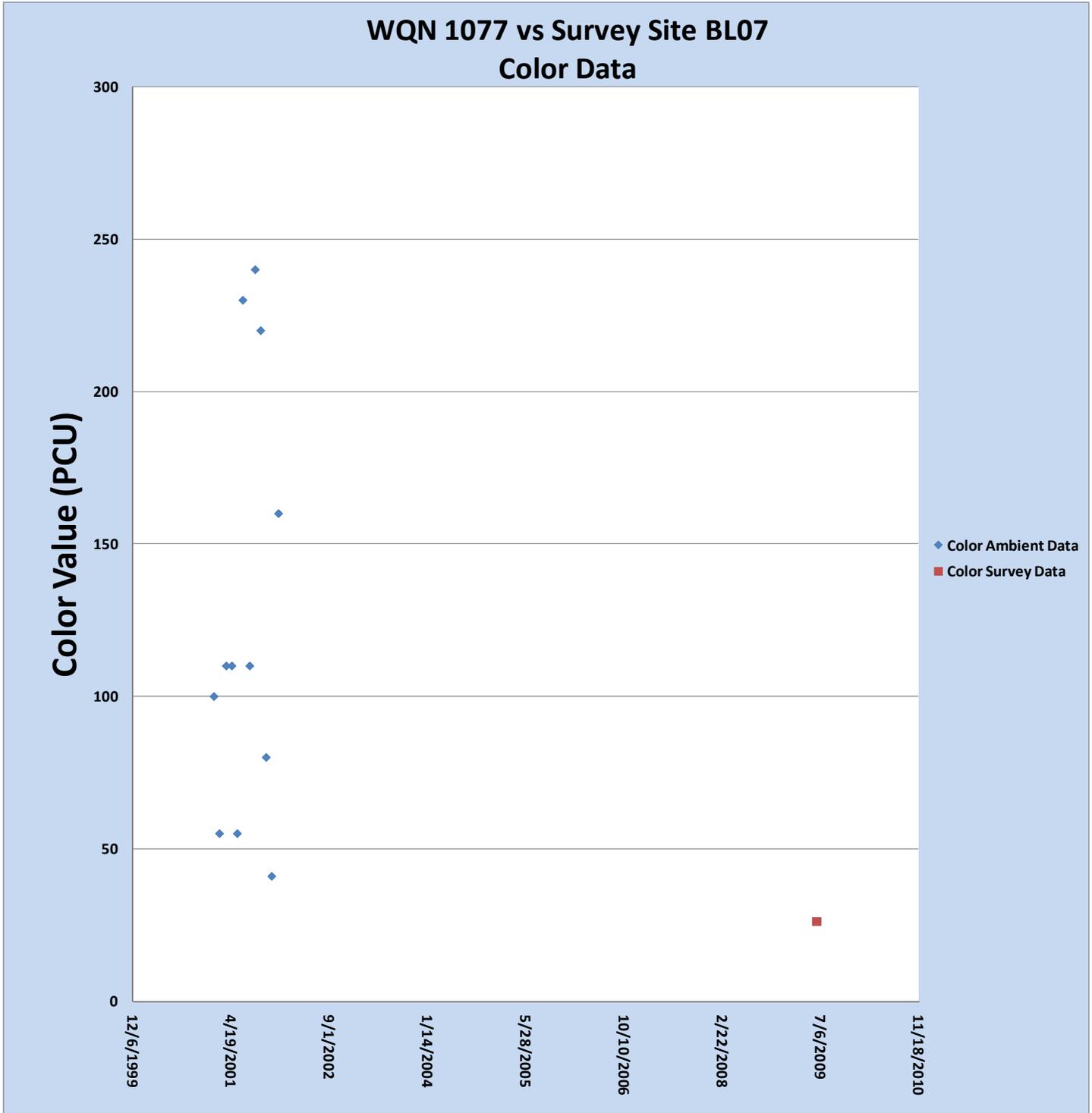


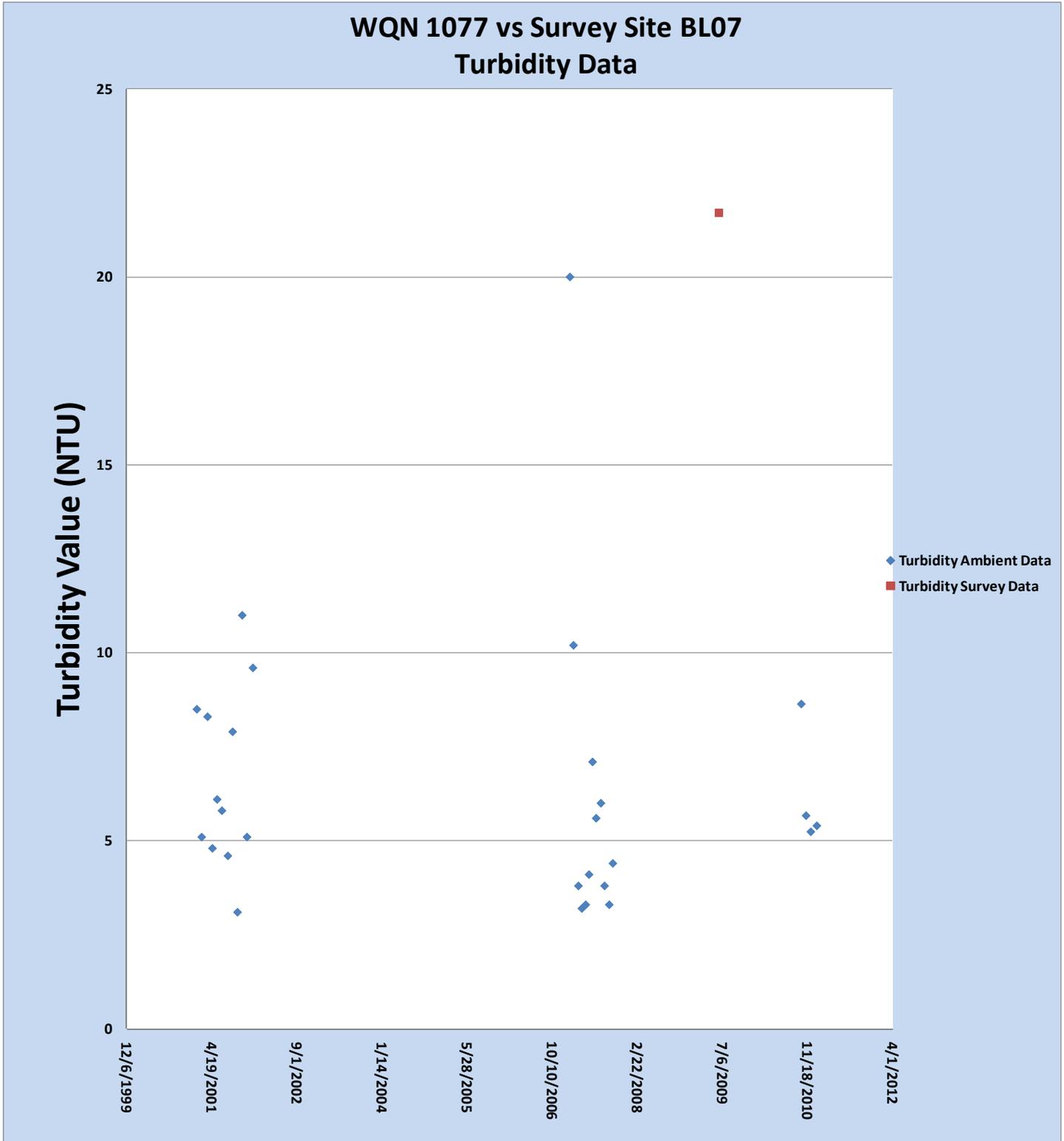


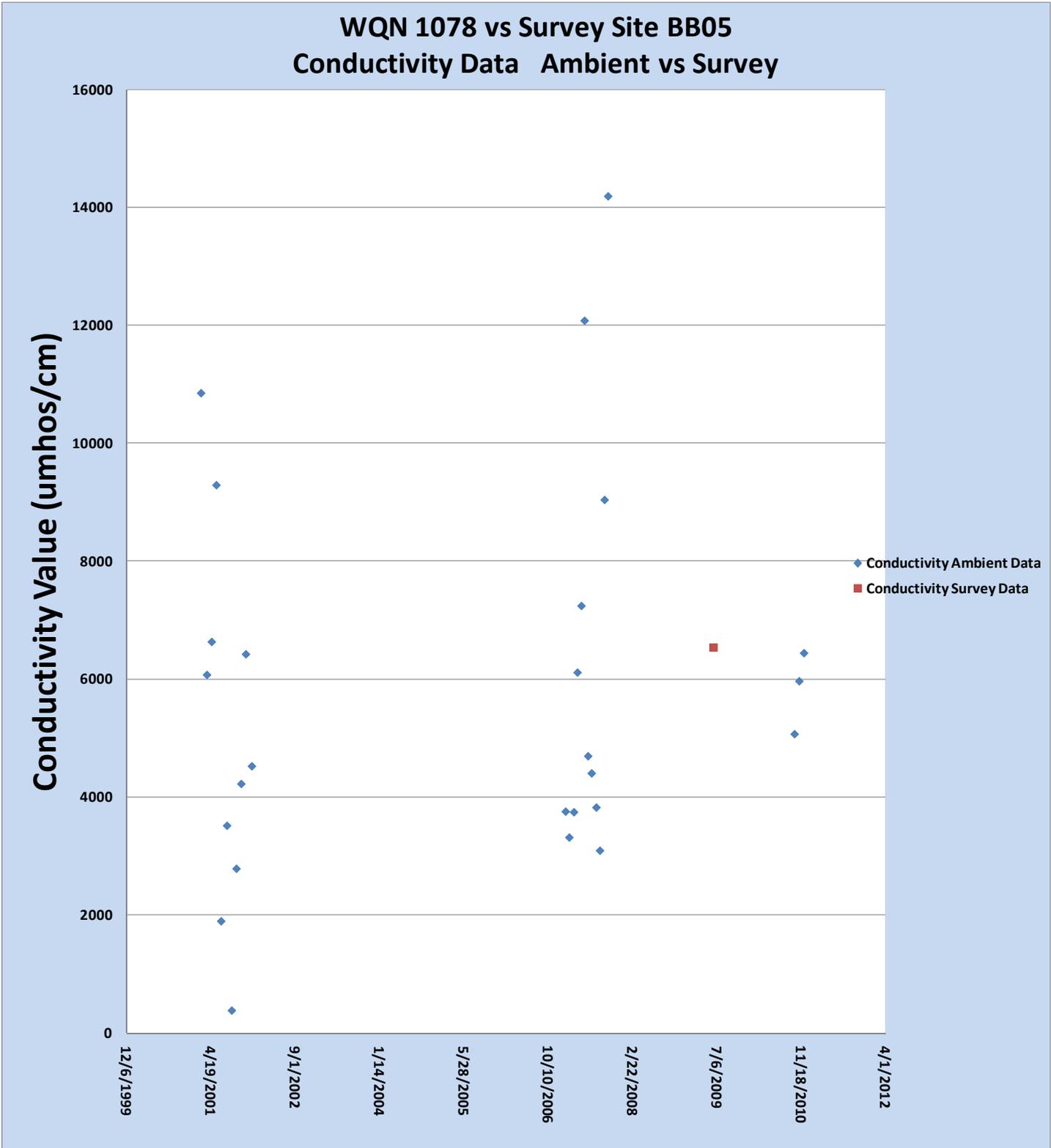


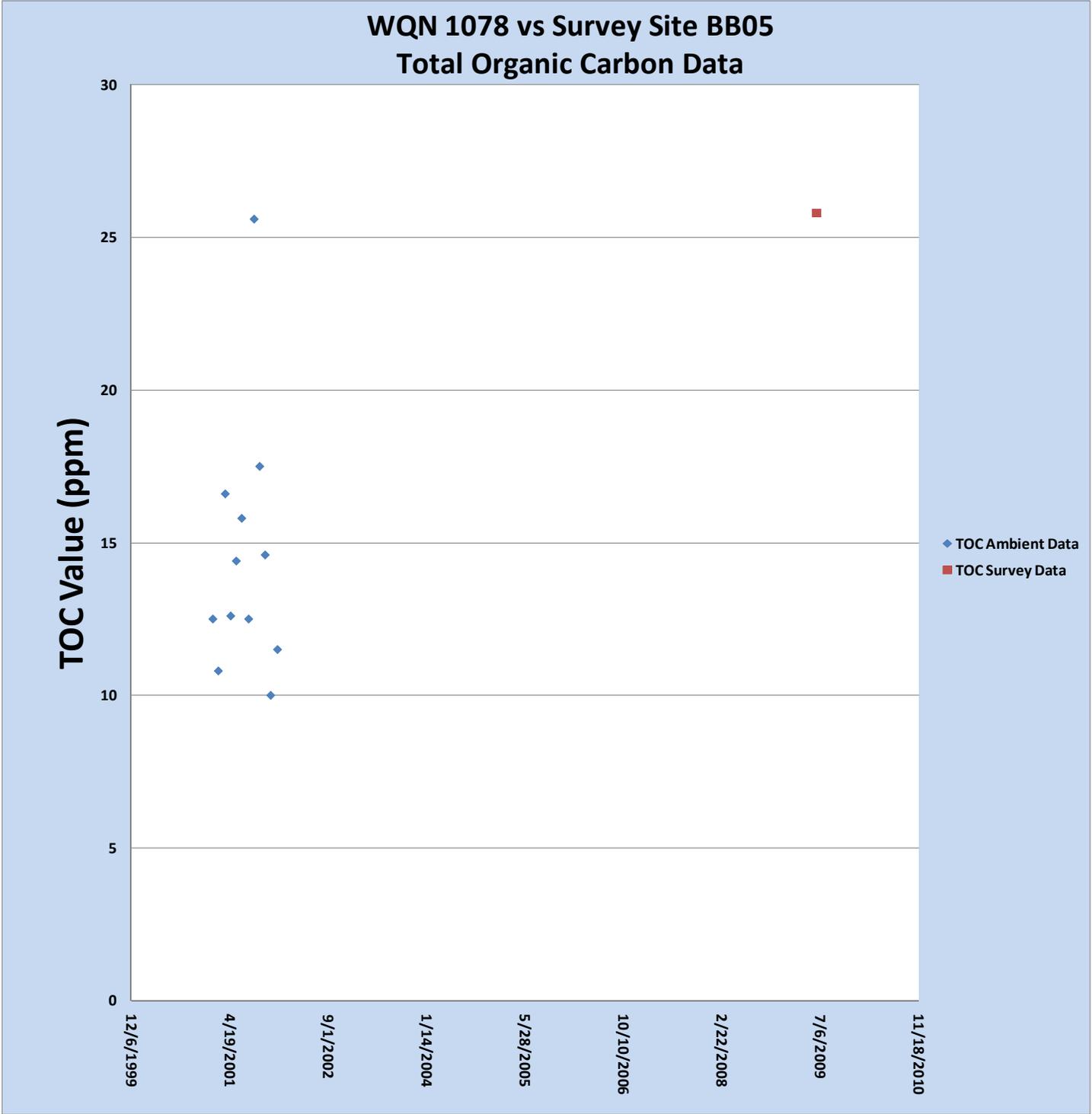


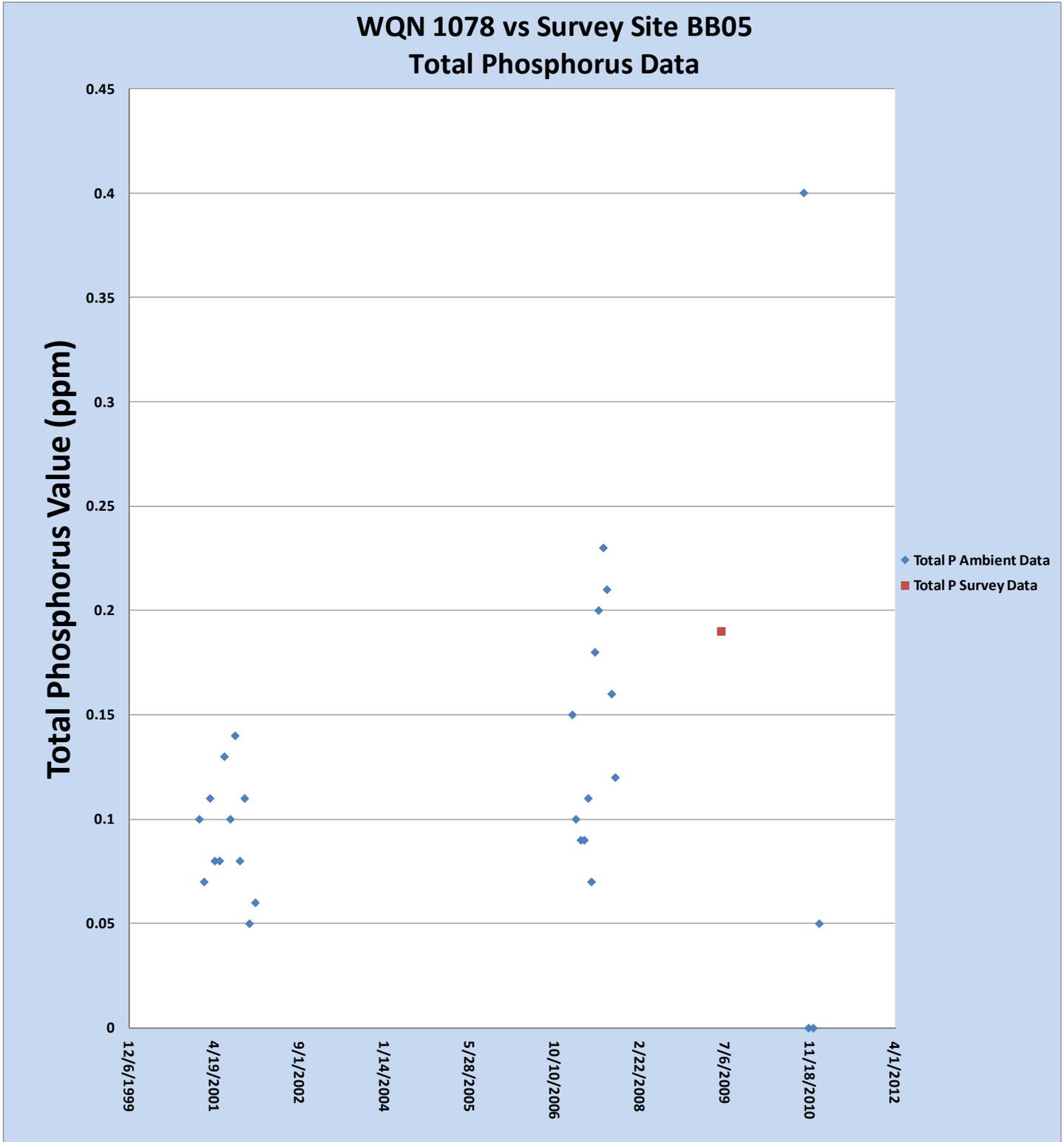


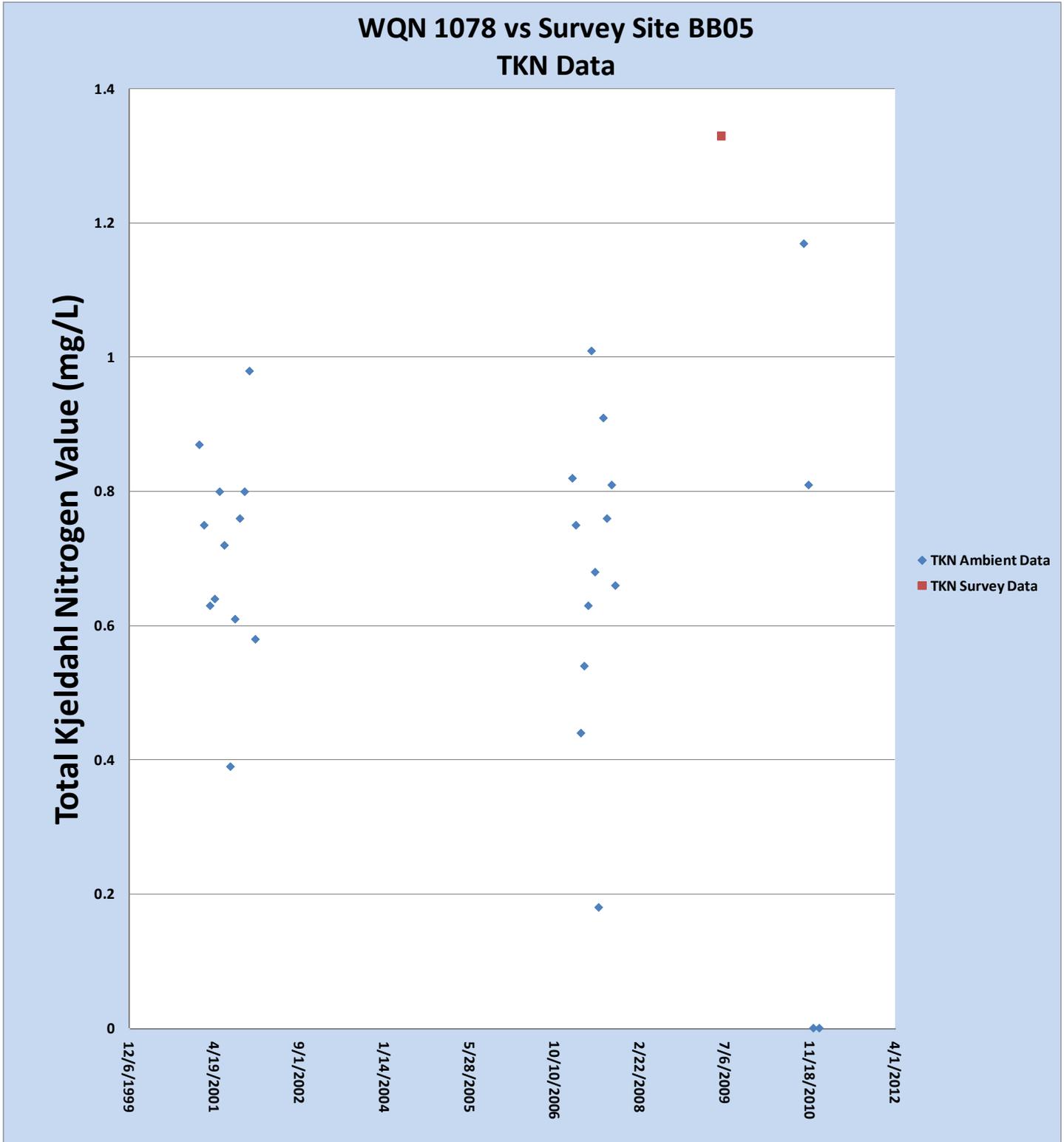


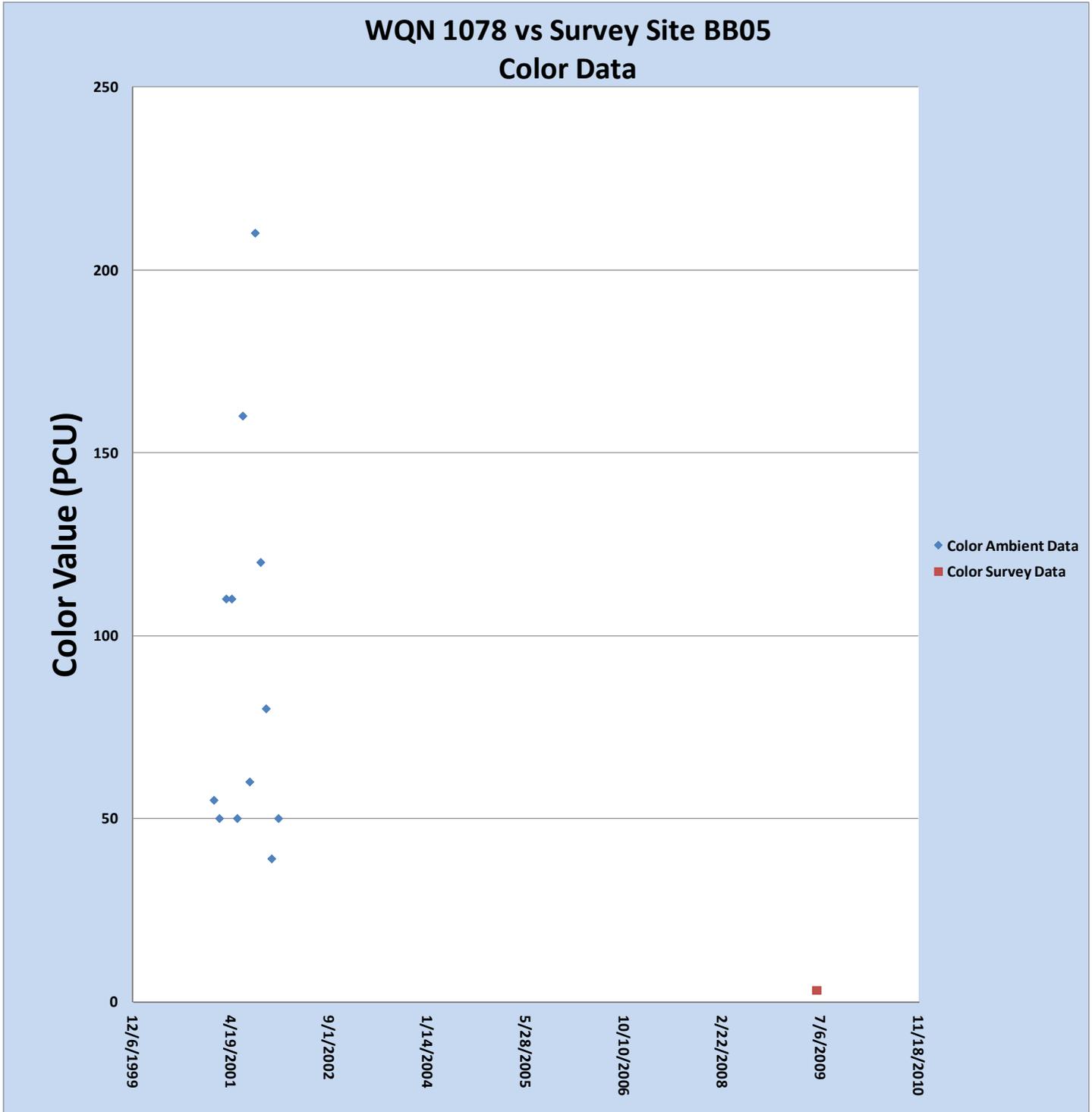


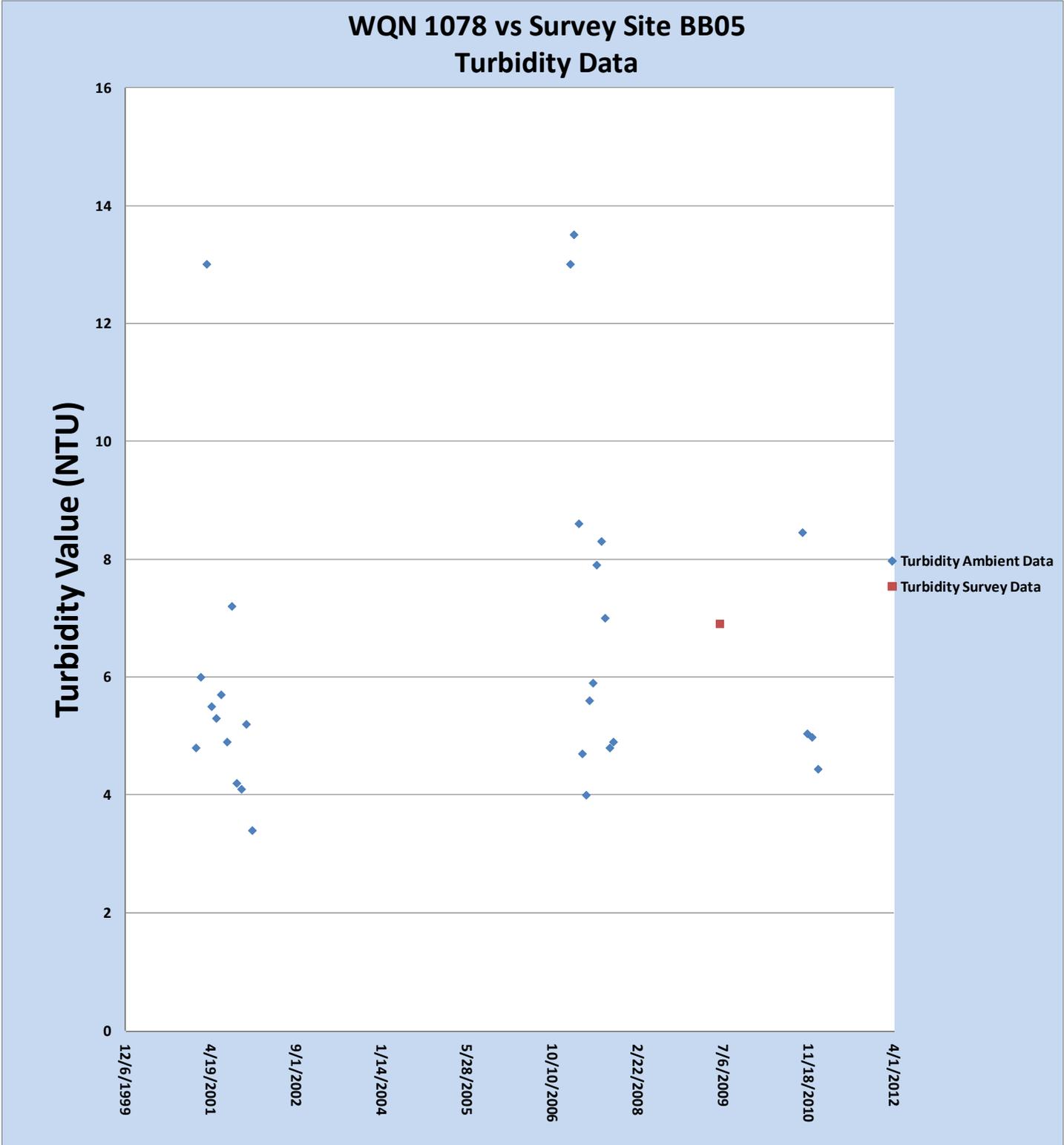








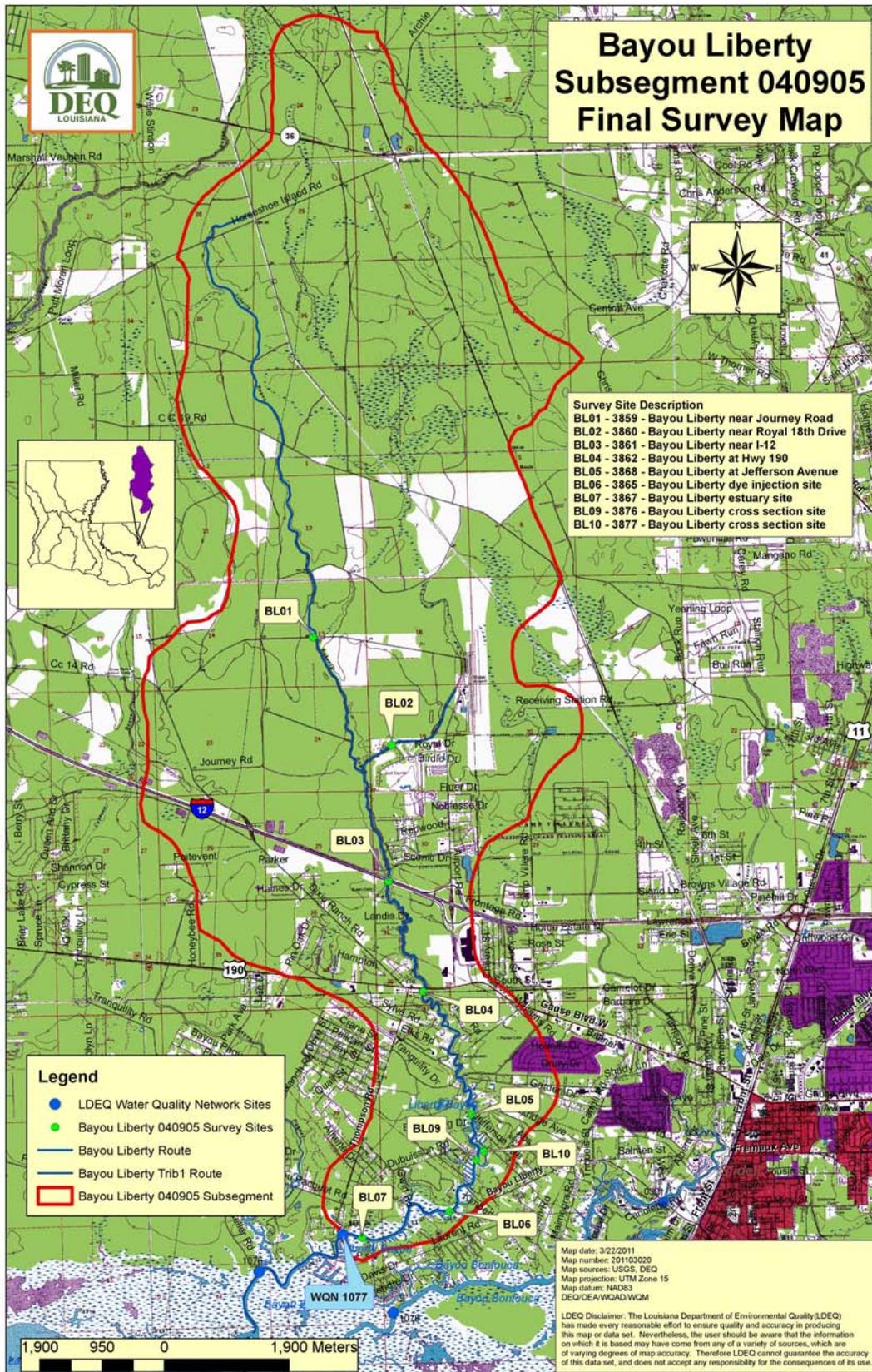


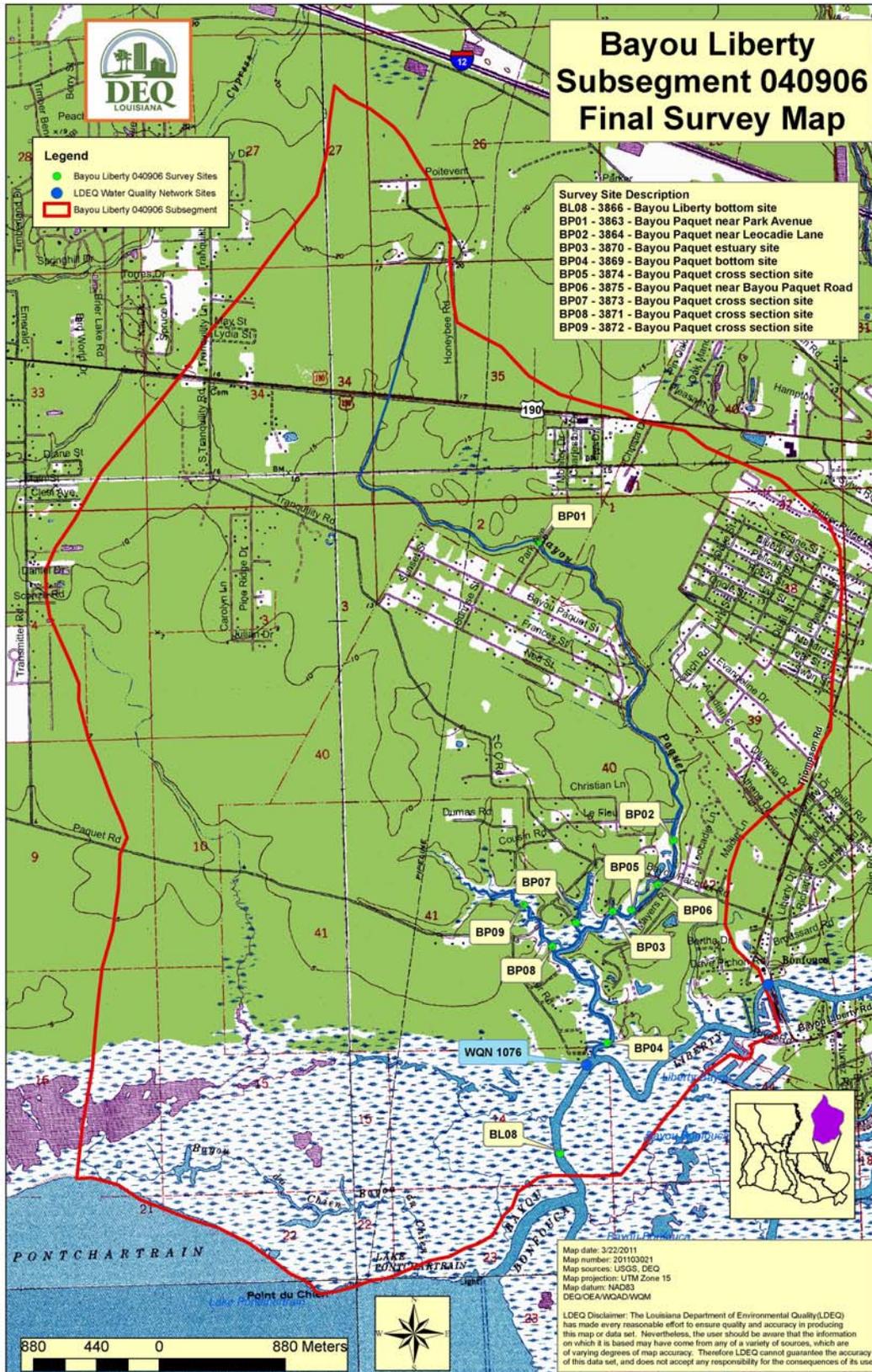


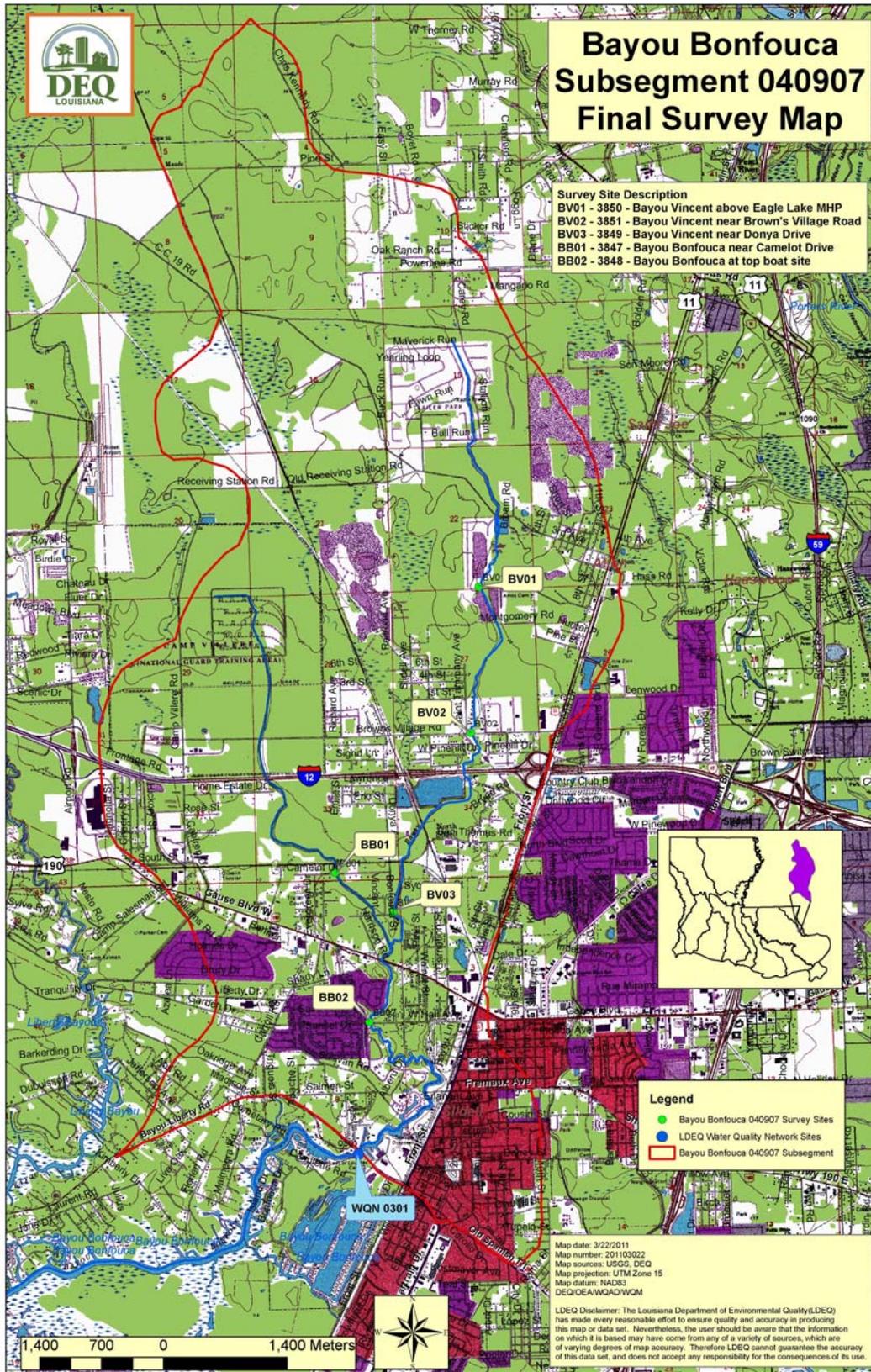
Appendix H – Maps and Diagrams

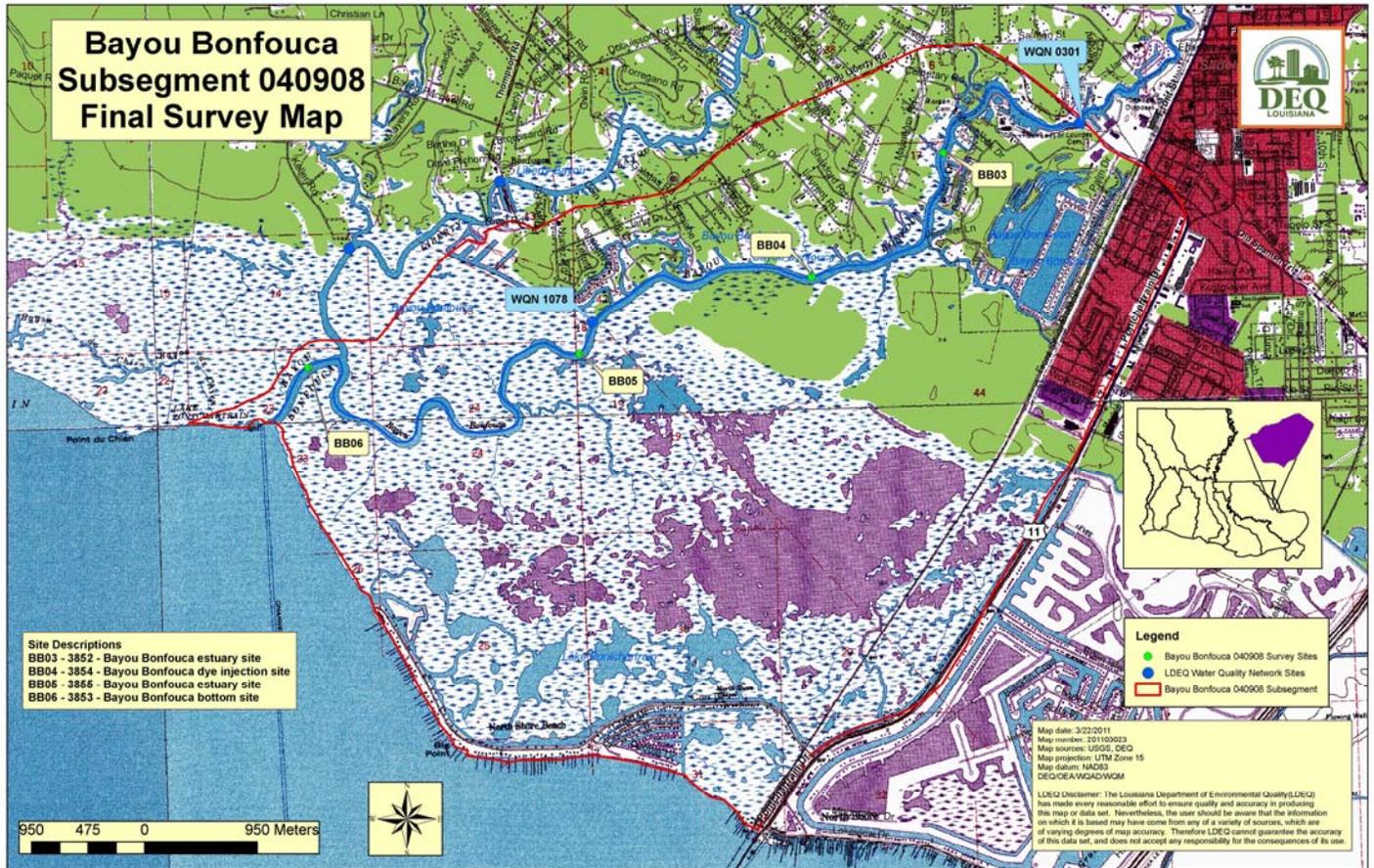
Appendix H1-

Overview map





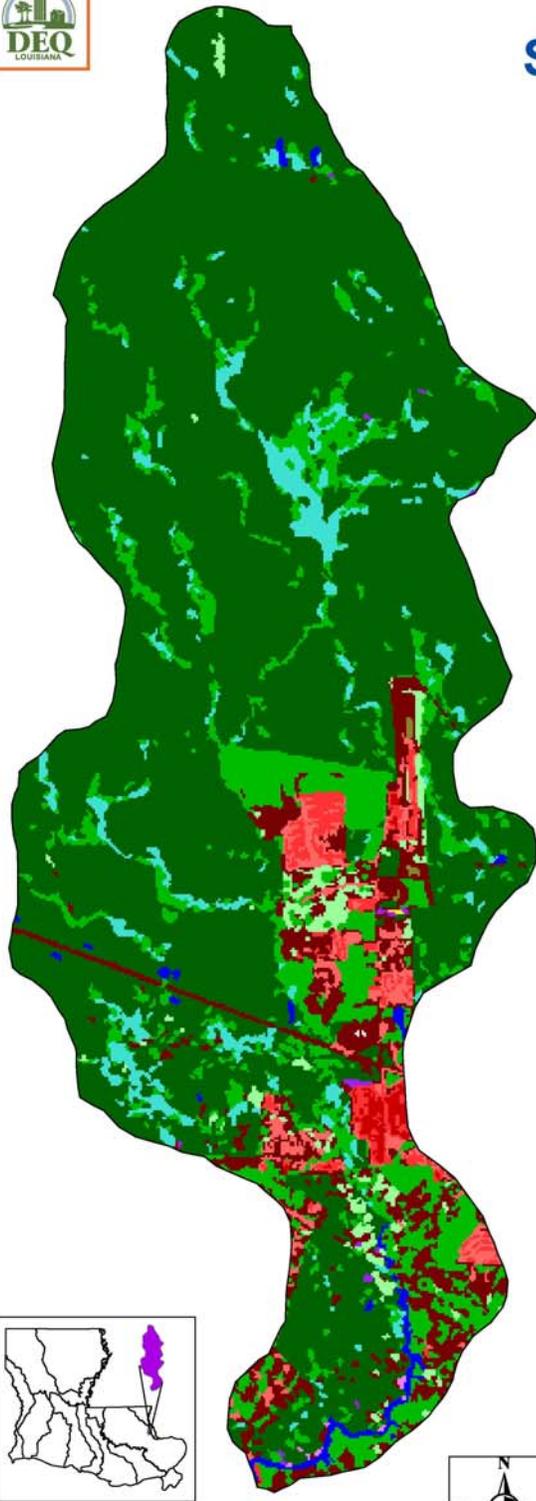




Appendix H2 – Land Use Map



Bayou Liberty Subsegment 040905 Landcover



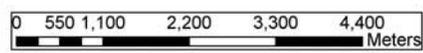
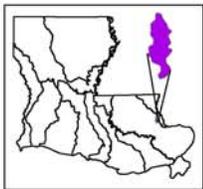
Legend

Landcover

- Deciduous Forest Land
- Developed high density
- Developed low density
- Developed medium density
- Evergreen Forest Land
- Forested Wetland
- Gravel Pit, Strip Mine
- Pasture/Hay
- Sugarcane
- Transitional Areas
- Urban or Built-up Land
- Water
- Wetland Nonforested

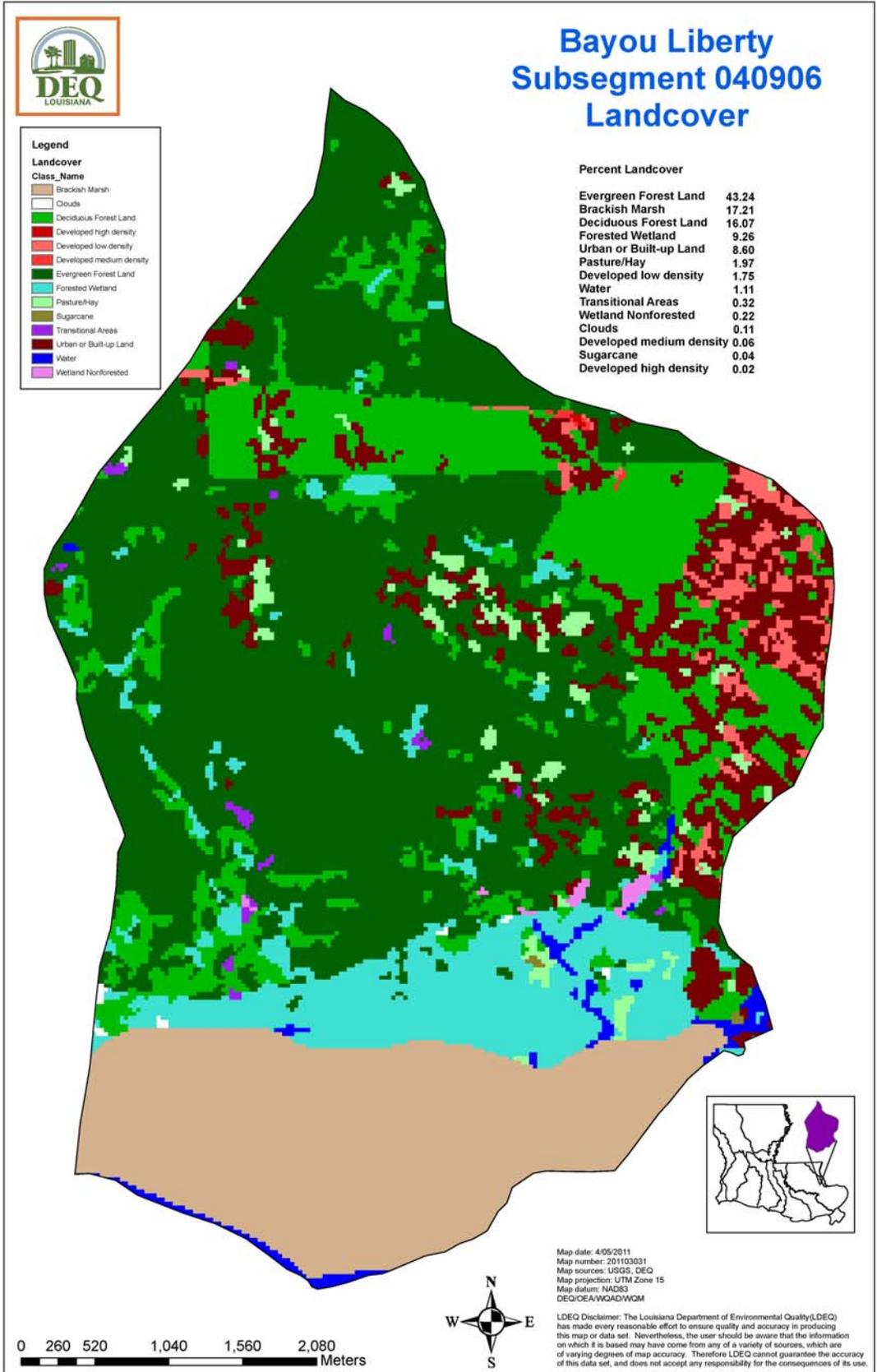
Percent Landcover

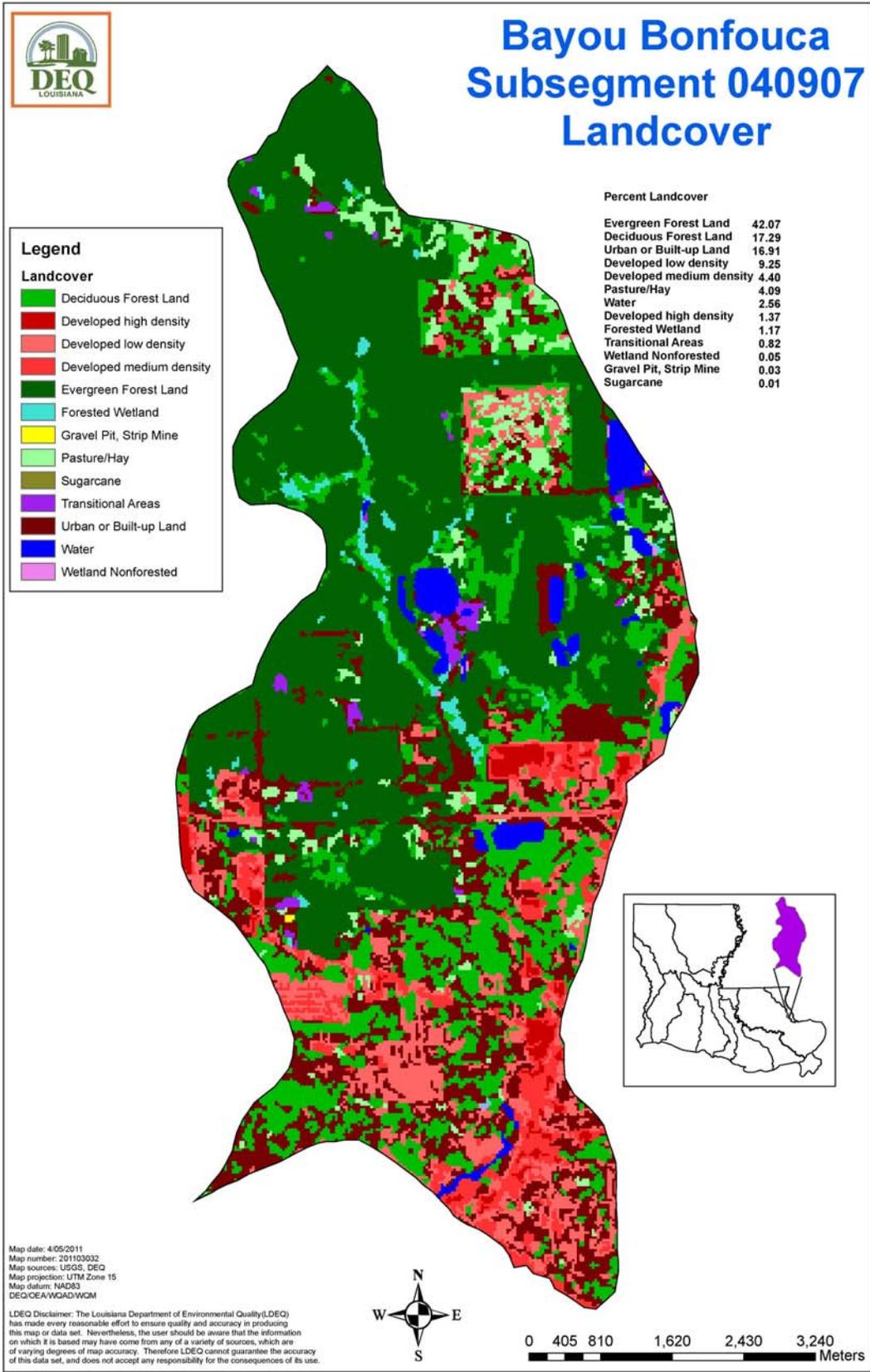
Evergreen Forest Land	69.09
Deciduous Forest Land	13.06
Urban or Built-up Land	7.15
Forested Wetland	4.09
Developed low density	2.10
Pasture/Hay	1.62
Developed medium density	1.43
Water	0.75
Developed high density	0.44
Transitional Areas	0.12
Sugarcane	0.07
Wetland Nonforested	0.05
Gravel Pit, Strip Mine	0.01
Clouds	0.01

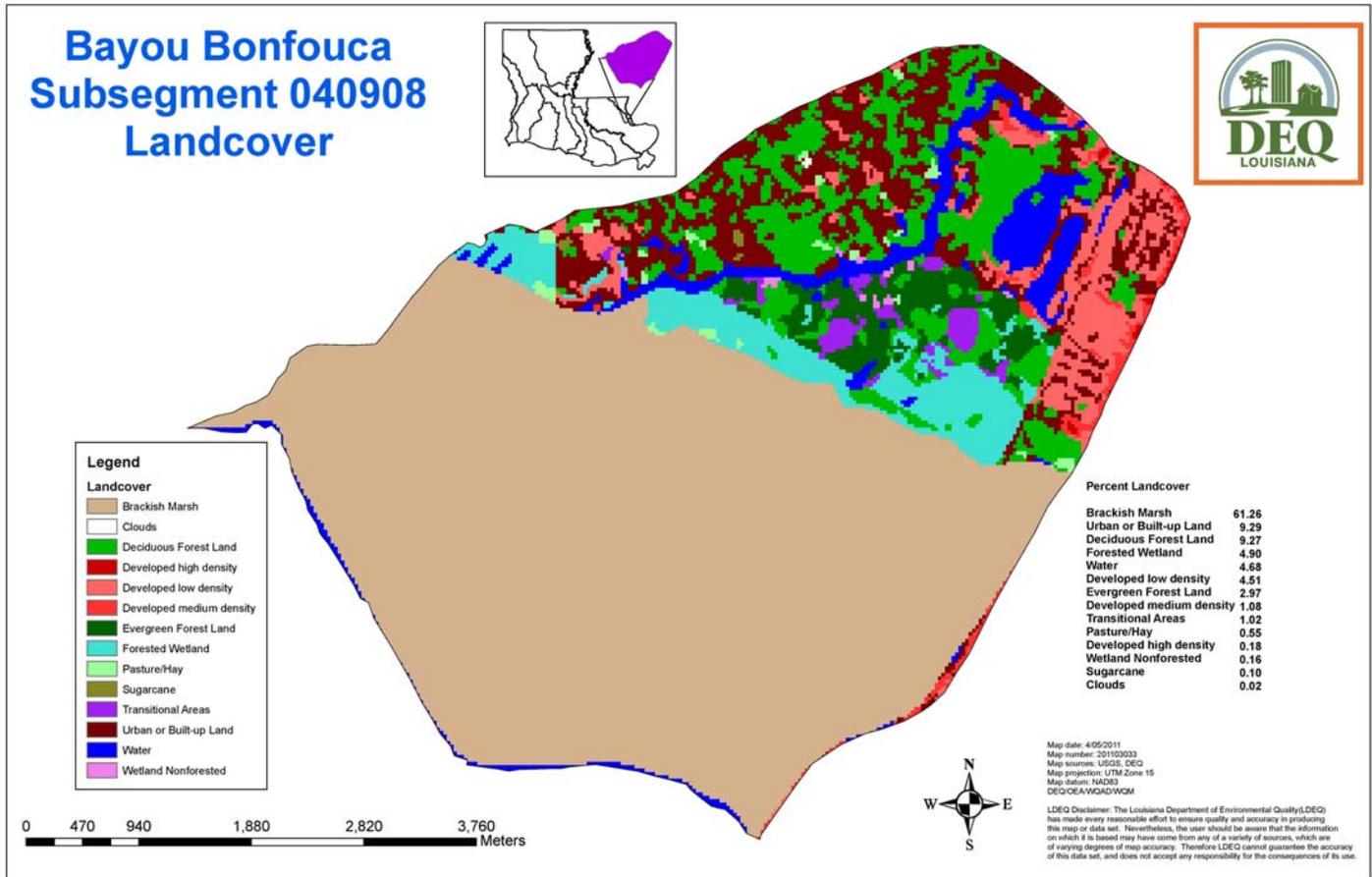


Map date: 4/04/2011
 Map number: 201103030
 Map sources: USGS, DEQ
 Map projection: UTM Zone 15
 Map datum: NAD83
 DEQ/OEA/WQAD/WQM

LDEQ Disclaimer: The Louisiana Department of Environmental Quality (LDEQ) has made every reasonable effort to ensure quality and accuracy in producing this map or data set. Nevertheless, the user should be aware that the information on which it is based may have come from any of a variety of sources, which are of varying degrees of map accuracy. Therefore LDEQ cannot guarantee the accuracy of this data set, and does not accept any responsibility for the consequences of its use.

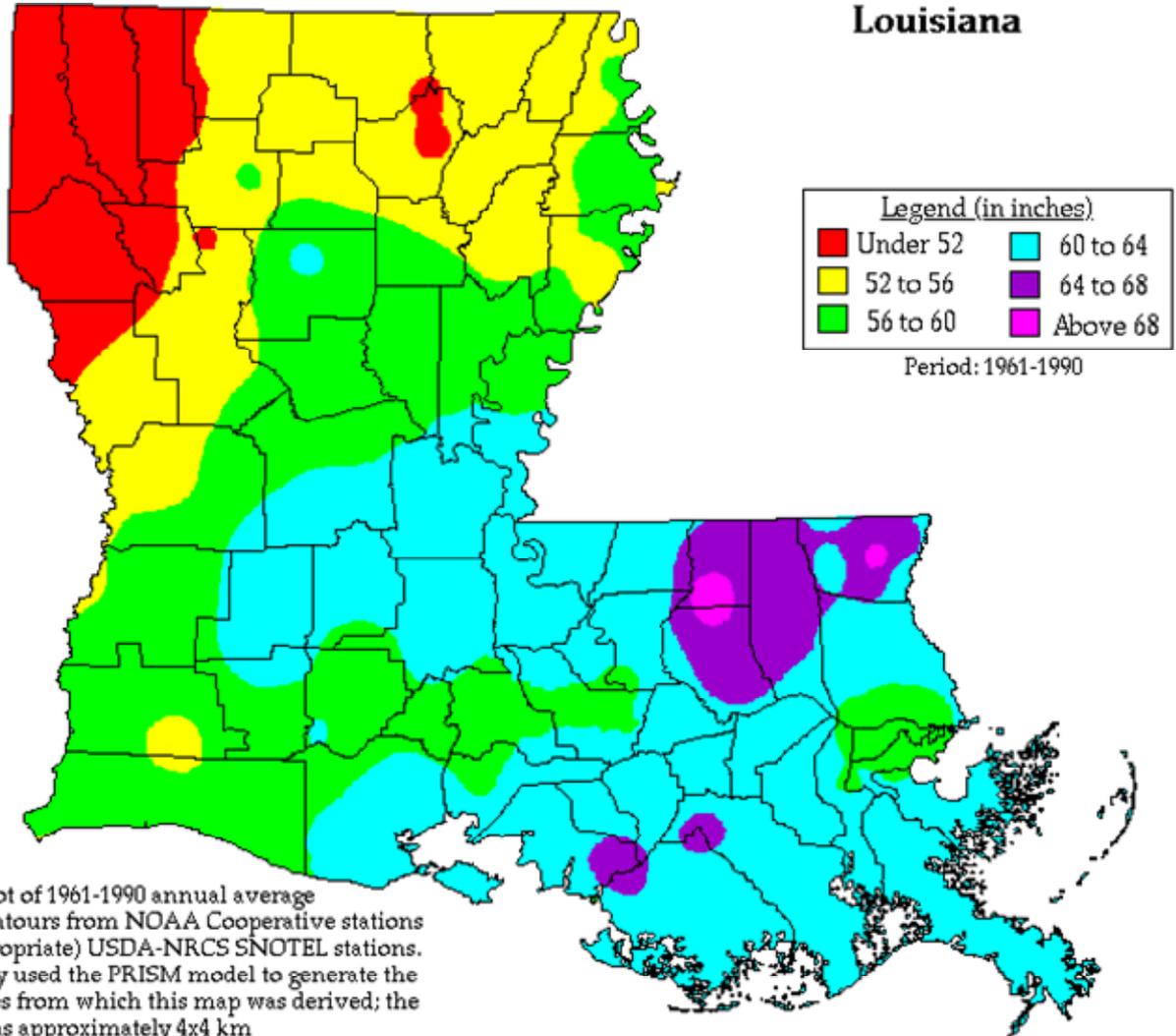






Appendix H3 – La Precipitation Map

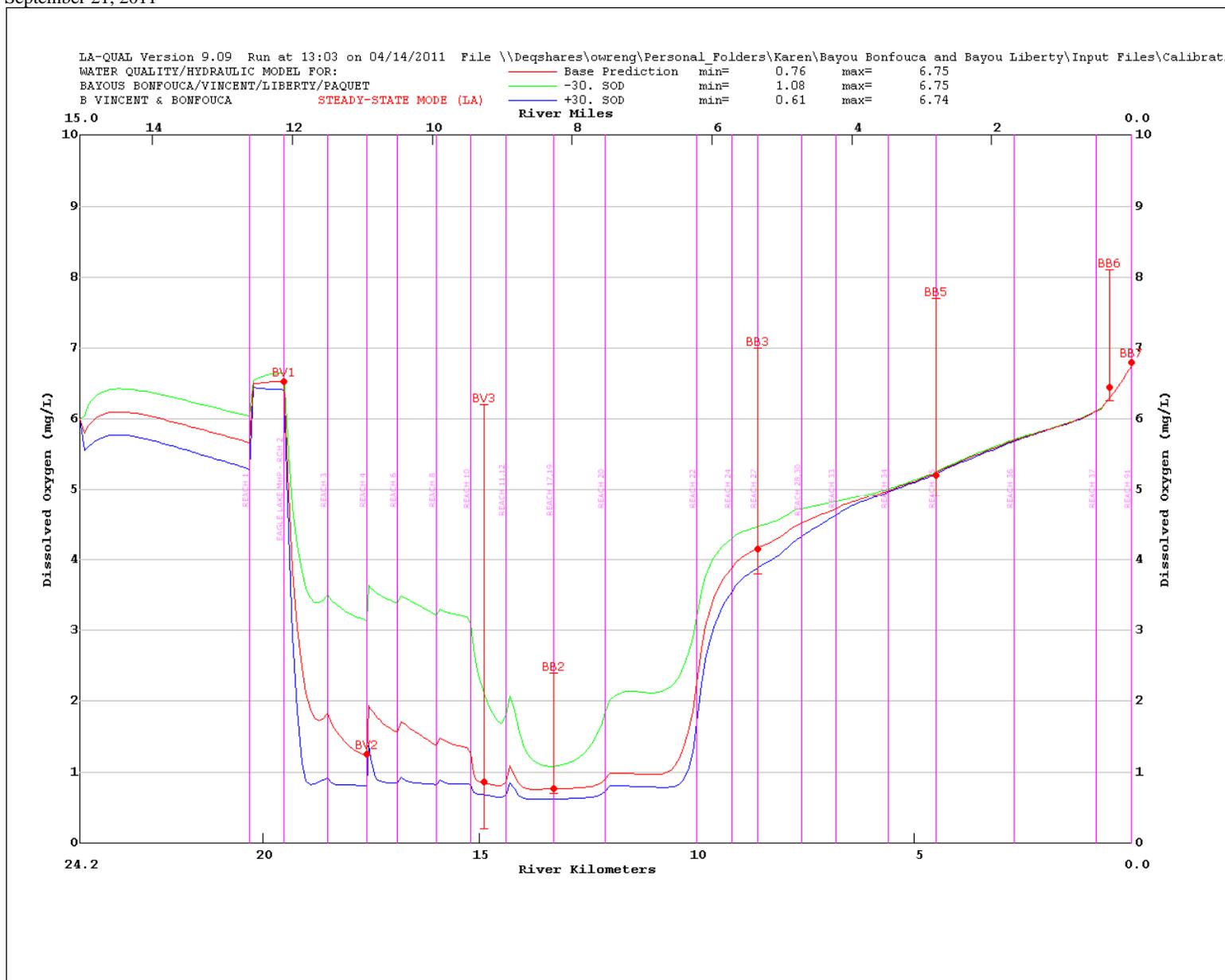
Average Annual Precipitation Louisiana

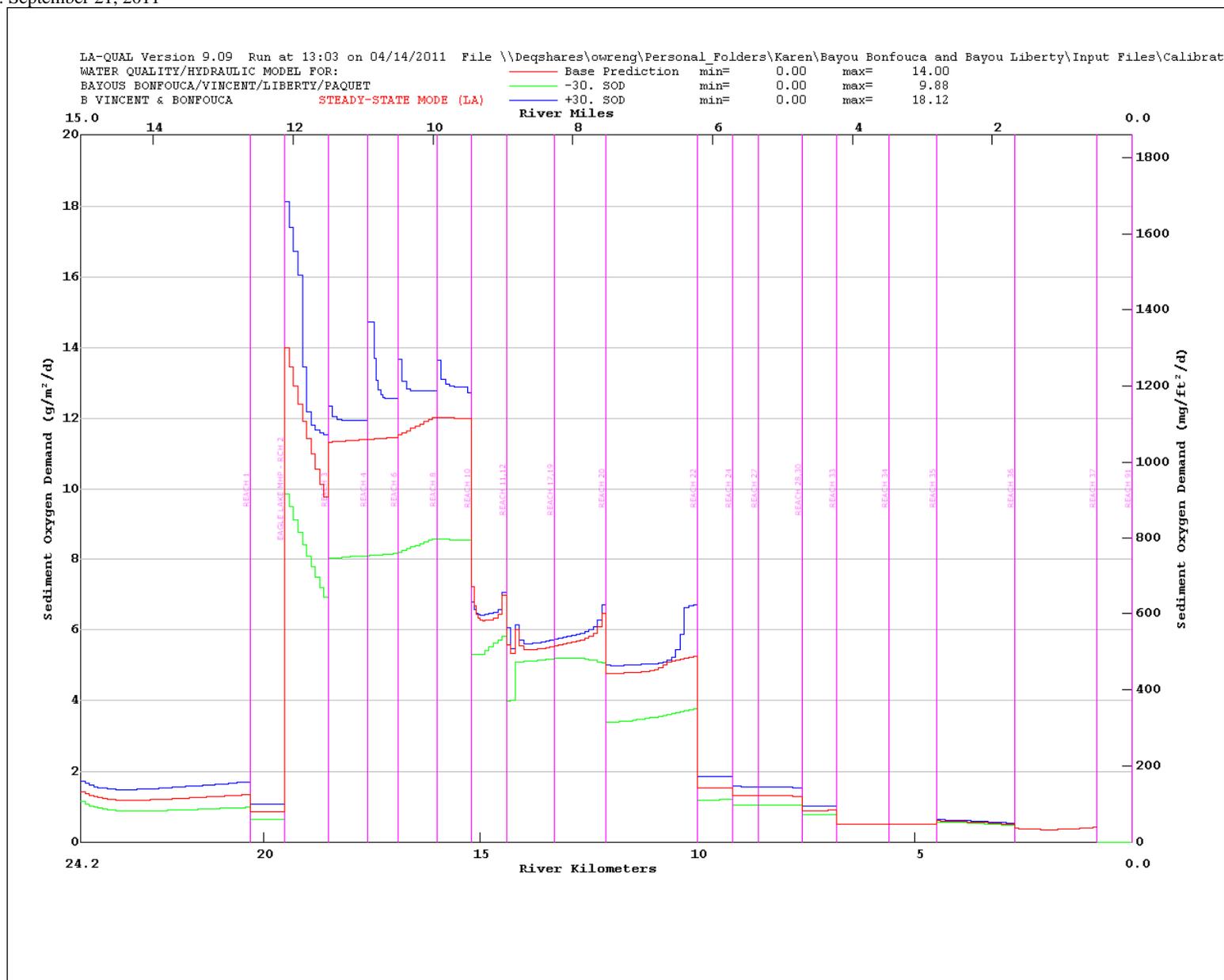


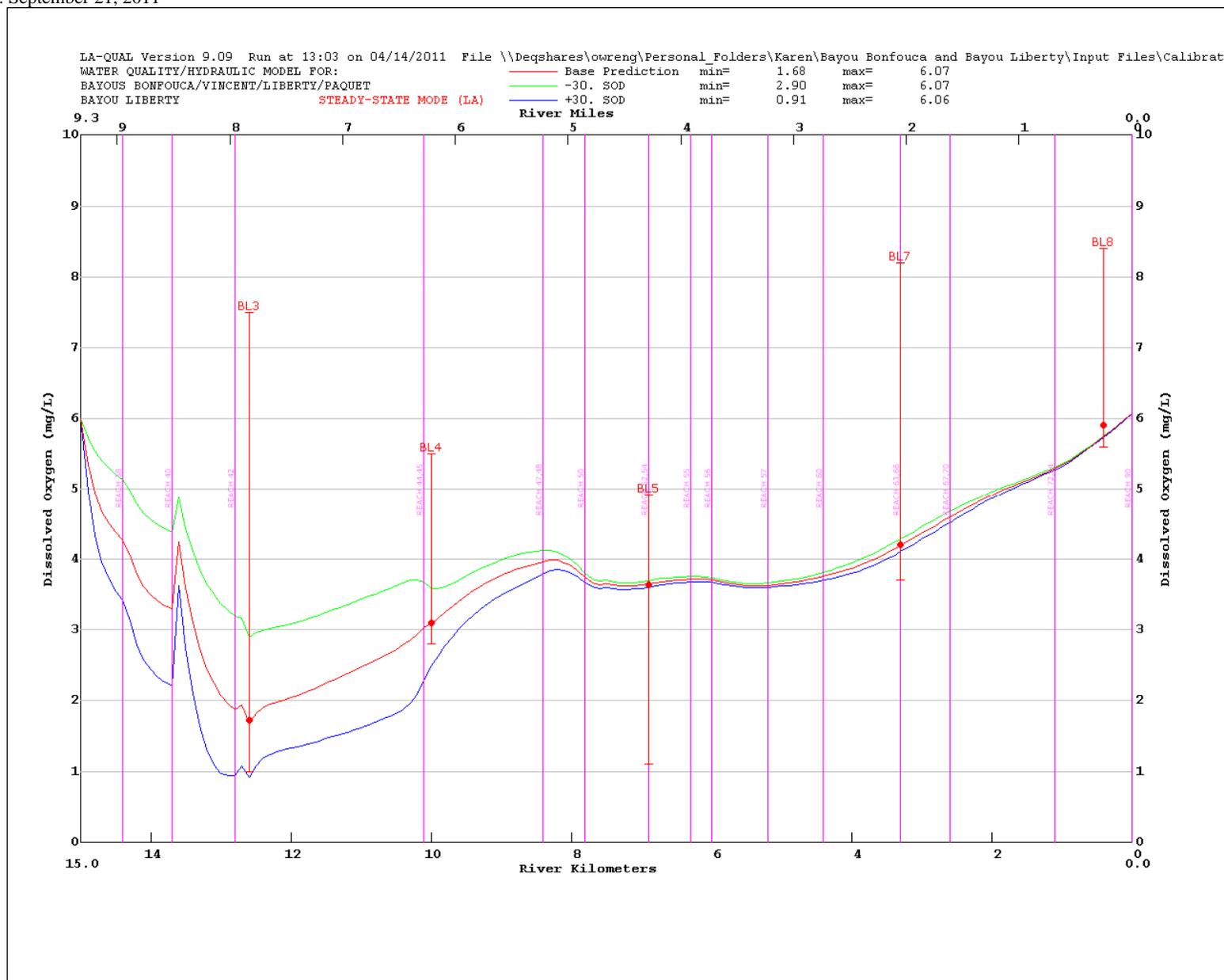
This map is a plot of 1961-1990 annual average precipitation contours from NOAA Cooperative stations and (where appropriate) USDA-NRCS SNOTEL stations. Christopher Daly used the PRISM model to generate the gridded estimates from which this map was derived; the modeled grid was approximately 4x4 km latitude/longitude, and was resampled to 2x2 km using a Gaussian filter. Mapping was performed by Jenny Weisburg. Funding was provided by USDA-NRCS National Water and Climate Center.

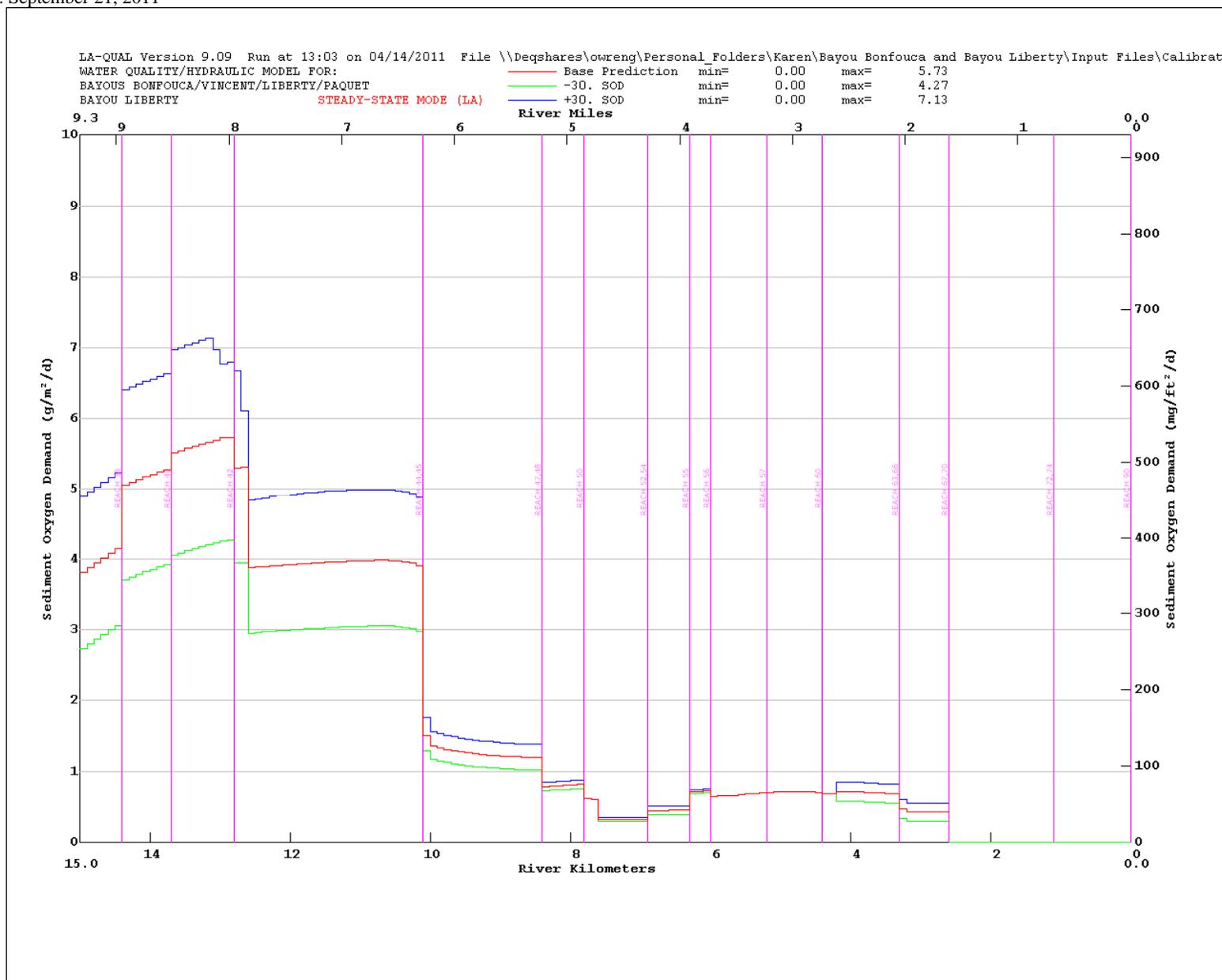
Appendix I – Sensitivity Analysis

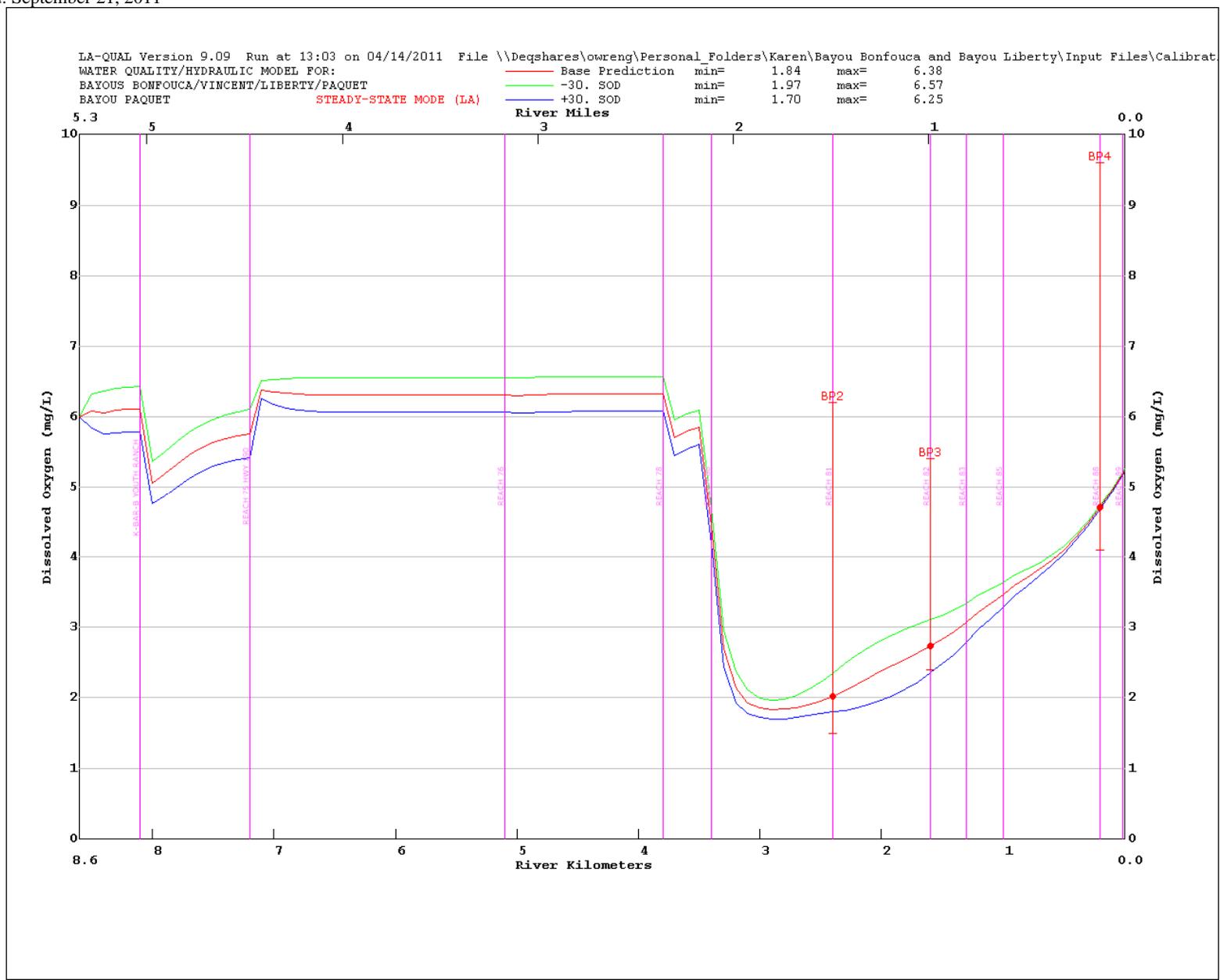
Appendix I1 – Sensitivity Output Graphs

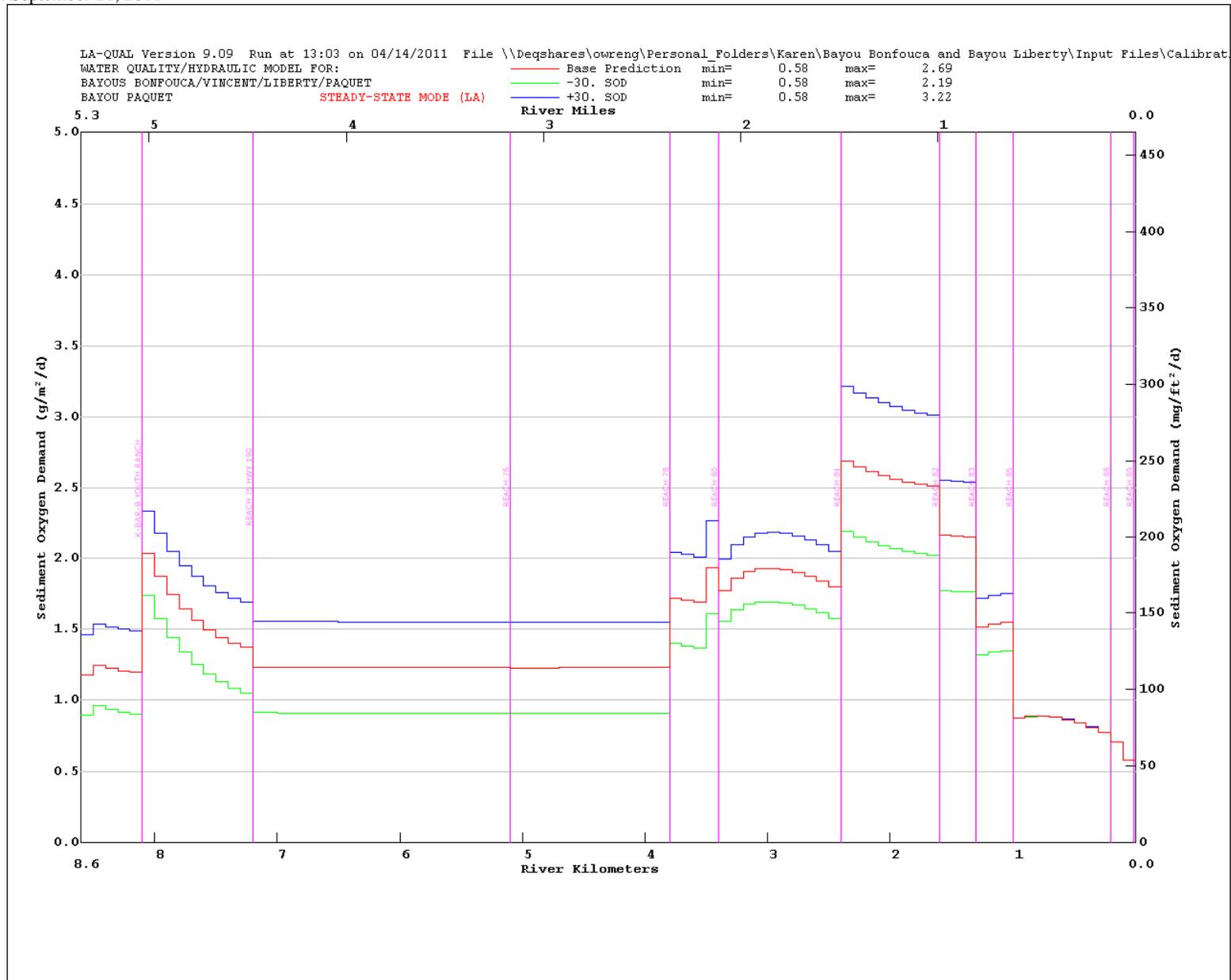












Appendix I2 – Sensitivity Output Data Set

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

Bayou Bonfouca and Bayou Liberty Sensitivity Analysis Input Data Set

! DATA TYPE 01 -- TITLES AND CONTROL DATA

TITLE01 WATER QUALITY/HYDRAULIC MODEL FOR:
TITLE02 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET
CONTROL YES METRIC UNITS
CONTROL YES USE EFFECTIVE CONCENTRATIONS
ENDATA01

! DATA TYPE 02 -- Model Options

MODOPT01 NO TEMPERATURE
MODOPT02 YES SALINITY
MODOPT03 YES CONSERVATIVE MATERIAL I = CONDUCTIVITY IN COND
MODOPT04 YES CONSERVATIVE MATERIAL II = CHLORIDES IN CL
MODOPT05 YES DISSOLVED OXYGEN
MODOPT06 YES BOD1 BIOCHEMICAL OXYGEN DEMAND
MODOPT07 NO BOD2 BIOCHEMICAL OXYGEN DEMAND
MODOPT08 YES NBOD
MODOPT09 NO PHOSPHORUS SERIES
MODOPT10 NO PHYTOPLANKTON
MODOPT11 NO PERIPHYTON
MODOPT12 NO COLIFORM
MODOPT13 NO NONCONSERVATIVE MATERIAL
ENDATA02

! DATA TYPE 03 -- PROGRAM CONSTANTS

PROGRAM K2 MAXIMUM = 25
PROGRAM DISPERSION EQUATION = 3
PROGRAM TIDE HEIGHT = 0.1
PROGRAM TIDAL PERIOD = 19.75
PROGRAM PERIOD OF TIDAL RISE = 10.5
PROGRAM S OXYGEN DEPENDENCE THRESHOLD = 1
PROGRAM SOD MAXIMUM RATE = 50
PROGRAM PHYTOPLANKTON OXYGEN PROD = 0
PROGRAM PERIPHYTON OXYGEN PROD = 0

ENDATA03

! DATA TYPE 04 -- TEMPERATURE CORRECTION CONSTANTS

ENDATA04

! DATA TYPE 05 -- TEMPERATURE DATA

ENDATA05

! DATA TYPE 06 -- ALGAE CONSTANTS

ENDATA06

! DATA TYPE 07 -- MACROPHYTE CONSTANTS

ENDATA07

! DATA TYPE 08 -- REACH IDENTIFICATION DATA

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

! - - - -1- - - -2- - - -3- - - -4- - - -5- - - -6- - - -7- - - -8- - - -9- - - -0- - - -1

!23456789012345678901234567890123456789012345678901234567890123456789012345678901234567890

! *** -- *****-----*****-----

!	R#	ID	SITE NAME	RKM	RKM	LENGTH
REACH ID	1	DD	DRAINAGE DITCH 1	24.2	20.3	0.1
REACH ID	2	BV	VINCENT FROM RKM 20.0 TO BV01	20.3	19.5	0.1
REACH ID	3	BV	VINCENT FROM BV01 RKM 18.5	19.5	18.5	0.1
REACH ID	4	BV	VINCENT FROM RKM 18.5 TO BV02	18.5	17.6	0.1
REACH ID	5	DD	DRAINAGE DITCH 2	2.1	0	0.1
REACH ID	6	BV	VINCENT FROM BV02 TO DD 8	17.6	16.9	0.05
REACH ID	7	DD	DRAINAGE DITCH 8	0.8	0	0.1
REACH ID	8	BV	VINCENT FROM DD 8 TO DD 9	16.9	16	0.1
REACH ID	9	DD	DRAINAGE DITCH 9	2.1	0	0.1
REACH ID	10	BV	VINCENT FROM DD 9 TO RKM 15.2	16	15.2	0.1
REACH ID	11	BV	VINCENT FROM RKM 15.2 TO BV03	15.2	14.9	0.05
REACH ID	12	BV	VINCENT FROM BV03 TO BONFOUCA	14.9	14.4	0.1
REACH ID	13	UB	UB FROM RKM 5.0 TO DD 23	5	2.6	0.1
REACH ID	14	DD	DRAINAGE DITCH 23	1	0	0.1
REACH ID	15	UB	UB FROM DD 23 TO BB01	2.6	1.1	0.1
REACH ID	16	UB	UB FROM BB01 TO BAYOU VINCENT	1.1	0	0.1
REACH ID	17	BB	BONFOUCA FROM BV TO HWY 190	14.4	14.2	0.1
REACH ID	18	DD	HWY 190 (DRAINAGE DITCH 5)	1.8	0	0.1
REACH ID	19	BB	BONFOUCA FROM HWY 190 TO BB02	14.2	13.3	0.1
REACH ID	20	BB	BONFOUCA FROM BB02 TO WD	13.3	12.1	0.1
REACH ID	21	WD	WEST DRAINAGE CANAL	0.3	0	0.1
REACH ID	22	BB	BONFOUCA FROM WD TO DD6	12.1	10	0.1
REACH ID	23	DD	DRAINAGE DITCH 6	0.3	0	0.1
REACH ID	24	BB	BONFOUCA FROM DD 6 TO TRIB 2	10	9.2	0.1
REACH ID	25	DD	DRAINAGE DITCH 7 - UPLAND	1.5	0.5	0.1
REACH ID	26	TR	TRIBUTARY 2 - TIDAL	0.5	0	0.1
REACH ID	27	BB	BONFOUCA FROM TRIB 2 TO BB03	9.2	8.6	0.1
REACH ID	28	BB	BONFOUCA FROM BB03 TO CANAL 26	8.6	7.8	0.1
REACH ID	29	C	CANAL 26	2	0	0.1
REACH ID	30	BB	BONFOUCA FROM CANAL 26 TO TRIB 47.8	47.8	7.6	0.1
REACH ID	31	TR	TRIBUTARY 10 - UPLAND	1.9	0.8	0.1
REACH ID	32	TR	TRIBUTARY 4 - TIDAL	0.8	0	0.1
REACH ID	33	BB	BONFOUCA FROM TRIB 4 TO BB04	7.6	6.8	0.1
REACH ID	34	BB	BONFOUCA FROM BB04 TO RKM 5.6	6.8	5.6	0.1
REACH ID	35	BB	BONFOUCA FROM RKM 5.6 TO BB05	5.6	4.5	0.1
REACH ID	36	BB	BONFOUCA FROM BB05 TO RKM 2.7	4.5	2.7	0.1
REACH ID	37	BB	BONFOUCA FROM RKM 2.7 TO LIBERTY2.7	2.7	0.8	0.1
REACH ID	38	BL	LIBERTY FROM RKM 15.0 TO TRIB 1 15	15	14.4	0.1

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

REACH ID	39	TR TRIBUTARY 1	2.4	0	0.1
REACH ID	40	BL LIBERTY FROM RKM 14.4 TO DD22	14.4	13.7	0.1
REACH ID	41	DD DD22	0.3	0	0.1
REACH ID	42	BL LIBERTY FROM DD22 TO DD20	13.7	12.8	0.1
REACH ID	43	DD DD20	2.7	0	0.1
REACH ID	44	BL LIBERTY FROM DD20 TO BL03	12.8	12.6	0.1
REACH ID	45	BL LIBERTY FROM BL03 TO HWY 190	12.6	10.1	0.1
REACH ID	46	DD HWY 190 (DRAINAGE DITCH 14)	2.3	0	0.1
REACH ID	47	BL LIBERTY FROM HWY 190 TO BL04	10.1	10	0.1
REACH ID	48	BL LIBERTY FROM BL04 TO DD18	10	8.4	0.1
REACH ID	49	DD DD18	0.3	0	0.1
REACH ID	50	BL LIBERTY FROM DD18 TO DD19	8.4	7.8	0.1
REACH ID	51	DD DD19	1.4	0	0.1
REACH ID	52	BL LIBERTY FROM DD19 TO DD04	7.8	7.6	0.1
REACH ID	53	DD DD04	4.2	0	0.1
REACH ID	54	BL LIBERTY FROM DD04 TO BL05	7.6	6.9	0.1
REACH ID	55	BL LIBERTY FROM BL05 TO RKM 6.3	6.9	6.3	0.1
REACH ID	56	BL LIBERTY FROM RKM 6.3 TO RKM 6.0	6.3	6	0.1
REACH ID	57	BL LIBERTY FROM RKM 6.0 TO TRIB 9	6	5.2	0.1
REACH ID	58	DD DRAINAGE DITCH 3 - UPLAND	0.5	0.3	0.1
REACH ID	59	TR TRIBUTARY 9 - TIDAL	0.3	0	0.1
REACH ID	60	BL LIBERTY FROM TRIB 9 TO TRIB 6	5.2	4.4	0.1
REACH ID	61	DD DRAINAGE DITCH 11 - UPLAND	1.6	0.6	0.1
REACH ID	62	TR TRIBUTARY 6 - TIDAL	0.6	0	0.1
REACH ID	63	BL LIBERTY FROM TRIB 6 TO TRIB 10	4.4	4.2	0.1
REACH ID	64	TR TRIBUTARY 10 - UPLAND	0.7	0.2	0.1
REACH ID	65	TR TRIBUTARY 10 - TIDAL	0.2	0	0.1
REACH ID	66	BL LIBERTY FROM TRIB 10 TO BL07	4.2	3.3	0.1
REACH ID	67	BL LIBERTY FROM BL07 TO TRIB 8	3.3	3.2	0.1
REACH ID	68	TR TRIBUTARY 8 - UPLAND	0.6	0.1	0.1
REACH ID	69	TR TRIBUTARY 8 - TIDAL	0.1	0	0.1
REACH ID	70	BL LIBERTY FROM TRIB 8 TO M1	3.2	2.6	0.1
REACH ID	71	M MARINA 1 - TIDAL	0.2	0	0.1
REACH ID	72	BL LIBERTY FROM M1 TO M2	2.6	2.5	0.1
REACH ID	73	M MARINA02 - TIDAL	1.8	0	0.1
REACH ID	74	BL LIBERTY FROM M2 TO B PAQUET	2.5	1.1	0.1
REACH ID	75	DD HWY 190 (DD13-PAQUET HEADWATERS)	8.6	7.2	0.1
REACH ID	76	BP PAQUET FROM HWY 190 TO DD16	7.2	5.1	0.1
REACH ID	77	DD DD16	0.9	0	0.1
REACH ID	78	BP PAQUET FROM RKM 5.1 TO DD17	5.1	3.8	0.1
REACH ID	79	DD DD17	1.7	0	0.1
REACH ID	80	BP PAQUET FROM DD17 TO TIDAL REACH	3.8	3.4	0.1

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

REACH ID	81	BP PAQUET TIDAL REACH TO BP02	3.4	2.4	0.1
REACH ID	82	BP PAQUET FROM BP02 TO BP03	2.4	1.6	0.1
REACH ID	83	BP PAQUET FROM BP03 TO TRIB 24	1.6	1.3	0.1
REACH ID	84	C TRIB 24 FROM TOP TO PAQUET	0.4	0	0.1
REACH ID	85	BP PAQUET FROM TRIB 24 TO TRIB 25	1.3	1	0.1
REACH ID	86	C TRIB 25 FROM TOP TO RKM 0.3	1	0.3	0.1
REACH ID	87	C TRIB 25 FROM RKM 0.3 TO PAQUET	0.3	0	0.1
REACH ID	88	BP PAQUET FROM TRIB 25 TO BP04	1	0.2	0.1
REACH ID	89	BP PAQUET FROM BP04 TO LIBERTY	0.2	0	0.1
REACH ID	90	BL LIBERTY FROM PAQUET TO BONFOUCA	1.1	0	0.1
REACH ID	91	BB BONFOUCA FROM LIBERTY TO BB06	0.8	0	0.1

ENDATA08

! DATA TYPE 09 -- ADVECTIVE HYDRAULIC COEFFICIENTS

! - - - -1- - - - -2- - - - -3- - - - -4- - - - -5- - - - -6- - - - -7- - - - -8- - - - -9- - - - -0- - - - -1

! 234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890

! *** -----*****-----*****-----*****-----*****

!		a	b	c	d	e	f		
!		WIDTH	WIDTH	WIDTH	DEPTH	DEPTH	DEPTH		
!	R#	COEFF	EXP	CONST	COEFF	EXP	CONST	SLOPE	MANNING
HYDR-1	1	11.59770	0.3	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	2	4.765	0.3	0	0.3255	0.36	0	0.00001	0.03
HYDR-1	3	4.765	0.3	0	0.3255	0.36	0	0.00001	0.03
HYDR-1	4	4.765	0.3	0	0.3255	0.36	0	0.00001	0.03
HYDR-1	5	11.59770	0.3	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	6	4.765	0.3	0	0.3255	0.36	0	0.00001	0.03
HYDR-1	7	11.59770	0.3	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	8	4.765	0.3	0	0.3255	0.36	0	0.00001	0.03
HYDR-1	9	11.59770	0.3	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	10	4.765	0.3	0	0.3255	0.36	0	0.00001	0.03
HYDR-1	11	0	0	4.724	0	0	0.271	0.00001	0.03
HYDR-1	12	0	0	4.724	0	0	0.271	0.00001	0.03
HYDR-1	13	5.813	0.3	0	0.413	0.36	0	0.00001	0.03
HYDR-1	14	11.59770	0.3	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	15	5.813	0.3	0	0.413	0.36	0	0.00001	0.03
HYDR-1	16	8.719	0.3	0	0.62	0.36	0	0.00001	0.03
HYDR-1	17	0	0	10.84	0	0	0.87	0.00001	0.03
HYDR-1	18	11.59770	0.3	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	19	0	0	10.84	0	0	0.87	0.00001	0.03
HYDR-1	20	0	0	10.84	0	0	0.87	0.00001	0.03
HYDR-1	21	0	0	3	0	0	0.15	0.00001	0.03
HYDR-1	22	0	0	54.25	0	0	1.24	0.00001	0.03
HYDR-1	23	11.59770	0.3	0	0.9468	0.36	0	0.00001	0.03

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

HYDR-1	24	0	0	93.08	0	0	1.603	0.00001	0.03
HYDR-1	25	11.59770.3	0	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	26	0	0	12	0	0	0.6	0.00001	0.03
HYDR-1	27	0	0	93.08	0	0	1.603	0.00001	0.03
HYDR-1	28	0	0	93.08	0	0	1.603	0.00001	0.03
HYDR-1	29	0	0	114	0	0	1	0.00001	0.03
HYDR-1	30	0	0	76.51	0	0	1.87	0.00001	0.03
HYDR-1	31	11.59770.3	0	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	32	0	0	18	0	0	0.9	0.00001	0.03
HYDR-1	33	0	0	76.51	0	0	1.87	0.00001	0.03
HYDR-1	34	0	0	91.4	0	0	1.89	0.00001	0.03
HYDR-1	35	0	0	114.3	0	0	1.67	0.00001	0.03
HYDR-1	36	0	0	77.7	0	0	1.44	0.00001	0.03
HYDR-1	37	0	0	88	0	0	1.6	0.00001	0.03
HYDR-1	38	8.72	0.3	0	0.62	0.36	0	0.00001	0.03
HYDR-1	39	11.59770.3	0	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	40	8.72	0.3	0	0.62	0.36	0	0.00001	0.03
HYDR-1	41	11.59770.3	0	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	42	17.43760.3	0	0	0.992	0.36	0	0.00001	0.03
HYDR-1	43	11.59770.3	0	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	44	0	0	8.84	0	0	0.472	0.00001	0.03
HYDR-1	45	0	0	8.84	0	0	0.472	0.00001	0.03
HYDR-1	46	11.59770.3	0	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	47	0	0	18.6	0	0	1.4	0.00001	0.03
HYDR-1	48	0	0	18.6	0	0	1.4	0.00001	0.03
HYDR-1	49	11.59770.3	0	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	50	0	0	18.6	0	0	1.4	0.00001	0.03
HYDR-1	51	11.59770.3	0	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	52	0	0	42.67	0	0	2.28	0.00001	0.03
HYDR-1	53	11.59770.3	0	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	54	0	0	42.67	0	0	2.28	0.00001	0.03
HYDR-1	55	0	0	42.67	0	0	2.28	0.00001	0.03
HYDR-1	56	0	0	39.69	0	0	1.7	0.00001	0.03
HYDR-1	57	0	0	47.55	0	0	2.08	0.00001	0.03
HYDR-1	58	11.59770.3	0	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	59	0	0	16	0	0	0.8	0.00001	0.03
HYDR-1	60	0	0	47.55	0	0	2.08	0.00001	0.03
HYDR-1	61	11.59770.3	0	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	62	0	0	12	0	0	0.6	0.00001	0.03
HYDR-1	63	0	0	52.73	0	0	2.09	0.00001	0.03
HYDR-1	64	11.59770.3	0	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	65	0	0	13	0	0	0.65	0.00001	0.03

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

HYDR-1	66	0	0	52.12	0	0	2.14	0.00001	0.03
HYDR-1	67	0	0	52.12	0	0	2.14	0.00001	0.03
HYDR-1	68	11.59770.3	0	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	69	0	0	10	0	0	0.5	0.00001	0.03
HYDR-1	70	0	0	52.12	0	0	2.14	0.00001	0.03
HYDR-1	71	0	0	32	0	0	1.2	0.00001	0.03
HYDR-1	72	0	0	56.54	0	0	2.14	0.00001	0.03
HYDR-1	73	0	0	32	0	0	1.2	0.00001	0.03
HYDR-1	74	0	0	60.96	0	0	2.13	0.00001	0.03
HYDR-1	75	11.59770.3	0	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	76	8.72	0.3	0	0.62	0.36	0	0.00001	0.03
HYDR-1	77	11.59770.3	0	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	78	8.72	0.3	0	0.62	0.36	0	0.00001	0.03
HYDR-1	79	11.59770.3	0	0	0.9468	0.36	0	0.00001	0.03
HYDR-1	80	8.72	0.3	0	0.62	0.36	0	0.00001	0.03
HYDR-1	81	0	0	18.9	0	0	1.1	0.00001	0.03
HYDR-1	82	0	0	18.29	0	0	1	0.00001	0.03
HYDR-1	83	0	0	21.34	0	0	1.5	0.00001	0.03
HYDR-1	84	0	0	20.1	0	0	0.74	0.00001	0.03
HYDR-1	85	0	0	21.34	0	0	1.5	0.00001	0.03
HYDR-1	86	0	0	16.46	0	0	0.94	0.00001	0.03
HYDR-1	87	0	0	32	0	0	0.77	0.00001	0.03
HYDR-1	88	0	0	30.48	0	0	1.5	0.00001	0.03
HYDR-1	89	0	0	30.48	0	0	1.5	0.00001	0.03
HYDR-1	90	0	0	60.96	0	0	2.13	0.00001	0.03
HYDR-1	91	0	0	105.59	0	0	1.96	0.00001	0.03

ENDATA09

! DATA TYPE 10 -- DISPERSIVE HYDRAULIC COEFFICIENTS

! - - - -1- - - - -2- - - - -3- - - - -4- - - - -5- - - - -6- - - - -7- - - - -8- - - - -9- - - - -0- - - - -1

! 234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890

! *** -----*****-----*****-----

!	TIDAL					
!	R#	RANGE	a	b	c	d
HYDR-2	1	0	0	0.833	0	1
HYDR-2	2	0	0	0.833	0	1
HYDR-2	3	0	0	0.833	0	1
HYDR-2	4	0	0	0.833	0	1
HYDR-2	5	0	0	0.833	0	1
HYDR-2	6	0	0	0.833	0	1
HYDR-2	7	0	0	0.833	0	1
HYDR-2	8	0	0	0.833	0	1
HYDR-2	9	0	0	0.833	0	1

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

HYDR-2	10	0	0	0.833	0	1
HYDR-2	11	1	200	0.833	0	1
HYDR-2	12	1	200	0.833	0	1
HYDR-2	13	0	0	0.833	0	1
HYDR-2	14	0	0	0.833	0	1
HYDR-2	15	0	0	0.833	0	1
HYDR-2	16	0	0	0.833	0	1
HYDR-2	17	1	200	0.833	0	1
HYDR-2	18	0	0	0.833	0	1
HYDR-2	19	1	200	0.833	0	1
HYDR-2	20	1	200	0.833	0	1
HYDR-2	21	1	200	0.833	0	1
HYDR-2	22	1	200	0.833	0	1
HYDR-2	23	0	0	0.833	0	1
HYDR-2	24	1	200	0.833	0	1
HYDR-2	25	0	0	0.833	0	1
HYDR-2	26	1	200	0.833	0	1
HYDR-2	27	1	200	0.833	0	1
HYDR-2	28	1	200	0.833	0	1
HYDR-2	29	1	200	0.833	0	1
HYDR-2	30	1	200	0.833	0	1
HYDR-2	31	0	0	0.833	0	1
HYDR-2	32	1	200	0.833	0	1
HYDR-2	33	1	200	0.833	0	1
HYDR-2	34	1	200	0.833	0	1
HYDR-2	35	1	200	0.833	0	1
HYDR-2	36	1	200	0.833	0	1
HYDR-2	37	1	200	0.833	0	1
HYDR-2	38	0	0	0.833	0	1
HYDR-2	39	0	0	0.833	0	1
HYDR-2	40	0	0	0.833	0	1
HYDR-2	41	0	0	0.833	0	1
HYDR-2	42	0	0	0.833	0	1
HYDR-2	43	0	0	0.833	0	1
HYDR-2	44	1	100	0.833	0	1
HYDR-2	45	1	100	0.833	0	1
HYDR-2	46	0	0	0.833	0	1
HYDR-2	47	1	100	0.833	0	1
HYDR-2	48	1	100	0.833	0	1
HYDR-2	49	0	0	0.833	0	1
HYDR-2	50	1	150	0.833	0	1
HYDR-2	51	0	0	0.833	0	1

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

HYDR-2	52	1	200	0.833	0	1
HYDR-2	53	0	0	0.833	0	1
HYDR-2	54	1	250	0.833	0	1
HYDR-2	55	1	300	0.833	0	1
HYDR-2	56	1	300	0.833	0	1
HYDR-2	57	1	300	0.833	0	1
HYDR-2	58	0	0	0.833	0	1
HYDR-2	59	1	200	0.833	0	1
HYDR-2	60	1	300	0.833	0	1
HYDR-2	61	0	0	0.833	0	1
HYDR-2	62	1	200	0.833	0	1
HYDR-2	63	1	300	0.833	0	1
HYDR-2	64	0	0	0.833	0	1
HYDR-2	65	1	200	0.833	0	1
HYDR-2	66	1	300	0.833	0	1
HYDR-2	67	1	300	0.833	0	1
HYDR-2	68	0	0	0.833	0	1
HYDR-2	69	1	200	0.833	0	1
HYDR-2	70	1	300	0.833	0	1
HYDR-2	71	1	200	0.833	0	1
HYDR-2	72	1	300	0.833	0	1
HYDR-2	73	1	200	0.833	0	1
HYDR-2	74	1	300	0.833	0	1
HYDR-2	75	0	0	0.833	0	1
HYDR-2	76	0	0	0.833	0	1
HYDR-2	77	0	0	0.833	0	1
HYDR-2	78	0	0	0.833	0	1
HYDR-2	79	0	0	0.833	0	1
HYDR-2	80	0	0	0.833	0	1
HYDR-2	81	1	200	0.833	0	1
HYDR-2	82	1	200	0.833	0	1
HYDR-2	83	1	200	0.833	0	1
HYDR-2	84	1	200	0.833	0	1
HYDR-2	85	1	200	0.833	0	1
HYDR-2	86	1	200	0.833	0	1
HYDR-2	87	1	200	0.833	0	1
HYDR-2	88	1	200	0.833	0	1
HYDR-2	89	1	200	0.833	0	1
HYDR-2	90	1	300	0.833	0	1
HYDR-2	91	1	200	0.833	0	1

ENDATA10

! DATA TYPE 11 -- INITIAL CONDITIONS

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

! - - - -1- - - -2- - - -3- - - -4- - - -5- - - -6- - - -7- - - -8- - - -9- - - -0- - - -1

! 2345678901234567890123456789012345678901234567890123456789012345678901234567890

! *** -----*****-----*****-----*****-----*****

!	R#	TEMP	SALINITY	DO	NH3	N	NIT	NIT	I	PHOS	CHL	A	MACROPHYTES
INITIAL	1	30	0.26	3	0.1		0.1				0		0
INITIAL	2	33.82	0.26	3	0.1		0.1				0		0
INITIAL	3	33.82	0.26	3	0.1		0.1				0		0
INITIAL	4	27.21	0.39	3	0.1		0.1				0		0
INITIAL	5	30	0.3	3	0.1		0.1				0		0
INITIAL	6	27.21	0.39	3	0.1		0.1				0		0
INITIAL	7	30	0.3	3	0.1		0.1				0		0
INITIAL	8	27.21	0.28	3	0.1		0.1				0		0
INITIAL	9	30	0.3	3	0.1		0.1				0		0
INITIAL	10	27.9	0.17	3	0.1		0.1				0		0
INITIAL	11	27.9	0.17	3	0.1		0.1				24.6		0
INITIAL	12	27.9	0.17	3	0.1		0.1				24.6		0
INITIAL	13	30	0.17	3	0.1		0.1				0		0
INITIAL	14	30	0.3	3	0.1		0.1				0		0
INITIAL	15	30	0.17	3	0.1		0.1				0		0
INITIAL	16	30	0.17	3	0.1		0.1				0		0
INITIAL	17	29.6	0.24	3	0.1		0.1				24.6		0
INITIAL	18	30	0.27	3	0.1		0.1				0		0
INITIAL	19	29.6	0.27	3	0.1		0.1				49.9		0
INITIAL	20	29.6	0.45	3	0.1		0.1				49.9		0
INITIAL	21	30	0.3	3	0.1		0.1				0		0
INITIAL	22	29.6	1.15	3	0.1		0.1				8.8		0
INITIAL	23	30	0.3	3	0.1		0.1				0		0
INITIAL	24	31.54	2.1	3	0.1		0.1				8.8		0
INITIAL	25	30	0.3	3	0.1		0.1				0		0
INITIAL	26	30	0.3	3	0.1		0.1				0		0
INITIAL	27	31.54	2.4	3	0.1		0.1				8.8		0
INITIAL	28	31.54	2.68	3	0.1		0.1				8.8		0
INITIAL	29	30	0.3	3	0.1		0.1				0		0
INITIAL	30	31.54	3	3	0.1		0.1				10.6		0
INITIAL	31	30	0.3	3	0.1		0.1				0		0
INITIAL	32	30	0.3	3	0.1		0.1				10.6		0
INITIAL	33	31.29	3.1	3	0.1		0.1				11.3		0
INITIAL	34	31.29	3.3	3	0.1		0.1				11.3		0
INITIAL	35	31.29	3.3	3	0.1		0.1				12.9		0
INITIAL	36	31.29	3.62	3	0.1		0.1				12.9		0
INITIAL	37	31.29	3.82	3	0.1		0.1				10.2		0
INITIAL	38	29.33	0.3	3	0.1		0.1				0		0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

INITIAL	39	30	0.3	3	0.1	0.1	0	0
INITIAL	40	29.33	0.3	3	0.1	0.1	0	0
INITIAL	41	30	0.3	3	0.1	0.1	0	0
INITIAL	42	29.33	0.3	3	0.1	0.1	0	0
INITIAL	43	30	0.3	3	0.1	0.1	0	0
INITIAL	44	29.33	0.48	3	0.1	0.1	14.8	0
INITIAL	45	29.33	0.48	3	0.1	0.1	14.8	0
INITIAL	46	30	0.3	3	0.1	0.1	0	0
INITIAL	47	29.52	0.54	3	0.1	0.1	14.8	0
INITIAL	48	29.52	0.54	3	0.1	0.1	57.1	0
INITIAL	49	30	0.3	3	0.1	0.1	0	0
INITIAL	50	29.52	1.7	3	0.1	0.1	3.2	0
INITIAL	51	30	0.3	3	0.1	0.1	0	0
INITIAL	52	31.31	2.9	3	0.1	0.1	3.2	0
INITIAL	53	30	0.3	3	0.1	0.1	0	0
INITIAL	54	31.31	3.09	3	0.1	0.1	3.2	0
INITIAL	55	31.31	3.09	3	0.1	0.1	3.2	0
INITIAL	56	31.31	3.09	3	0.1	0.1	3.2	0
INITIAL	57	31.31	3.09	3	0.1	0.1	3.2	0
INITIAL	58	30	0.3	3	0.1	0.1	0	0
INITIAL	59	30	0.3	3	0.1	0.1	0	0
INITIAL	60	31.99	2.8	3	0.1	0.1	3.2	0
INITIAL	61	30	0.3	3	0.1	0.1	0	0
INITIAL	62	30	0.3	3	0.1	0.1	0	0
INITIAL	63	31.99	2.4	3	0.1	0.1	3.2	0
INITIAL	64	30	0.3	3	0.1	0.1	0	0
INITIAL	65	30	0.3	3	0.1	0.1	0	0
INITIAL	66	31.99	2.12	3	0.1	0.1	3.2	0
INITIAL	67	31.99	2.12	3	0.1	0.1	65.2	0
INITIAL	68	30	0.3	3	0.1	0.1	0	0
INITIAL	69	30	0.3	3	0.1	0.1	0	0
INITIAL	70	31.99	2.8	3	0.1	0.1	65.2	0
INITIAL	71	30	0.3	3	0.1	0.1	0	0
INITIAL	72	31.99	3.5	3	0.1	0.1	6.8	0
INITIAL	73	30	0.3	3	0.1	0.1	0	0
INITIAL	74	31.99	4.16	3	0.1	0.1	6.8	0
INITIAL	75	30	0.3	3	0.1	0.1	0	0
INITIAL	76	32.08	0.3	3	0.1	0.1	0	0
INITIAL	77	30	0.3	3	0.1	0.1	0	0
INITIAL	78	32.08	0.3	3	0.1	0.1	0	0
INITIAL	79	30	0.3	3	0.1	0.1	0	0
INITIAL	80	32.08	1.6	3	0.1	0.1	0	0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

INITIAL	81	32.08	3.17	3	0.1	0.1	14.6	0
INITIAL	82	32.08	3.32	3	0.1	0.1	14.6	0
INITIAL	83	32.07	3.47	3	0.1	0.1	14.6	0
INITIAL	84	30	0.3	3	0.1	0.1	0	0
INITIAL	85	32.07	3.7	3	0.1	0.1	13.6	0
INITIAL	86	30	0.3	3	0.1	0.1	0	0
INITIAL	87	30	0.3	3	0.1	0.1	0	0
INITIAL	88	32.72	3.94	3	0.1	0.1	13.6	0
INITIAL	89	32.72	3.94	3	0.1	0.1	13.6	0
INITIAL	90	30.44	4.16	3	0.1	0.1	6.8	0
INITIAL	91	30.22	4	3	0.1	0.1	7.4	0

ENDATA11

! DATA TYPE 12 -- REAERATION, SEDIMENT OXYGEN DEMAND AND BOD COEFFICIENTS

!-----1-----2-----3-----4-----5-----6-----7-----8-----9

!234567890123456789012345678901234567890123456789012345678901234567890

! *** -----*****----- *****-----*****-----*****-----*****-----*****

!	R#	REA	KL	MIN		BOD 1	BOD 1			BOD 2	BOD 2		
!						SOD	DECAY	SETT		DECAY	SETT		
COEF-1	1	15	0	0	0	0.5	0.08	0.05	1	0	0	0	0
COEF-1	2	15	0	0	0	0.3	0.08	0.05	1	0	0	0	0
COEF-1	3	15	0	0	0	6	0.08	0.05	1	0	0	0	0
COEF-1	4	15	0	0	0	7	0.08	0.05	1	0	0	0	0
COEF-1	5	15	0	0	0	0.5	0.08	0.05	1	0	0	0	0
COEF-1	6	15	0	0	0	7	0.08	0.05	1	0	0	0	0
COEF-1	7	15	0	0	0	0.5	0.08	0.05	1	0	0	0	0
COEF-1	8	15	0	0	0	7	0.08	0.05	1	0	0	0	0
COEF-1	9	15	0	0	0	0.5	0.08	0.05	1	0	0	0	0
COEF-1	10	15	0	0	0	7	0.08	0.05	1	0	0	0	0
COEF-1	11	15	0	0	0	4.2	0.08	0.05	1	0	0	0	0
COEF-1	12	15	0	0	0	4.2	0.08	0.05	1	0	0	0	0
COEF-1	13	15	0	0	0	0.5	0.08	0.05	1	0	0	0	0
COEF-1	14	15	0	0	0	0.5	0.08	0.05	1	0	0	0	0
COEF-1	15	15	0	0	0	0.5	0.08	0.05	1	0	0	0	0
COEF-1	16	15	0	0	0	0.5	0.08	0.05	1	0	0	0	0
COEF-1	17	15	0	0	0	2.8	0.08	0.05	1	0	0	0	0
COEF-1	18	15	0	0	0	0.5	0.08	0.05	1	0	0	0	0
COEF-1	19	15	0	0	0	3.6	0.08	0.05	1	0	0	0	0
COEF-1	20	15	0	0	0	3.6	0.08	0.05	1	0	0	0	0
COEF-1	21	15	0	0	0	0.5	0.08	0.05	1	0	0	0	0
COEF-1	22	11	0	0	0	2.3	0.08	0.05	1	0	0	0	0
COEF-1	23	15	0	0	0	0.5	0.08	0.05	1	0	0	0	0
COEF-1	24	1	0.504	0	0	0.5	0.08	0.05	1	0	0	0	0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

COEF-1	25	15	0	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	26	11	0	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	27	1	0.504	0	0	0.4	0.08	0.05	1	0	0	0	0	0
COEF-1	28	1	0.504	0	0	0.4	0.08	0.05	1	0	0	0	0	0
COEF-1	29	11	0	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	30	1	0.477	0	0	0.4	0.08	0.05	1	0	0	0	0	0
COEF-1	31	15	0	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	32	11	0	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	33	1	0.477	0	0	0.2	0.08	0.05	1	0	0	0	0	0
COEF-1	34	1	0.477	0	0	0	0.08	0.05	1	0	0	0	0	0
COEF-1	35	1	0.542	0	0	0	0.08	0.05	1	0	0	0	0	0
COEF-1	36	1	0.658	0	0	0.05	0.08	0.05	1	0	0	0	0	0
COEF-1	37	1	0.58	0	0	0	0.08	0.05	1	0	0	0	0	0
COEF-1	38	15	0	0	0	2	0.08	0.05	1	0	0	0	0	0
COEF-1	39	15	0	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	40	15	0	0	0	2.5	0.08	0.05	1	0	0	0	0	0
COEF-1	41	15	0	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	42	15	0	0	0	2.7	0.08	0.05	1	0	0	0	0	0
COEF-1	43	15	0	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	44	15	0	0	0	2.5	0.08	0.05	1	0	0	0	0	0
COEF-1	45	15	0	0	0	1.7	0.08	0.05	1	0	0	0	0	0
COEF-1	46	15	0	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	47	11	0	0	0	0.4	0.08	0.05	1	0	0	0	0	0
COEF-1	48	11	0	0	0	0.33	0.08	0.05	1	0	0	0	0	0
COEF-1	49	15	0	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	50	11	0	0	0	0.1	0.08	0.05	1	0	0	0	0	0
COEF-1	51	15	0	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	52	11	0	0	0	0	0.08	0.05	1	0	0	0	0	0
COEF-1	53	15	0	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	54	11	0	0	0	0.04	0.08	0.05	0.4	0	0	0	0	0
COEF-1	55	1	0.355	0	0	0.1	0.08	0.05	0.4	0	0	0	0	0
COEF-1	56	1	0.469	0	0	0.04	0.08	0.05	1	0	0	0	0	0
COEF-1	57	1	0.389	0	0	0	0.08	0.05	1	0	0	0	0	0
COEF-1	58	15	0	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	59	11	0	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	60	1	0.438	0	0	0	0.08	0.05	1	0	0	0	0	0
COEF-1	61	15	0	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	62	11	0	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	63	1	0.426	0	0	0	0.08	0.05	1	0	0	0	0	0
COEF-1	64	15	0	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	65	11	0	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	66	1	0.426	0	0	0.21	0.08	0.05	0.4	0	0	0	0	0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

COEF-1	67	1	0.426	0	0	0.22	0.08	0.05	0	0	0	0	0	0
COEF-1	68	15	0	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	69	11	0	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	70	1	0.426	0	0	0.2	0.08	0.05	0	0	0	0	0	0
COEF-1	71	11	0	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	72	1	0.426	0	0	0	0.08	0.05	0	0	0	0	0	0
COEF-1	73	11	0	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	74	1	0.426	0	0	0	0.08	0.05	0	0	0	0	0	0
COEF-1	75	15	0	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	76	15	0	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	77	15	0	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	78	15	0	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	79	15	0	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	80	15	0	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	81	15	0	0	0	0.32	0.08	0.05	1	0	0	0	0	0
COEF-1	82	1	0.801	0	0	0.76	0.08	0.05	1	0	0	0	0	0
COEF-1	83	1	0.606	0	0	0.6	0.08	0.05	1	0	0	0	0	0
COEF-1	84	15	0	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	85	1	0.606	0	0	0.3	0.08	0.05	1	0	0	0	0	0
COEF-1	86	15	0	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	87	15	0	0	0	0.5	0.08	0.05	1	0	0	0	0	0
COEF-1	88	1	0.606	0	0	0	0.08	0.05	1	0	0	0	0	0
COEF-1	89	1	0.606	0	0	0	0.08	0.05	1	0	0	0	0	0
COEF-1	90	1	0.426	0	0	0	0.08	0.05	0	0	0	0	0	0
COEF-1	91	1	0.503	0	0	0	0.08	0.05	0	0	0	0	0	0

ENDATA12

! DATA TYPE 13 -- NITROGEN AND PHOSPHOURS COEFFICIENTS

! - - - -1- - - - -2- - - - -3- - - - -4- - - - -5- - - - -6- - - - -7- - - - -8- - - - -9- - - - -0- - - - -1

! 234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890

! *** -----*****-----*****-----*****-----

! NBOD NBOD

! R# DECAV SETT

COEF-2	1	0.03	0.05	0	0	0	0	0	0	0	0	0	0	0
COEF-2	2	0.03	0.05	0	0	0	0	0	0	0	0	0	0	0
COEF-2	3	0.03	0.05	0	0	0	0	0	0	0	0	0	0	0
COEF-2	4	0.03	0.05	0	0	0	0	0	0	0	0	0	0	0
COEF-2	5	0.03	0.05	0	0	0	0	0	0	0	0	0	0	0
COEF-2	6	0.03	0.1	0	0	0	0	0	0	0	0	0	0	0
COEF-2	7	0.03	0.05	0	0	0	0	0	0	0	0	0	0	0
COEF-2	8	0.03	0.1	0	0	0	0	0	0	0	0	0	0	0
COEF-2	9	0.03	0.05	0	0	0	0	0	0	0	0	0	0	0
COEF-2	10	0.03	0.05	0	0	0	0	0	0	0	0	0	0	0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

COEF-2	11	0.03	0.15	0	0	0	0	0	0
COEF-2	12	0.03	0.15	0	0	0	0	0	0
COEF-2	13	0.03	0.05	0	0	0	0	0	0
COEF-2	14	0.03	0.05	0	0	0	0	0	0
COEF-2	15	0.03	0.05	0	0	0	0	0	0
COEF-2	16	0.03	0.05	0	0	0	0	0	0
COEF-2	17	0.03	0.15	0	0	0	0	0	0
COEF-2	18	0.03	0.05	0	0	0	0	0	0
COEF-2	19	0.03	0.15	0	0	0	0	0	0
COEF-2	20	0.03	0.05	0	0	0	0	0	0
COEF-2	21	0.03	0.05	0	0	0	0	0	0
COEF-2	22	0.03	0.05	0	0	0	0	0	0
COEF-2	23	0.03	0.05	0	0	0	0	0	0
COEF-2	24	0.03	0.05	0	0	0	0	0	0
COEF-2	25	0.03	0.05	0	0	0	0	0	0
COEF-2	26	0.03	0.05	0	0	0	0	0	0
COEF-2	27	0.03	0.05	0	0	0	0	0	0
COEF-2	28	0.03	0.05	0	0	0	0	0	0
COEF-2	29	0.03	0.05	0	0	0	0	0	0
COEF-2	30	0.03	0.05	0	0	0	0	0	0
COEF-2	31	0.03	0.05	0	0	0	0	0	0
COEF-2	32	0.03	0.05	0	0	0	0	0	0
COEF-2	33	0.03	0.05	0	0	0	0	0	0
COEF-2	34	0.03	0.05	0	0	0	0	0	0
COEF-2	35	0.03	0.05	0	0	0	0	0	0
COEF-2	36	0.03	0.05	0	0	0	0	0	0
COEF-2	37	0.03	0.05	0	0	0	0	0	0
COEF-2	38	0.03	0.05	0	0	0	0	0	0
COEF-2	39	0.03	0.05	0	0	0	0	0	0
COEF-2	40	0.03	0.05	0	0	0	0	0	0
COEF-2	41	0.03	0.05	0	0	0	0	0	0
COEF-2	42	0.03	0.05	0	0	0	0	0	0
COEF-2	43	0.03	0.05	0	0	0	0	0	0
COEF-2	44	0.03	0.05	0	0	0	0	0	0
COEF-2	45	0.03	0.05	0	0	0	0	0	0
COEF-2	46	0.03	0.05	0	0	0	0	0	0
COEF-2	47	0.03	0.05	0	0	0	0	0	0
COEF-2	48	0.03	0.05	0	0	0	0	0	0
COEF-2	49	0.03	0.05	0	0	0	0	0	0
COEF-2	50	0.03	0.05	0	0	0	0	0	0
COEF-2	51	0.03	0.05	0	0	0	0	0	0
COEF-2	52	0.03	0.05	0	0	0	0	0	0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

COEF-2	53	0.03	0.05	0	0	0	0	0	0
COEF-2	54	0.03	0.05	0	0	0	0	0	0
COEF-2	55	0.03	0.05	0	0	0	0	0	0
COEF-2	56	0.03	0.05	0	0	0	0	0	0
COEF-2	57	0.03	0.05	0	0	0	0	0	0
COEF-2	58	0.03	0.05	0	0	0	0	0	0
COEF-2	59	0.03	0.05	0	0	0	0	0	0
COEF-2	60	0.03	0.05	0	0	0	0	0	0
COEF-2	61	0.03	0.05	0	0	0	0	0	0
COEF-2	62	0.03	0.05	0	0	0	0	0	0
COEF-2	63	0.03	0.05	0	0	0	0	0	0
COEF-2	64	0.03	0.05	0	0	0	0	0	0
COEF-2	65	0.03	0.05	0	0	0	0	0	0
COEF-2	66	0.03	0.05	0	0	0	0	0	0
COEF-2	67	0.03	0.05	0	0	0	0	0	0
COEF-2	68	0.03	0.05	0	0	0	0	0	0
COEF-2	69	0.03	0.05	0	0	0	0	0	0
COEF-2	70	0.03	0.05	0	0	0	0	0	0
COEF-2	71	0.03	0.05	0	0	0	0	0	0
COEF-2	72	0.03	0.05	0	0	0	0	0	0
COEF-2	73	0.03	0.05	0	0	0	0	0	0
COEF-2	74	0.03	0.05	0	0	0	0	0	0
COEF-2	75	0.03	0.05	0	0	0	0	0	0
COEF-2	76	0.03	0.05	0	0	0	0	0	0
COEF-2	77	0.03	0.05	0	0	0	0	0	0
COEF-2	78	0.03	0.05	0	0	0	0	0	0
COEF-2	79	0.03	0.05	0	0	0	0	0	0
COEF-2	80	0.03	0.05	0	0	0	0	0	0
COEF-2	81	0.03	0.05	0	0	0	0	0	0
COEF-2	82	0.03	0.05	0	0	0	0	0	0
COEF-2	83	0.03	0.05	0	0	0	0	0	0
COEF-2	84	0.03	0.05	0	0	0	0	0	0
COEF-2	85	0.03	0.05	0	0	0	0	0	0
COEF-2	86	0.03	0.05	0	0	0	0	0	0
COEF-2	87	0.03	0.05	0	0	0	0	0	0
COEF-2	88	0.03	0.05	0	0	0	0	0	0
COEF-2	89	0.03	0.05	0	0	0	0	0	0
COEF-2	90	0.03	0.05	0	0	0	0	0	0
COEF-2	91	0.03	0.05	0	0	0	0	0	0

ENDATA13

! DATA TYPE 14 -- ALGAE AND MACROPHYTE COEFFICIENTS

ENDATA14

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

! DATA TYPE 15 -- COLIFORM AND NONCONSERVATIVE COEFFICIENTS

! - - - -1- - - - -2- - - - -3- - - - -4- - - - -5- - - - -6- - - - -7- - - - -8- - - - -9- - - - -0- - - - -1
 ! 234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
 ! *** -----*****-----*****

ENDATA15

! DATA TYPE 16 -- INCREMENTAL DATA FOR FLOW, TEMPERATURE, SALINITY, AND CONSERVATIVES

! - - - -1- - - - -2- - - - -3- - - - -4- - - - -5- - - - -6- - - - -7- - - - -8- - - - -9- - - - -0- - - - -1
 ! 234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
 ! *** -----*****-----*****

! R# OUTFLOW INFLOW TEMP SALINITY CHLORIDE COND

ENDATA16

! DATA TYPE 17 -- INCREMENTAL DATA FOR DO, BOD, AND NITROGEN

! - - - -1- - - - -2- - - - -3- - - - -4- - - - -5- - - - -6- - - - -7- - - - -8- - - - -9- - - - -0- - - - -1
 ! 234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
 ! *** -----*****-----*****

! R# DO BOD 1 NBOD NH3 N NIT NIT BOD 2

ENDATA17

! DATA TYPE 18 -- Incremental Data

! - - - -1- - - - -2- - - - -3- - - - -4- - - - -5- - - - -6- - - - -7- - - - -8- - - - -9- - - - -0- - - - -1
 ! 234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
 ! *** -----*****-----*****

! R# PHOSPH CHL A COLIFORM NONCONSERVATIVE

ENDATA18

! DATA TYPE 19 -- NONPOINT SOURCE DATA

! - - - -1- - - - -2- - - - -3- - - - -4- - - - -5- - - - -6- - - - -7- - - - -8- - - - -9- - - - -0- - - - -1
 ! 234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
 ! *** -----*****-----*****

! R# BOD 1 NBOD COLIFORM NONCONS DO BOD 2

NONPOINT	1	0.65	0.27	0	0	0	0
NONPOINT	2	0.13	0.05	0	0	0	0
NONPOINT	3	1.4	0.05	0	0	0	0
NONPOINT	4	1.4	0.05	0	0	0	0
NONPOINT	5	0.3	0.131	0	0	0	0
NONPOINT	6	1.4	0.14	0	0	0	0
NONPOINT	7	0.11	0.05	0	0	0	0
NONPOINT	8	1.7	0.14	0	0	0	0
NONPOINT	9	0.3	0.133	0	0	0	0
NONPOINT	10	0.1	0.05	0	0	0	0
NONPOINT	11	0.8	0.15	0	0	0	0
NONPOINT	12	1.4	0.9	0	0	0	0
NONPOINT	13	0.37	0.16	0	0	0	0
NONPOINT	14	0.149	0.065	0	0	0	0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

NONPOINT	15	0.25	0.102	0	0	0	0
NONPOINT	16	0.28	0.112	0	0	0	0
NONPOINT	17	0.1	0	0	0	0	0
NONPOINT	18	0.262	0.118	0	0	0	0
NONPOINT	19	11.7	3.8	0	0	0	0
NONPOINT	20	22.5	2.1	0	0	0	0
NONPOINT	21	0.17	0.064	0	0	0	0
NONPOINT	22	135	17	0	0	0	0
NONPOINT	23	0.045	0.02	0	0	0	0
NONPOINT	24	160	18	0	0	0	0
NONPOINT	25	0.148	0.065	0	0	0	0
NONPOINT	26	1.85	0.614	0	0	0	0
NONPOINT	27	126	16	0	0	0	0
NONPOINT	28	146	15	0	0	0	0
NONPOINT	29	98	28	0	0	0	0
NONPOINT	30	100	12	0	0	0	0
NONPOINT	31	0.165	0.071	0	0	0	0
NONPOINT	32	5.7	1.72	0	0	0	0
NONPOINT	33	140	15	0	0	0	0
NONPOINT	34	280	30	0	0	0	0
NONPOINT	35	325	40	0	0	0	0
NONPOINT	36	325	5	0	0	0	0
NONPOINT	37	0	0	0	0	0	0
NONPOINT	38	2	1.4	0	0	0	0
NONPOINT	39	0.352	0.154	0	0	0	0
NONPOINT	40	2	1.9	0	0	0	0
NONPOINT	41	0.045	0.019	0	0	0	0
NONPOINT	42	10.8	12	0	0	0	0
NONPOINT	43	0.3975	0.173	0	0	0	0
NONPOINT	44	3.4	4	0	0	0	0
NONPOINT	45	40	3.5	0	0	0	0
NONPOINT	46	0.339	0.148	0	0	0	0
NONPOINT	47	6	2	0	0	0	0
NONPOINT	48	64	5	0	0	0	0
NONPOINT	49	0.0444	0.019	0	0	0	0
NONPOINT	50	25	3	0	0	0	0
NONPOINT	51	0.21	0.093	0	0	0	0
NONPOINT	52	38	3	0	0	0	0
NONPOINT	53	0.635	0.277	0	0	0	0
NONPOINT	54	98	3	0	0	0	0
NONPOINT	55	75	3	0	0	0	0
NONPOINT	56	40	2	0	0	0	0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

NONPOINT	57	120	2	0	0	0	0
NONPOINT	58	0.03	0.013	0	0	0	0
NONPOINT	59	1.8	0.55	0	0	0	0
NONPOINT	60	220	35	0	0	0	0
NONPOINT	61	0.148	0.065	0	0	0	0
NONPOINT	62	2.3	0.74	0	0	0	0
NONPOINT	63	40	12	0	0	0	0
NONPOINT	64	0.074	0.033	0	0	0	0
NONPOINT	65	0.86	0.28	0	0	0	0
NONPOINT	66	220	36	0	0	0	0
NONPOINT	67	0	17	0	0	0	0
NONPOINT	68	0.074	0.033	0	0	0	0
NONPOINT	69	0.29	0.099	0	0	0	0
NONPOINT	70	25	13	0	0	0	0
NONPOINT	71	3.35	0.89	0	0	0	0
NONPOINT	72	50	12	0	0	0	0
NONPOINT	73	29	8	0	0	0	0
NONPOINT	74	150	0	0	0	0	0
NONPOINT	75	0.212	0.097	0	0	0	0
NONPOINT	76	0.6	0.255	0	0	0	0
NONPOINT	77	0.138	0.06	0	0	0	0
NONPOINT	78	0.4	0.14	0	0	0	0
NONPOINT	79	0.26	0.114	0	0	0	0
NONPOINT	80	0.085	0.05	0	0	0	0
NONPOINT	81	83.5	14.5	0	0	0	0
NONPOINT	82	37	4	0	0	0	0
NONPOINT	83	22	4	0	0	0	0
NONPOINT	84	3	0.9	0	0	0	0
NONPOINT	85	35	8.5	0	0	0	0
NONPOINT	86	4.6	1.33	0	0	0	0
NONPOINT	87	3.6	1.1	0	0	0	0
NONPOINT	88	150	35	0	0	0	0
NONPOINT	89	160	30	0	0	0	0
NONPOINT	90	150	0	0	0	0	0
NONPOINT	91	0	0	0	0	0	0

ENDATA19

! DATA TYPE 20 -- HEADWATER DATA FOR FLOW, TEMPERATURE, SAALINITY, AND CONSERVATIVES

! - - - -1- - - -2- - - -3- - - -4- - - -5- - - -6- - - -7- - - -8- - - -9- - - -0- - - -1

! 234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890

! **** ----- *** -----*****-----*****-----

!	E#	NAME	FLOW	TEMP	SALIN	CHLORIDE	COND
HDWTR-1	1	B VINCENT & BONFOUCA	0.00028333	8	0.26	520.9	7.23

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

HDWTR-1	67	BROWNS VILL RD (DD2)	0.00028333.8	0.26	520.9	7.23
HDWTR-1	102	DRAINAGE DITCH 8	0.00028333.8	0.26	520.9	7.23
HDWTR-1	119	DRAINAGE DITCH 9	0.00028333.8	0.26	520.9	7.23
HDWTR-1	159	UPPER B BONFOUCA	0.00283233.8	0.26	520.9	7.23
HDWTR-1	183	DRAINAGE DITCH 23	0.00028333.8	0.26	520.9	7.23
HDWTR-1	221	HIGHWAY 190(DD 5)	0.00028333.8	0.26	520.9	7.23
HDWTR-1	260	WEST DRAINAGE CANAL	0.00028333.8	0.26	520.9	7.23
HDWTR-1	284	DRAINAGE DITCH 6	0.00028333.8	0.26	520.9	7.23
HDWTR-1	295	TRIBUTARY 2	0.00028333.8	0.26	520.9	7.23
HDWTR-1	324	CANAL 26	0.00028333.8	0.26	520.9	7.23
HDWTR-1	346	TRIBUTARY 4	0.00028333.8	0.26	520.9	7.23
HDWTR-1	433	BAYOU LIBERTY	0.00283233.8	0.26	520.9	7.23
HDWTR-1	439	TRIBUTARY 1	0.00028333.8	0.26	520.9	7.23
HDWTR-1	470	DRAINAGE DITCH 22	0.00028333.8	0.26	520.9	7.23
HDWTR-1	482	DRAINAGE DITCH 20	0.00028333.8	0.26	520.9	7.23
HDWTR-1	536	HIGHWAY 190	0.00028333.8	0.26	520.9	7.23
HDWTR-1	576	DRAINAGE DITCH 18	0.00028333.8	0.26	520.9	7.23
HDWTR-1	585	DRAINAGE DITCH 19	0.00028333.8	0.26	520.9	7.23
HDWTR-1	601	DRAINAGE DITCH 4	0.00028333.8	0.26	520.9	7.23
HDWTR-1	667	TRIBUTARY 9	0.00028333.8	0.26	520.9	7.23
HDWTR-1	680	TRIBUTARY 6	0.00028333.8	0.26	520.9	7.23
HDWTR-1	698	TRIBUTARY 10	0.00028333.8	0.26	520.9	7.23
HDWTR-1	715	TRIBUTARY 8	0.00028333.8	0.26	520.9	7.23
HDWTR-1	727	MARINA 1	0.00028333.8	0.26	520.9	7.23
HDWTR-1	730	MARINA 2	0.00028333.8	0.26	520.9	7.23
HDWTR-1	762	BAYOU PAQUET	0.00028333.8	0.26	520.9	7.23
HDWTR-1	797	DRAINAGE DITCH 16	0.00028333.8	0.26	520.9	7.23
HDWTR-1	819	DRAINAGE DITCH 17	0.00028333.8	0.26	520.9	7.23
HDWTR-1	861	TRIBUTARY 24	0.00028333.8	0.26	520.9	7.23
HDWTR-1	868	TRIBUTARY 25	0.00028333.8	0.26	520.9	7.23

ENDATA20

! DATA TYPE 21 -- HEADWATER DATA FOR DO, BOD, AND NITROGEN

! - - - -1- - - - -2- - - - -3- - - - -4- - - - -5- - - - -6- - - - -7- - - - -8- - - - -9- - - - -0- - - - -1

! 234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890

! **** -----*****-----*****-----*****

!	E#	DO	BOD 1	NBOD	NH3 N	NIT NIT	BOD 2
HDWTR-2	1	6	2.2	1			
HDWTR-2	67	6	2.2	1			
HDWTR-2	102	6	2.2	1			
HDWTR-2	119	6	2.2	1			
HDWTR-2	159	6	2.2	1			
HDWTR-2	183	6	2.2	1			

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

HDWTR-2	221	6	2.2	1
HDWTR-2	260	6	2.2	1
HDWTR-2	284	6	2.2	1
HDWTR-2	295	6	2.2	1
HDWTR-2	324	6	2.2	1
HDWTR-2	346	6	2.2	1
HDWTR-2	433	6	2.2	1
HDWTR-2	439	6	2.2	1
HDWTR-2	470	6	2.2	1
HDWTR-2	482	6	2.2	1
HDWTR-2	536	6	2.2	1
HDWTR-2	576	6	2.2	1
HDWTR-2	585	6	2.2	1
HDWTR-2	601	6	2.2	1
HDWTR-2	667	6	2.2	1
HDWTR-2	680	6	2.2	1
HDWTR-2	698	6	2.2	1
HDWTR-2	715	6	2.2	1
HDWTR-2	727	6	2.2	1
HDWTR-2	730	6	2.2	1
HDWTR-2	762	6	2.2	1
HDWTR-2	797	6	2.2	1
HDWTR-2	819	6	2.2	1
HDWTR-2	861	6	2.2	1
HDWTR-2	868	6	2.2	1

ENDATA21

! DATA TYPE 22 -- HEADWATER DATA FOR PHOSPHORUS, CHLOROPHYLL, COLIFORM, AND NCM

! - - - -1- - - - -2- - - - -3- - - - -4- - - - -5- - - - -6- - - - -7- - - - -8- - - - -9- - - - -0- - - - -1

! 234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890

! **** -----*****-----*****

! E# PHOSPHOR CHL A COLIFORM NCM

HDWTR-3	1			0	0	0
HDWTR-3	67			0	0	0
HDWTR-3	102			0	0	0
HDWTR-3	119			0	0	0
HDWTR-3	159			0	0	0
HDWTR-3	183			0	0	0
HDWTR-3	221			0	0	0
HDWTR-3	260			0	0	0
HDWTR-3	284			0	0	0
HDWTR-3	295			0	0	0
HDWTR-3	324			0	0	0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

HDWTR-3	346	0	0	0
HDWTR-3	433	0	0	0
HDWTR-3	439	0	0	0
HDWTR-3	470	0	0	0
HDWTR-3	482	0	0	0
HDWTR-3	536	0	0	0
HDWTR-3	576	0	0	0
HDWTR-3	585	0	0	0
HDWTR-3	601	0	0	0
HDWTR-3	667	0	0	0
HDWTR-3	680	0	0	0
HDWTR-3	698	0	0	0
HDWTR-3	715	0	0	0
HDWTR-3	727	0	0	0
HDWTR-3	730	0	0	0
HDWTR-3	762	0	0	0
HDWTR-3	797	0	0	0
HDWTR-3	819	0	0	0
HDWTR-3	861	0	0	0
HDWTR-3	868	0	0	0

ENDATA22

! DATA TYPE 23 -- JUNCTION DATA

JUNCTION	88	66	DRAINAGE DITCH	2
JUNCTION	110	101	DRAINAGE DITCH	8
JUNCTION	140	118	DRAINAGE DITCH	9
JUNCTION	193	182	DRAINAGE DITCH	23
JUNCTION	219	158	UPPER BAYOU BONFOUCA	
JUNCTION	239	220	HIGHWAY 190 (DRAINAGE DITCH	5)
JUNCTION	263	259	WEST DRAINAGE CANAL	
JUNCTION	287	283	DRAINAGE DITCH	6
JUNCTION	310	294	TRIBUTARY	2
JUNCTION	344	323	CANAL	26
JUNCTION	365	345	TRIBUTARY	4
JUNCTION	463	438	TRIBUTARY	1
JUNCTION	473	469	DRAINAGE DITCH	22
JUNCTION	509	481	DRAINAGE DITCH	20
JUNCTION	559	535	HIGHWAY 190 (DRAINAGE DITCH	14)
JUNCTION	579	575	DRAINAGE DITCH	18
JUNCTION	599	584	DRAINAGE DITCH	19
JUNCTION	643	600	DRAINAGE DITCH	4
JUNCTION	672	666	TRIBUTARY	9
JUNCTION	696	679	TRIBUTARY	6

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

JUNCTION 705 697 TRIBUTARY 10
 JUNCTION 721 714 TRIBUTARY 8
 JUNCTION 729 726 MARINA 1
 JUNCTION 748 729 MARINA 2
 JUNCTION 806 796 DRAINAGE DITCH 16
 JUNCTION 836 818 DRAINAGE DITCH 17
 JUNCTION 865 860 CHANNEL 1
 JUNCTION 878 867 CHANNEL 2
 JUNCTION 888 761 BAYOU PAQUET
 JUNCTION 899 432 BAYOU LIBERTY

ENDATA23

! DATA TYPE 24

! - - - -1- - - - -2- - - - -3- - - - -4- - - - -5- - - - -6- - - - -7- - - - -8- - - - -9- - - - -0- - - - -1

! 234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890

! **** -----*****-----*****-----*****

!	E#	NAME	FLOW	TEMP	SALINITY	CHLORIDE	COND
WSTLD-1	1	V H SEAL APARTMENTS	0.000032830		0.39	753.6	63.3
WSTLD-1	40	GROUNDWATER	0.0055	33.8	0.26	520.9	7.23
WSTLD-1	48	EAGLE LAKE MHP	0.002760230		0.4	774	34.4
WSTLD-1	63	J&K MANAGEMENT LLC	0.000007830		0.39	753.6	63.3
WSTLD-1	67	STONES THROW APTS	0.000841230		0.39	753.6	63.3
WSTLD-1	73	GOOD VALUE AUTO SALE	0.000002630		0.39	753.6	63.3
WSTLD-1	74	ADAMS MHP	0.000092030		0.39	753.6	63.3
WSTLD-1	79	WADLEIGH OFFSHORE	0.000035030		0.39	753.6	63.3
WSTLD-1	80	EXXONMOBIL #51367	0.000109530		0.39	753.6	63.3
WSTLD-1	81	LCR-M PLUMBING SUPP	0.000005230		0.39	753.6	63.3
WSTLD-1	83	BAKER-ELLIS-SHAMROCK	0.000018430		0.39	753.6	63.3
WSTLD-1	84	NORTHSHORE CHEMICAL	0.000002430		0.39	753.6	63.3
WSTLD-1	85	MANHEIM AUTO AUCTION	0.000030630		0.39	753.6	63.3
WSTLD-1	87	WADLEIGH FITNESS	0.000013130		0.39	753.6	63.3
WSTLD-1	102	JUBILEE #4815	0.000074430		0.39	753.6	63.3
WSTLD-1	107	JOHNSON-BLDG 2	0.000061330		0.39	753.6	63.3
WSTLD-1	119	CHARTER-JOHN'S AUTO	0.000007030		0.39	753.6	63.3
WSTLD-1	125	I-12 SHELL	0.000007030		0.39	753.6	63.3
WSTLD-1	135	ST TAM PAR SCH MAINT	0.000004330		0.39	753.6	63.3
WSTLD-1	136	J&D-VETS HEALTH/OMNI	0.000033330		0.39	753.6	63.3
WSTLD-1	183	GOOD SHEPHERD CHURCH	0.000048130		0.39	753.6	63.3
WSTLD-1	221	JOLLY APARTMENTS	0.000249730		0.39	753.6	63.3
WSTLD-1	222	PINEY RIDGE MHP	0.000407430		0.39	753.6	63.3
WSTLD-1	223	STARLING PLAZA	0.000125330		0.39	753.6	63.3
WSTLD-1	224	PO FOLKS SEAFOOD	0.000021430		0.39	753.6	63.3
WSTLD-1	227	SOUTH SEAS RSTRNT	0.000085430		0.39	753.6	63.3

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

WSTLD-1	228	SHADY PINES MHP	0.000460030	0.39	753.6	63.3
WSTLD-1	230	1421HWY190-ARMACOAT	0.000028030	0.39	753.6	63.3
WSTLD-1	231	FACDIR-STTAMBRACKETAG0	0.000003530	0.39	753.6	63.3
WSTLD-1	232	NEW LIFE MINISTRIES	0.000021430	0.39	753.6	63.3
WSTLD-1	233	PEACE LUTH CHURCH	0.000103830	0.39	753.6	63.3
WSTLD-1	234	ERNEST WALDER	0.000015730	0.39	753.6	63.3
WSTLD-1	235	STOR N LOCK-TYMELESS0	0.000006130	0.39	753.6	63.3
WSTLD-1	260	BONFOUCA SUPFND SITE0	0.000630930	0.22	437.3	23.5
WSTLD-1	281	DOTD BNFCA BRIDGE	0.000000830	0.39	753.6	63.3
WSTLD-1	282	SLIDELL MARINE	0.000162130	0.39	753.6	63.3
WSTLD-1	284	ARC MECH CONTRACTORS0	0.000004330	0.39	753.6	200
WSTLD-1	289	PEARL RIVER NAV	0.000153330	0.39	753.6	63.3
WSTLD-1	295	STP CONST BUILDING	0.000035030	0.39	753.6	63.3
WSTLD-1	346	ACADIAN GRDNS CONDOS0	0.000328530	0.39	753.6	63.3
WSTLD-1	351	OAKWOOD ESTATES	0.000543230	0.39	753.6	63.3
WSTLD-1	389	COIN DU LESTIN SUB	0.003505030	0.32	628.1	54.3
WSTLD-1	439	NORTHSHORE SQUADRON	0.000001130	0.39	753.6	63.3
WSTLD-1	442	ANDY KNIGHT	0.000001730	0.39	753.6	63.3
WSTLD-1	470	THE MEADOWS SUB	0.012092230	0.55	1053	150
WSTLD-1	482	ROYAL GOLF CLUB	0.000190130	0.39	753.6	63.3
WSTLD-1	494	NATFINANCE-TEXTRON	0.000175230	0.39	753.6	63.3
WSTLD-1	495	GUARDIAN ANGELS	0.000040730	0.39	753.6	63.3
WSTLD-1	498	OAKMONT SUBDIVISIO	0.003093130	0.32	619.5	47
WSTLD-1	536	ASSUNTA'S RESTAURANT0	0.000127030	0.39	753.6	63.3
WSTLD-1	544	INDIAN HILLS RV PARK0	0.000345030	0.39	753.6	63.3
WSTLD-1	546	J&J AUTO BROKERS	0.000001730	0.39	753.6	63.3
WSTLD-1	548	7THDAY & DOLLAR GEN	0.000060030	0.39	753.6	63.3
WSTLD-1	550	OMNI STORAGE VI	0.000013130	0.39	753.6	63.3
WSTLD-1	551	ABC SUPPLY CO	0.000006130	0.39	753.6	63.3
WSTLD-1	552	LION CONSULTING	0.000001730	0.39	753.6	63.3
WSTLD-1	553	CHILL RITE	0.000009630	0.39	753.6	63.3
WSTLD-1	555	HERRON-2315/17/19	0.000024930	0.39	753.6	63.3
WSTLD-1	556	THOMGROC-ST POL JURY0	0.000004330	0.39	753.6	63.3
WSTLD-1	557	PITSTOP3-REFLECTMIR	0.000061330	0.39	753.6	63.3
WSTLD-1	576	ALL AM ELKS LODGE	0.000070130	0.39	753.6	63.3
WSTLD-1	585	LAKE CASTLE SCHOOL	0.000381130	0.39	753.6	63.3
WSTLD-1	601	BLUEBELL-NULITE	0.000037630	0.39	753.6	63.3
WSTLD-1	602	ALBERS AC & HEATING	0.000005230	0.39	753.6	63.3
WSTLD-1	611	BAKER SALES WRHSE	0.000001730	0.39	753.6	63.3
WSTLD-1	614	CLECO SERVICE CENTER0	0.000008730	0.39	753.6	63.3
WSTLD-1	615	G&S-UNITED MEDICAL	0.000015730	0.39	753.6	63.3
WSTLD-1	616	AIRGAS-HANNA-SUNBELT0	0.000692230	0.39	753.6	63.3

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

WSTLD-1	617	RJD CONTRACTORS	0.000000830	0.39	753.6	63.3
WSTLD-1	619	M&R-WAGNERSHOPCTR	0.000087230	0.39	753.6	63.3
WSTLD-1	620	CALWES CENTER	0.000181630	0.39	753.6	63.3
WSTLD-1	621	BEAU'S-LA LUMBER	0.000023630	0.39	753.6	63.3
WSTLD-1	625	ADVANCE AUTO	0.000004330	0.39	753.6	63.3
WSTLD-1	633	HUNTWYCK VILLAGE	0.012179930	0.3	582.3	52.5
WSTLD-1	667	B LIBERTY WATER ASSN	0.000007830	0.39	753.6	63.3
WSTLD-1	680	THOMPSON RD BAPTIST	0.000035030	0.39	753.6	63.3
WSTLD-1	698	LIBERTY FOOD STORE	0.000024930	0.39	753.6	63.3
WSTLD-1	715	A-1 REMODELING & BLD	0.000008730	0.39	753.6	63.3
WSTLD-1	723	ST GENEVIEVE CATH CH	0.000131430	0.39	753.6	63.3
WSTLD-1	728	BAYOU LIBERTY MARINA	0.000000830	0.39	753.6	63.3
WSTLD-1	746	A BONFOUCA MARINA	0.000037630	0.39	753.6	63.3
WSTLD-1	762	WASTE MGMT OF LA	0.000021930	0.39	753.6	63.3
WSTLD-1	763	ACALIGN-ALLAM-CT-M&D	0.000007830	0.39	753.6	63.3
WSTLD-1	767	K-BAR-B YOUTH RANCH	0.000100730	0.39	753.6	63.3
WSTLD-1	776	BAYOU PAQUET HEADWAT	0.002832 33.8	0.26	520.9	7.23
WSTLD-1	797	ACTS 1 TAX SERVICE	0.000002630	0.39	753.6	63.3
WSTLD-1	819	TIMBER RIDGE SUB	0.001945230	0.45	864.7	41.6

ENDATA24

! DATA TYPE 25

! - - - -1- - - - -2- - - - -3- - - - -4- - - - -5- - - - -6- - - - -7- - - - -8- - - - -9- - - - -0- - - - -1

! 234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890

! *****

!	E#	DO	BOD 1	NBOD	NH3 N	NIT NIT	BOD 2
WSTLD-2	1	2	69	0	69		
WSTLD-2	40	6.53	2.16	0	0.95		
WSTLD-2	48	6.4	6.81	0	2.41		
WSTLD-2	63	2	69	0	69		
WSTLD-2	67	2	11.5	0	11.5		
WSTLD-2	73	2	13.8	0	13.8		
WSTLD-2	74	2	18.4	0	18.4		
WSTLD-2	79	2	23	0	23		
WSTLD-2	80	2	25.3	0	25.3		
WSTLD-2	81	2	16.1	0	16.1		
WSTLD-2	83	2	25.07	0	25.07		
WSTLD-2	84	2	69	0	69		
WSTLD-2	85	2	69	0	69		
WSTLD-2	87	2	69	0	69		
WSTLD-2	102	2	23	0	23		
WSTLD-2	107	2	40.25	0	40.25		
WSTLD-2	119	2	77.05	0	77.05		

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

WSTLD-2	125	2	18.4	0	18.4
WSTLD-2	135	2	16.1	0	16.1
WSTLD-2	136	2	69	0	69
WSTLD-2	183	2	69	0	69
WSTLD-2	221	2	25.3	0	25.3
WSTLD-2	222	2	6.9	0	6.9
WSTLD-2	223	2	69	0	69
WSTLD-2	224	2	69	0	69
WSTLD-2	227	2	621	0	621
WSTLD-2	228	2	69	0	69
WSTLD-2	230	2	69	0	69
WSTLD-2	231	2	69	0	69
WSTLD-2	232	2	69	0	69
WSTLD-2	233	2	92	0	92
WSTLD-2	234	2	25.3	0	25.3
WSTLD-2	235	2	55.2	0	55.2
WSTLD-2	260	7.1	1.33	0	1.74
WSTLD-2	281	2	69	0	69
WSTLD-2	282	2	18.4	0	18.4
WSTLD-2	284	2	69	0	69
WSTLD-2	289	2	69	0	69
WSTLD-2	295	2	69	0	69
WSTLD-2	346	2	34.5	0	34.5
WSTLD-2	351	2	2.3	0	2.3
WSTLD-2	389	3.6	3.1	0	2.41
WSTLD-2	439	2	69	0	69
WSTLD-2	442	2	69	0	69
WSTLD-2	470	4.97	10.17	0	3.01
WSTLD-2	482	2	69	0	69
WSTLD-2	494	2	69	0	69
WSTLD-2	495	2	69	0	69
WSTLD-2	498	7.4	6.2	0	2.8
WSTLD-2	536	2	69	0	69
WSTLD-2	544	2	39.1	0	39.1
WSTLD-2	546	2	69	0	69
WSTLD-2	548	2	56.93	0	56.93
WSTLD-2	550	2	69	0	69
WSTLD-2	551	2	69	0	69
WSTLD-2	552	2	69	0	69
WSTLD-2	553	2	69	0	69
WSTLD-2	555	2	57.39	0	57.39
WSTLD-2	556	2	69	0	69

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

WSTLD-2	557	2	69	0	69
WSTLD-2	576	2	69	0	69
WSTLD-2	585	2	46	0	46
WSTLD-2	601	2	145.48	0	145.48
WSTLD-2	602	2	20.7	0	20.7
WSTLD-2	611	2	69	0	69
WSTLD-2	614	2	57.5	0	57.5
WSTLD-2	615	2	21.85	0	21.85
WSTLD-2	616	2	36.57	0	36.57
WSTLD-2	617	2	69	0	69
WSTLD-2	619	2	11.5	0	11.5
WSTLD-2	620	2	16.1	0	16.1
WSTLD-2	621	2	69	0	69
WSTLD-2	625	2	69	0	69
WSTLD-2	633	7.1	4.68	0	3.01
WSTLD-2	667	2	46	0	46
WSTLD-2	680	2	32.2	0	32.2
WSTLD-2	698	2	69	0	69
WSTLD-2	715	2	25.3	0	25.3
WSTLD-2	723	2	69	0	69
WSTLD-2	728	2	69	0	69
WSTLD-2	746	2	128.8	0	128.8
WSTLD-2	762	2	27.6	0	27.6
WSTLD-2	763	2	69	0	69
WSTLD-2	767	2	69	0	69
WSTLD-2	776	6.53	2.16	0	0.95
WSTLD-2	797	2	6.9	0	6.9
WSTLD-2	819	5	85	0	2.41

ENDATA25

! DATA TYPE 26 -- WASTELOAD DATA FOR PHOSPHORUS, CHLOROPHYLL, COLIFORM, AND NCM

! - - - -1- - - - -2- - - - -3- - - - -4- - - - -5- - - - -6- - - - -7- - - - -8- - - - -9- - - - -0- - - - -1

! 234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890

! *****

! E# PHOSPHOR CHL A COLIFORM NONCONSERVATIVE

WSTLD-3	1
WSTLD-3	40
WSTLD-3	48
WSTLD-3	63
WSTLD-3	67
WSTLD-3	73
WSTLD-3	74
WSTLD-3	79

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

WSTLD-3 80
WSTLD-3 81
WSTLD-3 83
WSTLD-3 84
WSTLD-3 85
WSTLD-3 87
WSTLD-3 102
WSTLD-3 107
WSTLD-3 119
WSTLD-3 125
WSTLD-3 135
WSTLD-3 136
WSTLD-3 183
WSTLD-3 221
WSTLD-3 222
WSTLD-3 223
WSTLD-3 224
WSTLD-3 227
WSTLD-3 228
WSTLD-3 230
WSTLD-3 231
WSTLD-3 232
WSTLD-3 233
WSTLD-3 234
WSTLD-3 235
WSTLD-3 260
WSTLD-3 281
WSTLD-3 282
WSTLD-3 284
WSTLD-3 289
WSTLD-3 295
WSTLD-3 346
WSTLD-3 351
WSTLD-3 389
WSTLD-3 439
WSTLD-3 442
WSTLD-3 470
WSTLD-3 482
WSTLD-3 494
WSTLD-3 495
WSTLD-3 498
WSTLD-3 536

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

WSTLD-3 544
WSTLD-3 546
WSTLD-3 548
WSTLD-3 550
WSTLD-3 551
WSTLD-3 552
WSTLD-3 553
WSTLD-3 555
WSTLD-3 556
WSTLD-3 557
WSTLD-3 576
WSTLD-3 585
WSTLD-3 601
WSTLD-3 602
WSTLD-3 611
WSTLD-3 614
WSTLD-3 615
WSTLD-3 616
WSTLD-3 617
WSTLD-3 619
WSTLD-3 620
WSTLD-3 621
WSTLD-3 625
WSTLD-3 633
WSTLD-3 667
WSTLD-3 680
WSTLD-3 698
WSTLD-3 715
WSTLD-3 723
WSTLD-3 728
WSTLD-3 746
WSTLD-3 762
WSTLD-3 763
WSTLD-3 767
WSTLD-3 776
WSTLD-3 797
WSTLD-3 819

ENDATA26

! DATA TYPE 27 -- Lower Boundary Conditions

LOWER BC TEMPERATURE = 29.98
LOWER BC SALINITY = 3.94
LOWER BC CONSERVATIVE MATERIAL I = 7096

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

!234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890

! **^

PLOT1 BAYOU VINCENT-BONFOUCA

RCH 1 2 3 4 6 8 10 11 12 17 19 20 22 24 27 28 30 33 34 35 36 37 91

PLOT2 UPPER BAYOU BONFOUCA

RCH 13 15 16

PLOT3 BAYOU LIBERTY

RCH 38 40 42 44 45 47 48 50 52 54 55 56 57 60 63 66 67 70 72 74 90

PLOT4 BAYOU PAQUET & HEADWATERS

RCH 75 76 78 80 81 82 83 85 88 89

PLOT5 THE MEADOWS SUBDIVISION

RCH 41

PLOT6 OAKMONT SUBDIVISION

RCH 43

PLOT7 HWY 190 E TO BAYOU LIBERTY

RCH 53

PLOT8 TIMBER RIDGE SUBDIVISION

RCH 79

PLOT9 BROWNS VILLAGE ROAD

RCH 5

ENDATA30

!

! DATA TYPE 31 -- Overlay Plot Data

!

! - - - -1- - - - -2- - - - -3- - - - -4- - - - -5- - - - -6- - - - -7- - - - -8- - - - -9- - - - -0- - - - -1

!234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890

OVERLAY1 VINCENT-BONFOUCA.OVL

OVERLAY2 UPPER_BONFOUCA.OVL

OVERLAY3 LIBERTY.OVL

OVERLAY4 PAQUET.OVL

OVERLAY5 MEADOWS.OVL

OVERLAY6 OAKMONT.OVL

OVERLAY7 HWY 190 E - LIBERTY.OVL

OVERLAY8 TIMBER_RIDGE.OVL

OVERLAY9 BROWNS_VILLAGE.OVL

ENDATA31

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

BAYOU LIBERTY 040905 and 040906 Sensitivity Analysis Output Dataset

LA-QUAL Version 9.09

Louisiana Department of Environmental Quality

Input file is \\Degshares\owreng\Personal_Folders\Karen\Bayou Bonfouca and Bayou Liberty\Input Files\Calibration\BBBLsensi.txt

Running in steady-state mode using LA defaults

Output produced at 13:03 on 04/14/2011

\$\$\$ DATA TYPE 1 (TITLES AND CONTROL CARDS) \$\$\$

CARD TYPE	CONTROL TITLES
TITLE01	WATER QUALITY/HYDRAULIC MODEL FOR:
TITLE02	BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET
CONTROL YES	METRIC UNITS
CONTROL YES	USE EFFECTIVE CONCENTRATION
ENDATA01	

\$\$\$ DATA TYPE 2 (MODEL OPTIONS) \$\$\$

CARD TYPE	MODEL OPTION		
MODOPT01	NO	TEMPERATURE	
MODOPT02	YES	SALINITY	
MODOPT03	YES	CONSERVATIVE MATERIAL I = CONDUCTIVITY	IN COND
MODOPT04	YES	CONSERVATIVE MATERIAL II = CHLORIDES	IN CL
MODOPT05	YES	DISSOLVED OXYGEN	
MODOPT06	YES	BOD1 BIOCHEMICAL OXYGEN DEMAND	
MODOPT07	NO	BOD2 BIOCHEMICAL OXYGEN DEMAND	
MODOPT08	YES	NBOD	
MODOPT09	NO	PHOSPHORUS SERIES	
MODOPT10	NO	PHYTOPLANKTON	
MODOPT11	NO	PERIPHYTON	
MODOPT12	NO	COLIFORM	
MODOPT13	NO	NONCONSERVATIVE MATERIAL	
ENDATA02			

\$\$\$ DATA TYPE 3 (PROGRAM CONSTANTS) \$\$\$

CARD TYPE	DESCRIPTION OF CONSTANT	VALUE
PROGRAM	K2 MAXIMUM	= 25.00000 per day
PROGRAM	DISPERSION EQUATION	= 3.00000 (values entered as a function of D,Q,Vmean)
PROGRAM	TIDE HEIGHT	= 0.10000 meters
PROGRAM	TIDAL PERIOD	= 19.75000 hours
PROGRAM	PERIOD OF TIDAL RISE	= 10.50000 hours
PROGRAM	S OXYGEN DEPENDENCE THRESHOLD	= 1.00000 mg/L
PROGRAM	SOD MAXIMUM RATE	= 50.00000 gm/sq m/day
PROGRAM	PHYTOPLANKTON OXYGEN PROD	= 0.00000 mg O/ug chl a/day
PROGRAM	PERIPHYTON OXYGEN PROD	= 0.00000 mg O/mg periphyton/day
ENDATA03		

\$\$\$ DATA TYPE 4 (TEMPERATURE CORRECTION CONSTANTS FOR RATE COEFFICIENTS) \$\$\$

CARD TYPE	RATE CODE	THETA VALUE
ENDATA04		

\$\$\$ CONSTANTS TYPE 5 (TEMPERATURE DATA) \$\$\$

CARD TYPE	DESCRIPTION OF CONSTANT	VALUE
ENDATA05		

\$\$\$ DATA TYPE 6 (PHYTOPLANKTON CONSTANTS) \$\$\$

CARD TYPE	DESCRIPTION OF CONSTANT	VALUE
ENDATA06		

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

\$\$\$ DATA TYPE 7 (PERIPHYTON CONSTANTS) \$\$\$

CARD TYPE	DESCRIPTION OF CONSTANT	VALUE
-----------	-------------------------	-------

ENDATA07

\$\$\$ DATA TYPE 8 (REACH IDENTIFICATION DATA) \$\$\$

CARD TYPE	REACH	ID	NAME	BEGIN REACH km	END REACH km	ELEM LENGTH km	REACH LENGTH km	ELEMS PER RCH	BEGIN ELEM NUM	END ELEM NUM
REACH ID	1	DD	DRAINAGE DITCH 1	24.20	20.30	0.1000	3.90	39	1	39
REACH ID	2	BV	VINCENT FROM RKM 20.0 TO BV01	20.30	19.50	0.1000	0.80	8	40	47
REACH ID	3	BV	VINCENT FROM BV01 RKM 18.5	19.50	18.50	0.1000	1.00	10	48	57
REACH ID	4	BV	VINCENT FROM RKM 18.5 TO BV02	18.50	17.60	0.1000	0.90	9	58	66
REACH ID	5	DD	DRAINAGE DITCH 2	2.10	0.00	0.1000	2.10	21	67	87
REACH ID	6	BV	VINCENT FROM BV02 TO DD 8	17.60	16.90	0.0500	0.70	14	88	101
REACH ID	7	DD	DRAINAGE DITCH 8	0.80	0.00	0.1000	0.80	8	102	109
REACH ID	8	BV	VINCENT FROM DD 8 TO DD 9	16.90	16.00	0.1000	0.90	9	110	118
REACH ID	9	DD	DRAINAGE DITCH 9	2.10	0.00	0.1000	2.10	21	119	139
REACH ID	10	BV	VINCENT FROM DD 9 TO RKM 15.2	16.00	15.20	0.1000	0.80	8	140	147
REACH ID	11	BV	VINCENT FROM RKM 15.2 TO BV03	15.20	14.90	0.0500	0.30	6	148	153
REACH ID	12	BV	VINCENT FROM BV03 TO BONFOUCA	14.90	14.40	0.1000	0.50	5	154	158
REACH ID	13	UB	UB FROM RKM 5.0 TO DD 23	5.00	2.60	0.1000	2.40	24	159	182
REACH ID	14	DD	DRAINAGE DITCH 23	1.00	0.00	0.1000	1.00	10	183	192
REACH ID	15	UB	UB FROM DD 23 TO BB01	2.60	1.10	0.1000	1.50	15	193	207
REACH ID	16	UB	UB FROM BB01 TO BAYOU VINCENT	1.10	0.00	0.1000	1.10	11	208	218
REACH ID	17	BB	BONFOUCA FROM BV TO HWY 190	14.40	14.20	0.1000	0.20	2	219	220
REACH ID	18	DD	HWY 190 (DRAINAGE DITCH 5)	1.80	0.00	0.1000	1.80	18	221	238
REACH ID	19	BB	BONFOUCA FROM HWY 190 TO BB02	14.20	13.30	0.1000	0.90	9	239	247
REACH ID	20	BB	BONFOUCA FROM BB02 TO WD	13.30	12.10	0.1000	1.20	12	248	259
REACH ID	21	WD	WEST DRAINAGE CANAL	0.30	0.00	0.1000	0.30	3	260	262
REACH ID	22	BB	BONFOUCA FROM WD TO DD6	12.10	10.00	0.1000	2.10	21	263	283
REACH ID	23	DD	DRAINAGE DITCH 6	0.30	0.00	0.1000	0.30	3	284	286
REACH ID	24	BB	BONFOUCA FROM DD 6 TO TRIB 2	10.00	9.20	0.1000	0.80	8	287	294
REACH ID	25	DD	DRAINAGE DITCH 7 - UPLAND	1.50	0.50	0.1000	1.00	10	295	304
REACH ID	26	TR	TRIBUTARY 2 - TIDAL	0.50	0.00	0.1000	0.50	5	305	309
REACH ID	27	BB	BONFOUCA FROM TRIB 2 TO BB03	9.20	8.60	0.1000	0.60	6	310	315
REACH ID	28	BB	BONFOUCA FROM BB03 TO CANAL 26	8.60	7.80	0.1000	0.80	8	316	323
REACH ID	29	C	CANAL 26	2.00	0.00	0.1000	2.00	20	324	343
REACH ID	30	BB	BONFOUCA FROM CANAL 26 TO TRIB 4	7.80	7.60	0.1000	0.20	2	344	345
REACH ID	31	TR	TRIBUTARY 10 - UPLAND	1.90	0.80	0.1000	1.10	11	346	356
REACH ID	32	TR	TRIBUTARY 4 - TIDAL	0.80	0.00	0.1000	0.80	8	357	364
REACH ID	33	BB	BONFOUCA FROM TRIB 4 TO BB04	7.60	6.80	0.1000	0.80	8	365	372
REACH ID	34	BB	BONFOUCA FROM BB04 TO RKM 5.6	6.80	5.60	0.1000	1.20	12	373	384
REACH ID	35	BB	BONFOUCA FROM RKM 5.6 TO BB05	5.60	4.50	0.1000	1.10	11	385	395
REACH ID	36	BB	BONFOUCA FROM BB05 TO RKM 2.7	4.50	2.70	0.1000	1.80	18	396	413
REACH ID	37	BB	BONFOUCA FROM RKM 2.7 TO LIBERTY	2.70	0.80	0.1000	1.90	19	414	432
REACH ID	38	BL	LIBERTY FROM RKM 15.0 TO TRIB 1	15.00	14.40	0.1000	0.60	6	433	438
REACH ID	39	TR	TRIBUTARY 1	2.40	0.00	0.1000	2.40	24	439	462
REACH ID	40	BL	LIBERTY FROM RKM 14.4 TO DD22	14.40	13.70	0.1000	0.70	7	463	469
REACH ID	41	DD	DD22	0.30	0.00	0.1000	0.30	3	470	472
REACH ID	42	BL	LIBERTY FROM DD22 TO DD20	13.70	12.80	0.1000	0.90	9	473	481
REACH ID	43	DD	DD20	2.70	0.00	0.1000	2.70	27	482	508
REACH ID	44	BL	LIBERTY FROM DD20 TO BL03	12.80	12.60	0.1000	0.20	2	509	510
REACH ID	45	BL	LIBERTY FROM BL03 TO HWY 190	12.60	10.10	0.1000	2.50	25	511	535
REACH ID	46	DD	HWY 190 (DRAINAGE DITCH 14)	2.30	0.00	0.1000	2.30	23	536	558
REACH ID	47	BL	LIBERTY FROM HWY 190 TO BL04	10.10	10.00	0.1000	0.10	1	559	559
REACH ID	48	BL	LIBERTY FROM BL04 TO DD18	10.00	8.40	0.1000	1.60	16	560	575
REACH ID	49	DD	DD18	0.30	0.00	0.1000	0.30	3	576	578
REACH ID	50	BL	LIBERTY FROM DD18 TO DD19	8.40	7.80	0.1000	0.60	6	579	584
REACH ID	51	DD	DD19	1.40	0.00	0.1000	1.40	14	585	598
REACH ID	52	BL	LIBERTY FROM DD19 TO DD04	7.80	7.60	0.1000	0.20	2	599	600
REACH ID	53	DD	DD04	4.20	0.00	0.1000	4.20	42	601	642
REACH ID	54	BL	LIBERTY FROM DD04 TO BL05	7.60	6.90	0.1000	0.70	7	643	649
REACH ID	55	BL	LIBERTY FROM BL05 TO RKM 6.3	6.90	6.30	0.1000	0.60	6	650	655
REACH ID	56	BL	LIBERTY FROM RKM 6.3 TO RKM 6.0	6.30	6.00	0.1000	0.30	3	656	658
REACH ID	57	BL	LIBERTY FROM RKM 6.0 TO TRIB 9	6.00	5.20	0.1000	0.80	8	659	666
REACH ID	58	DD	DRAINAGE DITCH 3 - UPLAND	0.50	0.30	0.1000	0.20	2	667	668

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

REACH ID	TR	LIBERTY FROM	TO	0.30	0.00	0.1000	0.30	3	669	671	
59	TR	TRIBUTARY 9 - TIDAL		0.30	TO	0.00	0.1000	0.30	3	669	671
60	BL	LIBERTY FROM TRIB 9 TO TRIB 6		5.20	TO	4.40	0.1000	0.80	8	672	679
61	DD	DRAINAGE DITCH 11 - UPLAND		1.60	TO	0.60	0.1000	1.00	10	680	689
62	TR	TRIBUTARY 6 - TIDAL		0.60	TO	0.00	0.1000	0.60	6	690	695
63	BL	LIBERTY FROM TRIB 6 TO TRIB 10		4.40	TO	4.20	0.1000	0.20	2	696	697
64	TR	TRIBUTARY 10 - UPLAND		0.70	TO	0.20	0.1000	0.50	5	698	702
65	TR	TRIBUTARY 10 - TIDAL		0.20	TO	0.00	0.1000	0.20	2	703	704
66	BL	LIBERTY FROM TRIB 10 TO BL07		4.20	TO	3.30	0.1000	0.90	9	705	713
67	BL	LIBERTY FROM BL07 TO TRIB 8		3.30	TO	3.20	0.1000	0.10	1	714	714
68	TR	TRIBUTARY 8 - UPLAND		0.60	TO	0.10	0.1000	0.50	5	715	719
69	TR	TRIBUTARY 8 - TIDAL		0.10	TO	0.00	0.1000	0.10	1	720	720
70	BL	LIBERTY FROM TRIB 8 TO M1		3.20	TO	2.60	0.1000	0.60	6	721	726
71	M	MARINA 1 - TIDAL		0.20	TO	0.00	0.1000	0.20	2	727	728
72	BL	LIBERTY FROM M1 TO M2		2.60	TO	2.50	0.1000	0.10	1	729	729
73	M	MARINA02 - TIDAL		1.80	TO	0.00	0.1000	1.80	18	730	747
74	BL	LIBERTY FROM M2 TO B PAQUET		2.50	TO	1.10	0.1000	1.40	14	748	761
75	DD	HWY 190 (DD13-PAQUET HEADWATERS)		8.60	TO	7.20	0.1000	1.40	14	762	775
76	BP	PAQUET FROM HWY 190 TO DD16		7.20	TO	5.10	0.1000	2.10	21	776	796
77	DD	DD16		0.90	TO	0.00	0.1000	0.90	9	797	805
78	BP	PAQUET FROM RKM 5.1 TO DD17		5.10	TO	3.80	0.1000	1.30	13	806	818
79	DD	DD17		1.70	TO	0.00	0.1000	1.70	17	819	835
80	BP	PAQUET FROM DD17 TO TIDAL REACH		3.80	TO	3.40	0.1000	0.40	4	836	839
81	BP	PAQUET TIDAL REACH TO BP02		3.40	TO	2.40	0.1000	1.00	10	840	849
82	BP	PAQUET FROM BP02 TO BP03		2.40	TO	1.60	0.1000	0.80	8	850	857
83	BP	PAQUET FROM BP03 TO TRIB 24		1.60	TO	1.30	0.1000	0.30	3	858	860
84	C	TRIB 24 FROM TOP TO PAQUET		0.40	TO	0.00	0.1000	0.40	4	861	864
85	BP	PAQUET FROM TRIB 24 TO TRIB 25		1.30	TO	1.00	0.1000	0.30	3	865	867
86	C	TRIB 25 FROM TOP TO RKM 0.3		1.00	TO	0.30	0.1000	0.70	7	868	874
87	C	TRIB 25 FROM RKM 0.3 TO PAQUET		0.30	TO	0.00	0.1000	0.30	3	875	877
88	BP	PAQUET FROM TRIB 25 TO BP04		1.00	TO	0.20	0.1000	0.80	8	878	885
89	BP	PAQUET FROM BP04 TO LIBERTY		0.20	TO	0.00	0.1000	0.20	2	886	887
90	BL	LIBERTY FROM PAQUET TO BONFOUCA		1.10	TO	0.00	0.1000	1.10	11	888	898
91	BB	BONFOUCA FROM LIBERTY TO BB06		0.80	TO	0.00	0.1000	0.80	8	899	906

ENDATA08

\$\$\$ DATA TYPE 9 (ADVECTIVE HYDRAULIC COEFFICIENTS) \$\$\$

CARD TYPE	REACH	ID	WIDTH "A"	WIDTH "B"	WIDTH "C"	DEPTH "D"	DEPTH "E"	DEPTH "F"	SLOPE	MANNINGS "N"
HYDR-1	1	DD	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	2	BV	4.765	0.300	0.000	0.326	0.360	0.000	0.00001	0.030
HYDR-1	3	BV	4.765	0.300	0.000	0.326	0.360	0.000	0.00001	0.030
HYDR-1	4	BV	4.765	0.300	0.000	0.326	0.360	0.000	0.00001	0.030
HYDR-1	5	DD	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	6	BV	4.765	0.300	0.000	0.326	0.360	0.000	0.00001	0.030
HYDR-1	7	DD	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	8	BV	4.765	0.300	0.000	0.326	0.360	0.000	0.00001	0.030
HYDR-1	9	DD	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	10	BV	4.765	0.300	0.000	0.326	0.360	0.000	0.00001	0.030
HYDR-1	11	BV	0.000	0.000	4.724	0.000	0.000	0.271	0.00001	0.030
HYDR-1	12	BV	0.000	0.000	4.724	0.000	0.000	0.271	0.00001	0.030
HYDR-1	13	UB	5.813	0.300	0.000	0.413	0.360	0.000	0.00001	0.030
HYDR-1	14	DD	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	15	UB	5.813	0.300	0.000	0.413	0.360	0.000	0.00001	0.030
HYDR-1	16	UB	8.719	0.300	0.000	0.620	0.360	0.000	0.00001	0.030
HYDR-1	17	BB	0.000	0.000	10.840	0.000	0.000	0.870	0.00001	0.030
HYDR-1	18	DD	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	19	BB	0.000	0.000	10.840	0.000	0.000	0.870	0.00001	0.030
HYDR-1	20	BB	0.000	0.000	10.840	0.000	0.000	0.870	0.00001	0.030
HYDR-1	21	WD	0.000	0.000	3.000	0.000	0.000	0.150	0.00001	0.030
HYDR-1	22	BB	0.000	0.000	54.250	0.000	0.000	1.240	0.00001	0.030
HYDR-1	23	DD	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	24	BB	0.000	0.000	93.080	0.000	0.000	1.603	0.00001	0.030
HYDR-1	25	DD	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	26	TR	0.000	0.000	12.000	0.000	0.000	0.600	0.00001	0.030
HYDR-1	27	BB	0.000	0.000	93.080	0.000	0.000	1.603	0.00001	0.030
HYDR-1	28	BB	0.000	0.000	93.080	0.000	0.000	1.603	0.00001	0.030
HYDR-1	29	C	0.000	0.000	114.000	0.000	0.000	1.000	0.00001	0.030
HYDR-1	30	BB	0.000	0.000	76.510	0.000	0.000	1.870	0.00001	0.030

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

HYDR-1	31	TR	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	32	TR	0.000	0.000	18.000	0.000	0.000	0.900	0.00001	0.030
HYDR-1	33	BB	0.000	0.000	76.510	0.000	0.000	1.870	0.00001	0.030
HYDR-1	34	BB	0.000	0.000	91.400	0.000	0.000	1.890	0.00001	0.030
HYDR-1	35	BB	0.000	0.000	114.300	0.000	0.000	1.670	0.00001	0.030
HYDR-1	36	BB	0.000	0.000	77.700	0.000	0.000	1.440	0.00001	0.030
HYDR-1	37	BB	0.000	0.000	88.000	0.000	0.000	1.600	0.00001	0.030
HYDR-1	38	BL	8.720	0.300	0.000	0.620	0.360	0.000	0.00001	0.030
HYDR-1	39	TR	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	40	BL	8.720	0.300	0.000	0.620	0.360	0.000	0.00001	0.030
HYDR-1	41	DD	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	42	BL	17.438	0.300	0.000	0.992	0.360	0.000	0.00001	0.030
HYDR-1	43	DD	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	44	BL	0.000	0.000	8.840	0.000	0.000	0.472	0.00001	0.030
HYDR-1	45	BL	0.000	0.000	8.840	0.000	0.000	0.472	0.00001	0.030
HYDR-1	46	DD	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	47	BL	0.000	0.000	18.600	0.000	0.000	1.400	0.00001	0.030
HYDR-1	48	BL	0.000	0.000	18.600	0.000	0.000	1.400	0.00001	0.030
HYDR-1	49	DD	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	50	BL	0.000	0.000	18.600	0.000	0.000	1.400	0.00001	0.030
HYDR-1	51	DD	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	52	BL	0.000	0.000	42.670	0.000	0.000	2.280	0.00001	0.030
HYDR-1	53	DD	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	54	BL	0.000	0.000	42.670	0.000	0.000	2.280	0.00001	0.030
HYDR-1	55	BL	0.000	0.000	42.670	0.000	0.000	2.280	0.00001	0.030
HYDR-1	56	BL	0.000	0.000	39.690	0.000	0.000	1.700	0.00001	0.030
HYDR-1	57	BL	0.000	0.000	47.550	0.000	0.000	2.080	0.00001	0.030
HYDR-1	58	DD	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	59	TR	0.000	0.000	16.000	0.000	0.000	0.800	0.00001	0.030
HYDR-1	60	BL	0.000	0.000	47.550	0.000	0.000	2.080	0.00001	0.030
HYDR-1	61	DD	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	62	TR	0.000	0.000	12.000	0.000	0.000	0.600	0.00001	0.030
HYDR-1	63	BL	0.000	0.000	52.730	0.000	0.000	2.090	0.00001	0.030
HYDR-1	64	TR	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	65	TR	0.000	0.000	13.000	0.000	0.000	0.650	0.00001	0.030
HYDR-1	66	BL	0.000	0.000	52.120	0.000	0.000	2.140	0.00001	0.030
HYDR-1	67	BL	0.000	0.000	52.120	0.000	0.000	2.140	0.00001	0.030
HYDR-1	68	TR	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	69	TR	0.000	0.000	10.000	0.000	0.000	0.500	0.00001	0.030
HYDR-1	70	BL	0.000	0.000	52.120	0.000	0.000	2.140	0.00001	0.030
HYDR-1	71	M	0.000	0.000	32.000	0.000	0.000	1.200	0.00001	0.030
HYDR-1	72	BL	0.000	0.000	56.540	0.000	0.000	2.140	0.00001	0.030
HYDR-1	73	M	0.000	0.000	32.000	0.000	0.000	1.200	0.00001	0.030
HYDR-1	74	BL	0.000	0.000	60.960	0.000	0.000	2.130	0.00001	0.030
HYDR-1	75	DD	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	76	BP	8.720	0.300	0.000	0.620	0.360	0.000	0.00001	0.030
HYDR-1	77	DD	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	78	BP	8.720	0.300	0.000	0.620	0.360	0.000	0.00001	0.030
HYDR-1	79	DD	11.598	0.300	0.000	0.947	0.360	0.000	0.00001	0.030
HYDR-1	80	BP	8.720	0.300	0.000	0.620	0.360	0.000	0.00001	0.030
HYDR-1	81	BP	0.000	0.000	18.900	0.000	0.000	1.100	0.00001	0.030
HYDR-1	82	BP	0.000	0.000	18.290	0.000	0.000	1.000	0.00001	0.030
HYDR-1	83	BP	0.000	0.000	21.340	0.000	0.000	1.500	0.00001	0.030
HYDR-1	84	C	0.000	0.000	20.100	0.000	0.000	0.740	0.00001	0.030
HYDR-1	85	BP	0.000	0.000	21.340	0.000	0.000	1.500	0.00001	0.030
HYDR-1	86	C	0.000	0.000	16.460	0.000	0.000	0.940	0.00001	0.030
HYDR-1	87	C	0.000	0.000	32.000	0.000	0.000	0.770	0.00001	0.030
HYDR-1	88	BP	0.000	0.000	30.480	0.000	0.000	1.500	0.00001	0.030
HYDR-1	89	BP	0.000	0.000	30.480	0.000	0.000	1.500	0.00001	0.030
HYDR-1	90	BL	0.000	0.000	60.960	0.000	0.000	2.130	0.00001	0.030
HYDR-1	91	BB	0.000	0.000	105.590	0.000	0.000	1.960	0.00001	0.030

ENDATA09

\$\$\$ DATA TYPE 10 (DISPERSIVE HYDRAULIC COEFFICIENTS) \$\$\$

CARD	TYPE	REACH	ID	TIDAL RANGE	DISPERSION "A"	DISPERSION "B"	DISPERSION "C"	DISPERSION "D"
HYDR		1	DD	0.00	0.000	0.833	0.000	1.000
HYDR		2	BV	0.00	0.000	0.833	0.000	1.000

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

HYDR	3	BV	0.00	0.000	0.833	0.000	1.000
HYDR	4	BV	0.00	0.000	0.833	0.000	1.000
HYDR	5	DD	0.00	0.000	0.833	0.000	1.000
HYDR	6	BV	0.00	0.000	0.833	0.000	1.000
HYDR	7	DD	0.00	0.000	0.833	0.000	1.000
HYDR	8	BV	0.00	0.000	0.833	0.000	1.000
HYDR	9	DD	0.00	0.000	0.833	0.000	1.000
HYDR	10	BV	0.00	0.000	0.833	0.000	1.000
HYDR	11	BV	1.00	200.000	0.833	0.000	1.000
HYDR	12	BV	1.00	200.000	0.833	0.000	1.000
HYDR	13	UB	0.00	0.000	0.833	0.000	1.000
HYDR	14	DD	0.00	0.000	0.833	0.000	1.000
HYDR	15	UB	0.00	0.000	0.833	0.000	1.000
HYDR	16	UB	0.00	0.000	0.833	0.000	1.000
HYDR	17	BB	1.00	200.000	0.833	0.000	1.000
HYDR	18	DD	0.00	0.000	0.833	0.000	1.000
HYDR	19	BB	1.00	200.000	0.833	0.000	1.000
HYDR	20	BB	1.00	200.000	0.833	0.000	1.000
HYDR	21	WD	1.00	200.000	0.833	0.000	1.000
HYDR	22	BB	1.00	200.000	0.833	0.000	1.000
HYDR	23	DD	0.00	0.000	0.833	0.000	1.000
HYDR	24	BB	1.00	200.000	0.833	0.000	1.000
HYDR	25	DD	0.00	0.000	0.833	0.000	1.000
HYDR	26	TR	1.00	200.000	0.833	0.000	1.000
HYDR	27	BB	1.00	200.000	0.833	0.000	1.000
HYDR	28	BB	1.00	200.000	0.833	0.000	1.000
HYDR	29	C	1.00	200.000	0.833	0.000	1.000
HYDR	30	BB	1.00	200.000	0.833	0.000	1.000
HYDR	31	TR	0.00	0.000	0.833	0.000	1.000
HYDR	32	TR	1.00	200.000	0.833	0.000	1.000
HYDR	33	BB	1.00	200.000	0.833	0.000	1.000
HYDR	34	BB	1.00	200.000	0.833	0.000	1.000
HYDR	35	BB	1.00	200.000	0.833	0.000	1.000
HYDR	36	BB	1.00	200.000	0.833	0.000	1.000
HYDR	37	BB	1.00	200.000	0.833	0.000	1.000
HYDR	38	BL	0.00	0.000	0.833	0.000	1.000
HYDR	39	TR	0.00	0.000	0.833	0.000	1.000
HYDR	40	BL	0.00	0.000	0.833	0.000	1.000
HYDR	41	DD	0.00	0.000	0.833	0.000	1.000
HYDR	42	BL	0.00	0.000	0.833	0.000	1.000
HYDR	43	DD	0.00	0.000	0.833	0.000	1.000
HYDR	44	BL	1.00	100.000	0.833	0.000	1.000
HYDR	45	BL	1.00	100.000	0.833	0.000	1.000
HYDR	46	DD	0.00	0.000	0.833	0.000	1.000
HYDR	47	BL	1.00	100.000	0.833	0.000	1.000
HYDR	48	BL	1.00	100.000	0.833	0.000	1.000
HYDR	49	DD	0.00	0.000	0.833	0.000	1.000
HYDR	50	BL	1.00	150.000	0.833	0.000	1.000
HYDR	51	DD	0.00	0.000	0.833	0.000	1.000
HYDR	52	BL	1.00	200.000	0.833	0.000	1.000
HYDR	53	DD	0.00	0.000	0.833	0.000	1.000
HYDR	54	BL	1.00	250.000	0.833	0.000	1.000
HYDR	55	BL	1.00	300.000	0.833	0.000	1.000
HYDR	56	BL	1.00	300.000	0.833	0.000	1.000
HYDR	57	BL	1.00	300.000	0.833	0.000	1.000
HYDR	58	DD	0.00	0.000	0.833	0.000	1.000
HYDR	59	TR	1.00	200.000	0.833	0.000	1.000
HYDR	60	BL	1.00	300.000	0.833	0.000	1.000
HYDR	61	DD	0.00	0.000	0.833	0.000	1.000
HYDR	62	TR	1.00	200.000	0.833	0.000	1.000
HYDR	63	BL	1.00	300.000	0.833	0.000	1.000
HYDR	64	TR	0.00	0.000	0.833	0.000	1.000
HYDR	65	TR	1.00	200.000	0.833	0.000	1.000
HYDR	66	BL	1.00	300.000	0.833	0.000	1.000
HYDR	67	BL	1.00	300.000	0.833	0.000	1.000
HYDR	68	TR	0.00	0.000	0.833	0.000	1.000
HYDR	69	TR	1.00	200.000	0.833	0.000	1.000
HYDR	70	BL	1.00	300.000	0.833	0.000	1.000
HYDR	71	M	1.00	200.000	0.833	0.000	1.000
HYDR	72	BL	1.00	300.000	0.833	0.000	1.000

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

HYDR	73	M	1.00	200.000	0.833	0.000	1.000
HYDR	74	BL	1.00	300.000	0.833	0.000	1.000
HYDR	75	DD	0.00	0.000	0.833	0.000	1.000
HYDR	76	BP	0.00	0.000	0.833	0.000	1.000
HYDR	77	DD	0.00	0.000	0.833	0.000	1.000
HYDR	78	BP	0.00	0.000	0.833	0.000	1.000
HYDR	79	DD	0.00	0.000	0.833	0.000	1.000
HYDR	80	BP	0.00	0.000	0.833	0.000	1.000
HYDR	81	BP	1.00	200.000	0.833	0.000	1.000
HYDR	82	BP	1.00	200.000	0.833	0.000	1.000
HYDR	83	BP	1.00	200.000	0.833	0.000	1.000
HYDR	84	C	1.00	200.000	0.833	0.000	1.000
HYDR	85	BP	1.00	200.000	0.833	0.000	1.000
HYDR	86	C	1.00	200.000	0.833	0.000	1.000
HYDR	87	C	1.00	200.000	0.833	0.000	1.000
HYDR	88	BP	1.00	200.000	0.833	0.000	1.000
HYDR	89	BP	1.00	200.000	0.833	0.000	1.000
HYDR	90	BL	1.00	300.000	0.833	0.000	1.000
HYDR	91	BB	1.00	200.000	0.833	0.000	1.000

ENDATA10

\$\$\$ DATA TYPE 11 (INITIAL CONDITIONS) \$\$\$

CARD TYPE	REACH	ID	TEMP deg C	SALIN ppt	DO mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	PERIP g/m ²	BOD1 mg/L	BOD2 mg/L	ORG-N mg/L	ORG-P mg/L	COLI #/100mL	NCM	COND	CL
INITIAL	1	DD	30.00	0.26	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	2	BV	33.82	0.26	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	3	BV	33.82	0.26	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	4	BV	27.21	0.39	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	5	DD	30.00	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	6	BV	27.21	0.39	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	7	DD	30.00	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	8	BV	27.21	0.28	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	9	DD	30.00	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	10	BV	27.90	0.17	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	11	BV	27.90	0.17	3.00	0.10	0.10	0.00	24.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	12	BV	27.90	0.17	3.00	0.10	0.10	0.00	24.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	13	UB	30.00	0.17	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	14	DD	30.00	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	15	UB	30.00	0.17	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	16	UB	30.00	0.17	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	17	BB	29.60	0.24	3.00	0.10	0.10	0.00	24.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	18	DD	30.00	0.27	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	19	BB	29.60	0.27	3.00	0.10	0.10	0.00	49.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	20	BB	29.60	0.45	3.00	0.10	0.10	0.00	49.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	21	WD	30.00	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	22	BB	29.60	1.15	3.00	0.10	0.10	0.00	8.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	23	DD	30.00	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	24	BB	31.54	2.10	3.00	0.10	0.10	0.00	8.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	25	DD	30.00	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	26	TR	30.00	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	27	BB	31.54	2.40	3.00	0.10	0.10	0.00	8.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	28	BB	31.54	2.68	3.00	0.10	0.10	0.00	8.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	29	C	30.00	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	30	BB	31.54	3.00	3.00	0.10	0.10	0.00	10.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	31	TR	30.00	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	32	TR	30.00	0.30	3.00	0.10	0.10	0.00	10.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	33	BB	31.29	3.10	3.00	0.10	0.10	0.00	11.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	34	BB	31.29	3.30	3.00	0.10	0.10	0.00	11.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	35	BB	31.29	3.30	3.00	0.10	0.10	0.00	12.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	36	BB	31.29	3.62	3.00	0.10	0.10	0.00	12.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	37	BB	31.29	3.82	3.00	0.10	0.10	0.00	10.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	38	BL	29.33	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	39	TR	30.00	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	40	BL	29.33	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	41	DD	30.00	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	42	BL	29.33	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	43	DD	30.00	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	44	BL	29.33	0.48	3.00	0.10	0.10	0.00	14.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

INITIAL	45	BL	29.33	0.48	3.00	0.10	0.10	0.00	14.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	46	DD	30.00	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	47	BL	29.52	0.54	3.00	0.10	0.10	0.00	14.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	48	BL	29.52	0.54	3.00	0.10	0.10	0.00	57.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	49	DD	30.00	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	50	BL	29.52	1.70	3.00	0.10	0.10	0.00	3.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	51	DD	30.00	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	52	BL	31.31	2.90	3.00	0.10	0.10	0.00	3.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	53	DD	30.00	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	54	BL	31.31	3.09	3.00	0.10	0.10	0.00	3.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	55	BL	31.31	3.09	3.00	0.10	0.10	0.00	3.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	56	BL	31.31	3.09	3.00	0.10	0.10	0.00	3.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	57	BL	31.31	3.09	3.00	0.10	0.10	0.00	3.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	58	DD	30.00	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	59	TR	30.00	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	60	BL	31.99	2.80	3.00	0.10	0.10	0.00	3.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	61	DD	30.00	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	62	TR	30.00	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	63	BL	31.99	2.40	3.00	0.10	0.10	0.00	3.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	64	TR	30.00	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	65	TR	30.00	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	66	BL	31.99	2.12	3.00	0.10	0.10	0.00	3.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	67	BL	31.99	2.12	3.00	0.10	0.10	0.00	65.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	68	TR	30.00	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	69	TR	30.00	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	70	BL	31.99	2.80	3.00	0.10	0.10	0.00	65.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	71	M	30.00	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	72	BL	31.99	3.50	3.00	0.10	0.10	0.00	6.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	73	M	30.00	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	74	BL	31.99	4.16	3.00	0.10	0.10	0.00	6.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	75	DD	30.00	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	76	BP	32.08	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	77	DD	30.00	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	78	BP	32.08	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	79	DD	30.00	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	80	BP	32.08	1.60	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	81	BP	32.08	3.17	3.00	0.10	0.10	0.00	14.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	82	BP	32.08	3.32	3.00	0.10	0.10	0.00	14.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	83	BP	32.07	3.47	3.00	0.10	0.10	0.00	14.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	84	C	30.00	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	85	BP	32.07	3.70	3.00	0.10	0.10	0.00	13.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	86	C	30.00	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	87	C	30.00	0.30	3.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	88	BP	32.72	3.94	3.00	0.10	0.10	0.00	13.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	89	BP	32.72	3.94	3.00	0.10	0.10	0.00	13.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	90	BL	30.44	4.16	3.00	0.10	0.10	0.00	6.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INITIAL	91	BB	30.22	4.00	3.00	0.10	0.10	0.00	7.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

\$\$\$ DATA TYPE 12 (REAERATION, SEDIMENT OXYGEN DEMAND, BOD COEFFICIENTS) \$\$\$

CARD	RCH	RCH	K2		K2	K2	BKGRND	AEROB	BOD	SETTLD	ANAER	AEROB	BOD2	ANAER	BOD2	HYDR TO
TYPE	NUM	ID	OPT	"A"	"B"	"C"	SOD	DECAY	SETT	AVAIL	per day	DECAY	SETT	per day	DECAY	BOD1
							g/m ² /d	per day	m/d	frac	per day	per day	m/d	per day	per day	per day
COEF-1	1	DD	15	LOUISIANA	0.000	0.000	0.000	0.500	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	2	BV	15	LOUISIANA	0.000	0.000	0.000	0.300	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	3	BV	15	LOUISIANA	0.000	0.000	0.000	6.000	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	4	BV	15	LOUISIANA	0.000	0.000	0.000	7.000	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	5	DD	15	LOUISIANA	0.000	0.000	0.000	0.500	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	6	BV	15	LOUISIANA	0.000	0.000	0.000	7.000	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	7	DD	15	LOUISIANA	0.000	0.000	0.000	0.500	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	8	BV	15	LOUISIANA	0.000	0.000	0.000	7.000	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	9	DD	15	LOUISIANA	0.000	0.000	0.000	0.500	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	10	BV	15	LOUISIANA	0.000	0.000	0.000	7.000	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	11	BV	15	LOUISIANA	0.000	0.000	0.000	4.200	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	12	BV	15	LOUISIANA	0.000	0.000	0.000	4.200	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	13	UB	15	LOUISIANA	0.000	0.000	0.000	0.500	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	14	DD	15	LOUISIANA	0.000	0.000	0.000	0.500	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	15	UB	15	LOUISIANA	0.000	0.000	0.000	0.500	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

COEF-1	86	C	15	LOUISIANA	0.000	0.000	0.000	0.500	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	87	C	15	LOUISIANA	0.000	0.000	0.000	0.500	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	88	BP	1	K2=a	0.606	0.000	0.000	0.000	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	89	BP	1	K2=a	0.606	0.000	0.000	0.000	0.080	0.050	1.000	0.000	0.000	0.000	0.000	0.000
COEF-1	90	BL	1	K2=a	0.426	0.000	0.000	0.000	0.080	0.050	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	91	BB	1	K2=a	0.503	0.000	0.000	0.000	0.080	0.050	0.000	0.000	0.000	0.000	0.000	0.000

ENDATA12

\$\$\$ DATA TYPE 13 (NITROGEN AND PHOSPHORUS COEFFICIENTS) \$\$\$

CARD TYPE	REACH	ID	NBOD		SETTLD		BKGRND		BKGRND		DENIT	ORGP		SETTLD	
			DECA	SETT	ORGN	NH3	NH3	PO4	DECA	SETT		ORGN	ORGN	AVAIL	AVAIL
			per day	m/d	frac	per day	g/m ² /d	g/m ² /d	per day	per day	per day	per day	m/d	frac	
COEF-2	1	DD	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
COEF-2	2	BV	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
COEF-2	3	BV	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
COEF-2	4	BV	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
COEF-2	5	DD	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
COEF-2	6	BV	0.030	0.100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
COEF-2	7	DD	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
COEF-2	8	BV	0.030	0.100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
COEF-2	9	DD	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
COEF-2	10	BV	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
COEF-2	11	BV	0.030	0.150	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
COEF-2	12	BV	0.030	0.150	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
COEF-2	13	UB	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
COEF-2	14	DD	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
COEF-2	15	UB	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
COEF-2	16	UB	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
COEF-2	17	BB	0.030	0.150	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
COEF-2	18	DD	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
COEF-2	19	BB	0.030	0.150	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
COEF-2	20	BB	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
COEF-2	21	WD	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
COEF-2	22	BB	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
COEF-2	23	DD	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
COEF-2	24	BB	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
COEF-2	25	DD	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
COEF-2	26	TR	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
COEF-2	27	BB	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
COEF-2	28	BB	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
COEF-2	29	C	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
COEF-2	30	BB	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
COEF-2	31	TR	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
COEF-2	32	TR	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
COEF-2	33	BB	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
COEF-2	34	BB	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
COEF-2	35	BB	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
COEF-2	36	BB	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
COEF-2	37	BB	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
COEF-2	38	BL	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
COEF-2	39	TR	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
COEF-2	40	BL	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
COEF-2	41	DD	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
COEF-2	42	BL	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
COEF-2	43	DD	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
COEF-2	44	BL	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
COEF-2	45	BL	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
COEF-2	46	DD	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
COEF-2	47	BL	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
COEF-2	48	BL	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
COEF-2	49	DD	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
COEF-2	50	BL	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
COEF-2	51	DD	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
COEF-2	52	BL	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
COEF-2	53	DD	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
COEF-2	54	BL	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
COEF-2	55	BL	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
COEF-2	56	BL	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

COEF-2	57	BL	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	58	DD	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	59	TR	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	60	BL	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	61	DD	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	62	TR	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	63	BL	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	64	TR	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	65	TR	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	66	BL	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	67	BL	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	68	TR	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	69	TR	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	70	BL	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	71	M	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	72	BL	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	73	M	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	74	BL	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	75	DD	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	76	BP	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	77	DD	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	78	BP	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	79	DD	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	80	BP	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	81	BP	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	82	BP	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	83	BP	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	84	C	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	85	BP	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	86	C	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	87	C	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	88	BP	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	89	BP	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	90	BL	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-2	91	BB	0.030	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

ENDATA13

\$\$\$ DATA TYPE 14 (ALGAE PHYTOPLANKTON AND PERIPHYTON COEFFICIENTS) \$\$\$

CARD TYPE	REACH	ID	SECCHI DEPTH m	CHL A: ALGAE frac	PHYTO SETT m/d	PHYTO DEATH per day	PHYTO GROW per day	PHYTO RESP per day	PERIP DEATH per day	MAX	PERIP GROW per day	PERIP RESP per day	BANK SHADING frac
										PHYTO GROW per day			

ENDATA14

\$\$\$ DATA TYPE 15 (COLIFORM AND NONCONSERVATIVE COEFFICIENTS) \$\$\$

CARD TYPE	REACH	ID	COLIFORM DIE-OFF per day	NCM DECAY per day	NCM SETT m/d

ENDATA15

\$\$\$ DATA TYPE 16 (INCREMENTAL DATA FOR FLOW, TEMPERATURE, SALINITY, AND CONSERVATIVES) \$\$\$

CARD TYPE	REACH	ID	OUTFLOW m ³ /s	INFLOW m ³ /s	TEMP deg C	SALIN ppt	COND	CL	IN/DIST	OUT/DIST

ENDATA16

\$\$\$ DATA TYPE 17 (INCREMENTAL DATA FOR DO, BOD, AND NITROGEN) \$\$\$

CARD TYPE	REACH	ID	DO mg/L	BOD1 mg/L	NBOD mg/L	mg/L	mg/L	BOD2 mg/L

ENDATA17

\$\$\$ DATA TYPE 18 (INCREMENTAL DATA FOR PHOSPHORUS, PHYTOPLANKTON, COLIFORM, AND NONCONSERVATIVES) \$\$\$

CARD TYPE	REACH	ID	PO4	PHYTO CHL A	COLI	NCM	ORGP

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

	mg/L	µg/L	#/100mL	mg/L					
ENDATA18									
\$\$\$ DATA TYPE 19 (NONPOINT SOURCE DATA) \$\$\$									
CARD TYPE	REACH	ID	BOD1 kg/d	NBOD kg/d	COLI #/day	NCM	DO kg/d	BOD2 kg/d	ORG-P kg/d
NONPOINT	1	DD	0.65	0.27	0.00	0.00	0.00	0.00	0.00
NONPOINT	2	BV	0.13	0.05	0.00	0.00	0.00	0.00	0.00
NONPOINT	3	BV	1.40	0.05	0.00	0.00	0.00	0.00	0.00
NONPOINT	4	BV	1.40	0.05	0.00	0.00	0.00	0.00	0.00
NONPOINT	5	DD	0.30	0.13	0.00	0.00	0.00	0.00	0.00
NONPOINT	6	BV	1.40	0.14	0.00	0.00	0.00	0.00	0.00
NONPOINT	7	DD	0.11	0.05	0.00	0.00	0.00	0.00	0.00
NONPOINT	8	BV	1.70	0.14	0.00	0.00	0.00	0.00	0.00
NONPOINT	9	DD	0.30	0.13	0.00	0.00	0.00	0.00	0.00
NONPOINT	10	BV	0.10	0.05	0.00	0.00	0.00	0.00	0.00
NONPOINT	11	BV	0.80	0.15	0.00	0.00	0.00	0.00	0.00
NONPOINT	12	BV	1.40	0.90	0.00	0.00	0.00	0.00	0.00
NONPOINT	13	UB	0.37	0.16	0.00	0.00	0.00	0.00	0.00
NONPOINT	14	DD	0.15	0.06	0.00	0.00	0.00	0.00	0.00
NONPOINT	15	UB	0.25	0.10	0.00	0.00	0.00	0.00	0.00
NONPOINT	16	UB	0.28	0.11	0.00	0.00	0.00	0.00	0.00
NONPOINT	17	BB	0.10	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	18	DD	0.26	0.12	0.00	0.00	0.00	0.00	0.00
NONPOINT	19	BB	11.70	3.80	0.00	0.00	0.00	0.00	0.00
NONPOINT	20	BB	22.50	2.10	0.00	0.00	0.00	0.00	0.00
NONPOINT	21	WD	0.17	0.06	0.00	0.00	0.00	0.00	0.00
NONPOINT	22	BB	135.00	17.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	23	DD	0.05	0.02	0.00	0.00	0.00	0.00	0.00
NONPOINT	24	BB	160.00	18.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	25	DD	0.15	0.06	0.00	0.00	0.00	0.00	0.00
NONPOINT	26	TR	1.85	0.61	0.00	0.00	0.00	0.00	0.00
NONPOINT	27	BB	126.00	16.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	28	BB	146.00	15.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	29	C	98.00	28.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	30	BB	100.00	12.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	31	TR	0.17	0.07	0.00	0.00	0.00	0.00	0.00
NONPOINT	32	TR	5.70	1.72	0.00	0.00	0.00	0.00	0.00
NONPOINT	33	BB	140.00	15.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	34	BB	280.00	30.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	35	BB	325.00	40.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	36	BB	325.00	5.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	37	BB	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	38	BL	2.00	1.40	0.00	0.00	0.00	0.00	0.00
NONPOINT	39	TR	0.35	0.15	0.00	0.00	0.00	0.00	0.00
NONPOINT	40	BL	2.00	1.90	0.00	0.00	0.00	0.00	0.00
NONPOINT	41	DD	0.05	0.02	0.00	0.00	0.00	0.00	0.00
NONPOINT	42	BL	10.80	12.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	43	DD	0.40	0.17	0.00	0.00	0.00	0.00	0.00
NONPOINT	44	BL	3.40	4.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	45	BL	40.00	3.50	0.00	0.00	0.00	0.00	0.00
NONPOINT	46	DD	0.34	0.15	0.00	0.00	0.00	0.00	0.00
NONPOINT	47	BL	6.00	2.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	48	BL	64.00	5.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	49	DD	0.04	0.02	0.00	0.00	0.00	0.00	0.00
NONPOINT	50	BL	25.00	3.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	51	DD	0.21	0.09	0.00	0.00	0.00	0.00	0.00
NONPOINT	52	BL	38.00	3.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	53	DD	0.63	0.28	0.00	0.00	0.00	0.00	0.00
NONPOINT	54	BL	98.00	3.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	55	BL	75.00	3.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	56	BL	40.00	2.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	57	BL	120.00	2.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	58	DD	0.03	0.01	0.00	0.00	0.00	0.00	0.00
NONPOINT	59	TR	1.80	0.55	0.00	0.00	0.00	0.00	0.00
NONPOINT	60	BL	220.00	35.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	61	DD	0.15	0.06	0.00	0.00	0.00	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

NONPOINT	62	TR	2.30	0.74	0.00	0.00	0.00	0.00	0.00
NONPOINT	63	BL	40.00	12.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	64	TR	0.07	0.03	0.00	0.00	0.00	0.00	0.00
NONPOINT	65	TR	0.86	0.28	0.00	0.00	0.00	0.00	0.00
NONPOINT	66	BL	220.00	36.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	67	BL	0.00	17.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	68	TR	0.07	0.03	0.00	0.00	0.00	0.00	0.00
NONPOINT	69	TR	0.29	0.10	0.00	0.00	0.00	0.00	0.00
NONPOINT	70	BL	25.00	13.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	71	M	3.35	0.89	0.00	0.00	0.00	0.00	0.00
NONPOINT	72	BL	50.00	12.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	73	M	29.00	8.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	74	BL	150.00	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	75	DD	0.21	0.10	0.00	0.00	0.00	0.00	0.00
NONPOINT	76	BP	0.60	0.25	0.00	0.00	0.00	0.00	0.00
NONPOINT	77	DD	0.14	0.06	0.00	0.00	0.00	0.00	0.00
NONPOINT	78	BP	0.40	0.14	0.00	0.00	0.00	0.00	0.00
NONPOINT	79	DD	0.26	0.11	0.00	0.00	0.00	0.00	0.00
NONPOINT	80	BP	0.09	0.05	0.00	0.00	0.00	0.00	0.00
NONPOINT	81	BP	83.50	14.50	0.00	0.00	0.00	0.00	0.00
NONPOINT	82	BP	37.00	4.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	83	BP	22.00	4.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	84	C	3.00	0.90	0.00	0.00	0.00	0.00	0.00
NONPOINT	85	BP	35.00	8.50	0.00	0.00	0.00	0.00	0.00
NONPOINT	86	C	4.60	1.33	0.00	0.00	0.00	0.00	0.00
NONPOINT	87	C	3.60	1.10	0.00	0.00	0.00	0.00	0.00
NONPOINT	88	BP	150.00	35.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	89	BP	160.00	30.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	90	BL	150.00	0.00	0.00	0.00	0.00	0.00	0.00
NONPOINT	91	BB	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ENDATA19									

\$\$\$ DATA TYPE 20 (HEADWATER FOR FLOW, TEMPERATURE, SALINITY AND CONSERVATIVES) \$\$\$

CARD	TYPE	ELEMENT	NAME	UNIT	FLOW m ³ /s	FLOW cfs	TEMP deg C	SALIN ppt	COND	CL	HDW DISP
											EXCHG frac
HDWTR-1		1	B VINCENT & BONFOUCA	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1		67	BROWNS VILL RD (DD2)	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1		102	DRAINAGE DITCH 8	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1		119	DRAINAGE DITCH 9	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1		159	UPPER B BONFOUCA	0	0.00283	0.10000	33.80	0.26	520.900	7.230	0.000
HDWTR-1		183	DRAINAGE DITCH 23	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1		221	HIGHWAY 190(DD 5)	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1		260	WEST DRAINAGE CANAL	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1		284	DRAINAGE DITCH 6	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1		295	TRIBUTARY 2	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1		324	CANAL 26	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1		346	TRIBUTARY 4	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1		433	BAYOU LIBERTY	0	0.00283	0.10000	33.80	0.26	520.900	7.230	0.000
HDWTR-1		439	TRIBUTARY 1	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1		470	DRAINAGE DITCH 22	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1		482	DRAINAGE DITCH 20	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1		536	HIGHWAY 190	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1		576	DRAINAGE DITCH 18	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1		585	DRAINAGE DITCH 19	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1		601	DRAINAGE DITCH 4	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1		667	TRIBUTARY 9	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1		680	TRIBUTARY 6	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1		698	TRIBUTARY 10	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1		715	TRIBUTARY 8	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1		727	MARINA 1	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1		730	MARINA 2	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1		762	BAYOU PAQUET	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1		797	DRAINAGE DITCH 16	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1		819	DRAINAGE DITCH 17	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1		861	TRIBUTARY 24	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
HDWTR-1		868	TRIBUTARY 25	0	0.00028	0.00999	33.80	0.26	520.900	7.230	0.000
ENDATA20											

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

\$\$\$ DATA TYPE 21 (HEADWATER DATA FOR DO, BOD, AND NITROGEN) \$\$\$

CARD TYPE	ELEMENT	NAME	DO mg/L	BOD#1 mg/L	NBOD mg/L	mg/L	mg/L	BOD2 mg/L
HDWTR-2	1	B VINCENT & BONFOUCA	6.00	2.20	1.00	0.00	0.00	0.00
HDWTR-2	67	BROWNS VILL RD (DD2)	6.00	2.20	1.00	0.00	0.00	0.00
HDWTR-2	102	DRAINAGE DITCH 8	6.00	2.20	1.00	0.00	0.00	0.00
HDWTR-2	119	DRAINAGE DITCH 9	6.00	2.20	1.00	0.00	0.00	0.00
HDWTR-2	159	UPPER B BONFOUCA	6.00	2.20	1.00	0.00	0.00	0.00
HDWTR-2	183	DRAINAGE DITCH 23	6.00	2.20	1.00	0.00	0.00	0.00
HDWTR-2	221	HIGHWAY 190(DD 5)	6.00	2.20	1.00	0.00	0.00	0.00
HDWTR-2	260	WEST DRAINAGE CANAL	6.00	2.20	1.00	0.00	0.00	0.00
HDWTR-2	284	DRAINAGE DITCH 6	6.00	2.20	1.00	0.00	0.00	0.00
HDWTR-2	295	TRIBUTARY 2	6.00	2.20	1.00	0.00	0.00	0.00
HDWTR-2	324	CANAL 26	6.00	2.20	1.00	0.00	0.00	0.00
HDWTR-2	346	TRIBUTARY 4	6.00	2.20	1.00	0.00	0.00	0.00
HDWTR-2	433	BAYOU LIBERTY	6.00	2.20	1.00	0.00	0.00	0.00
HDWTR-2	439	TRIBUTARY 1	6.00	2.20	1.00	0.00	0.00	0.00
HDWTR-2	470	DRAINAGE DITCH 22	6.00	2.20	1.00	0.00	0.00	0.00
HDWTR-2	482	DRAINAGE DITCH 20	6.00	2.20	1.00	0.00	0.00	0.00
HDWTR-2	536	HIGHWAY 190	6.00	2.20	1.00	0.00	0.00	0.00
HDWTR-2	576	DRAINAGE DITCH 18	6.00	2.20	1.00	0.00	0.00	0.00
HDWTR-2	585	DRAINAGE DITCH 19	6.00	2.20	1.00	0.00	0.00	0.00
HDWTR-2	601	DRAINAGE DITCH 4	6.00	2.20	1.00	0.00	0.00	0.00
HDWTR-2	667	TRIBUTARY 9	6.00	2.20	1.00	0.00	0.00	0.00
HDWTR-2	680	TRIBUTARY 6	6.00	2.20	1.00	0.00	0.00	0.00
HDWTR-2	698	TRIBUTARY 10	6.00	2.20	1.00	0.00	0.00	0.00
HDWTR-2	715	TRIBUTARY 8	6.00	2.20	1.00	0.00	0.00	0.00
HDWTR-2	727	MARINA 1	6.00	2.20	1.00	0.00	0.00	0.00
HDWTR-2	730	MARINA 2	6.00	2.20	1.00	0.00	0.00	0.00
HDWTR-2	762	BAYOU PAQUET	6.00	2.20	1.00	0.00	0.00	0.00
HDWTR-2	797	DRAINAGE DITCH 16	6.00	2.20	1.00	0.00	0.00	0.00
HDWTR-2	819	DRAINAGE DITCH 17	6.00	2.20	1.00	0.00	0.00	0.00
HDWTR-2	861	TRIBUTARY 24	6.00	2.20	1.00	0.00	0.00	0.00
HDWTR-2	868	TRIBUTARY 25	6.00	2.20	1.00	0.00	0.00	0.00
ENDATA21								

\$\$\$ DATA TYPE 22 (HEADWATER DATA FOR PHOSPHORUS, PHYTOPLANKTON, COLIFORM, AND NONCONSERVATIVES) \$\$\$

CARD TYPE	ELEMENT	NAME	PO4-P mg/L	PHYTO CHL A µg/L	COLI #/100mL	NCM	ORG-P mg/L
HDWTR-3	1	B VINCENT & BONFOUCA	0.00	0.00	0.00	0.00	0.00
HDWTR-3	67	BROWNS VILL RD (DD2)	0.00	0.00	0.00	0.00	0.00
HDWTR-3	102	DRAINAGE DITCH 8	0.00	0.00	0.00	0.00	0.00
HDWTR-3	119	DRAINAGE DITCH 9	0.00	0.00	0.00	0.00	0.00
HDWTR-3	159	UPPER B BONFOUCA	0.00	0.00	0.00	0.00	0.00
HDWTR-3	183	DRAINAGE DITCH 23	0.00	0.00	0.00	0.00	0.00
HDWTR-3	221	HIGHWAY 190(DD 5)	0.00	0.00	0.00	0.00	0.00
HDWTR-3	260	WEST DRAINAGE CANAL	0.00	0.00	0.00	0.00	0.00
HDWTR-3	284	DRAINAGE DITCH 6	0.00	0.00	0.00	0.00	0.00
HDWTR-3	295	TRIBUTARY 2	0.00	0.00	0.00	0.00	0.00
HDWTR-3	324	CANAL 26	0.00	0.00	0.00	0.00	0.00
HDWTR-3	346	TRIBUTARY 4	0.00	0.00	0.00	0.00	0.00
HDWTR-3	433	BAYOU LIBERTY	0.00	0.00	0.00	0.00	0.00
HDWTR-3	439	TRIBUTARY 1	0.00	0.00	0.00	0.00	0.00
HDWTR-3	470	DRAINAGE DITCH 22	0.00	0.00	0.00	0.00	0.00
HDWTR-3	482	DRAINAGE DITCH 20	0.00	0.00	0.00	0.00	0.00
HDWTR-3	536	HIGHWAY 190	0.00	0.00	0.00	0.00	0.00
HDWTR-3	576	DRAINAGE DITCH 18	0.00	0.00	0.00	0.00	0.00
HDWTR-3	585	DRAINAGE DITCH 19	0.00	0.00	0.00	0.00	0.00
HDWTR-3	601	DRAINAGE DITCH 4	0.00	0.00	0.00	0.00	0.00
HDWTR-3	667	TRIBUTARY 9	0.00	0.00	0.00	0.00	0.00
HDWTR-3	680	TRIBUTARY 6	0.00	0.00	0.00	0.00	0.00
HDWTR-3	698	TRIBUTARY 10	0.00	0.00	0.00	0.00	0.00
HDWTR-3	715	TRIBUTARY 8	0.00	0.00	0.00	0.00	0.00
HDWTR-3	727	MARINA 1	0.00	0.00	0.00	0.00	0.00
HDWTR-3	730	MARINA 2	0.00	0.00	0.00	0.00	0.00
HDWTR-3	762	BAYOU PAQUET	0.00	0.00	0.00	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

HDWTR-3	797	DRAINAGE DITCH 16	0.00	0.00	0.00	0.00	0.00
HDWTR-3	819	DRAINAGE DITCH 17	0.00	0.00	0.00	0.00	0.00
HDWTR-3	861	TRIBUTARY 24	0.00	0.00	0.00	0.00	0.00
HDWTR-3	868	TRIBUTARY 25	0.00	0.00	0.00	0.00	0.00

ENDATA22

\$\$\$ DATA TYPE 23 (JUNCTION DATA) \$\$\$

CARD TYPE	JUNCTION ELEMENT	UPSTRM ELEMENT	RIVER KILOM	NAME
JUNCTION	88	66	17.60	DRAINAGE DITCH 2
JUNCTION	110	101	16.90	DRAINAGE DITCH 8
JUNCTION	140	118	16.00	DRAINAGE DITCH 9
JUNCTION	193	182	2.60	DRAINAGE DITCH 23
JUNCTION	219	158	14.40	UPPER BAYOU BONFOUCA
JUNCTION	239	220	14.20	HIGHWAY 190 (DRAINAGE DITCH 5)
JUNCTION	263	259	12.10	WEST DRAINAGE CANAL
JUNCTION	287	283	10.00	DRAINAGE DITCH 6
JUNCTION	310	294	9.20	TRIBUTARY 2
JUNCTION	344	323	7.80	CANAL 26
JUNCTION	365	345	7.60	TRIBUTARY 4
JUNCTION	463	438	14.40	TRIBUTARY 1
JUNCTION	473	469	13.70	DRAINAGE DITCH 22
JUNCTION	509	481	12.80	DRAINAGE DITCH 20
JUNCTION	559	535	10.10	HIGHWAY 190 (DRAINAGE DITCH 14)
JUNCTION	579	575	8.40	DRAINAGE DITCH 18
JUNCTION	599	584	7.80	DRAINAGE DITCH 19
JUNCTION	643	600	7.60	DRAINAGE DITCH 4
JUNCTION	672	666	5.20	TRIBUTARY 9
JUNCTION	696	679	4.40	TRIBUTARY 6
JUNCTION	705	697	4.20	TRIBUTARY 10
JUNCTION	721	714	3.20	TRIBUTARY 8
JUNCTION	729	726	2.60	MARINA 1
JUNCTION	748	729	2.50	MARINA 2
JUNCTION	806	796	5.10	DRAINAGE DITCH 16
JUNCTION	836	818	3.80	DRAINAGE DITCH 17
JUNCTION	865	860	1.30	CHANNEL 1
JUNCTION	878	867	1.00	CHANNEL 2
JUNCTION	888	761	1.10	BAYOU PAQUET
JUNCTION	899	432	0.80	BAYOU LIBERTY

ENDATA23

\$\$\$ DATA TYPE 24 (WASTELOAD DATA FOR FLOW, TEMPERATURE, SALINITY, AND CONSERVATIVES) \$\$\$

CARD TYPE	ELEMENT	RKILO	NAME	FLOW m³/s	FLOW cfs	FLOW MGD	TEMP deg C	SALIN ppt	COND	CL
WSTLD-1	1	24.20	V H SEAL APARTMENTS	0.00003	0.00116	0.001	30.00	0.39	753.600	63.300
WSTLD-1	40	20.30	GROUNDWATER	0.00550	0.19421	0.126	33.80	0.26	520.900	7.230
WSTLD-1	48	19.50	EAGLE LAKE MHP	0.00276	0.09746	0.063	30.00	0.40	774.000	34.400
WSTLD-1	63	18.00	J&K MANAGEMENT LLC	0.00001	0.00028	0.000	30.00	0.39	753.600	63.300
WSTLD-1	67	2.10	STONES THROW APTS	0.00084	0.02970	0.019	30.00	0.39	753.600	63.300
WSTLD-1	73	1.50	GOOD VALUE AUTO SALE	0.00000	0.00009	0.000	30.00	0.39	753.600	63.300
WSTLD-1	74	1.40	ADAMS MHP	0.00009	0.00325	0.002	30.00	0.39	753.600	63.300
WSTLD-1	79	0.90	WADLEIGH OFFSHORE	0.00004	0.00124	0.001	30.00	0.39	753.600	63.300
WSTLD-1	80	0.80	EXXONMOBIL #51367	0.00011	0.00387	0.002	30.00	0.39	753.600	63.300
WSTLD-1	81	0.70	LCR-M PLUMBING SUPP	0.00001	0.00018	0.000	30.00	0.39	753.600	63.300
WSTLD-1	83	0.50	BAKER-ELLIS-SHAMROCK	0.00002	0.00065	0.000	30.00	0.39	753.600	63.300
WSTLD-1	84	0.40	NORTHSHORE CHEMICAL	0.00000	0.00008	0.000	30.00	0.39	753.600	63.300
WSTLD-1	85	0.30	MANHEIM AUTO AUCTION	0.00003	0.00108	0.001	30.00	0.39	753.600	63.300
WSTLD-1	87	0.10	WADLEIGH FITNESS	0.00001	0.00046	0.000	30.00	0.39	753.600	63.300
WSTLD-1	102	0.80	JUBILEE #4815	0.00007	0.00263	0.002	30.00	0.39	753.600	63.300
WSTLD-1	107	0.30	JOHNSON-BLDG 2	0.00006	0.00216	0.001	30.00	0.39	753.600	63.300
WSTLD-1	119	2.10	CHARTER-JOHN'S AUTO	0.00001	0.00025	0.000	30.00	0.39	753.600	63.300
WSTLD-1	125	1.50	I-12 SHELL	0.00001	0.00025	0.000	30.00	0.39	753.600	63.300
WSTLD-1	135	0.50	ST TAM PAR SCH MAINT	0.00000	0.00015	0.000	30.00	0.39	753.600	63.300
WSTLD-1	136	0.40	J&D-VETS HEALTH/OMNI	0.00003	0.00118	0.001	30.00	0.39	753.600	63.300
WSTLD-1	183	1.00	GOOD SHEPHERD CHURCH	0.00005	0.00170	0.001	30.00	0.39	753.600	63.300
WSTLD-1	221	1.80	JOLLY APARTMENTS	0.00025	0.00882	0.006	30.00	0.39	753.600	63.300

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

WSTLD-1	222	1.70	PINEY RIDGE MHP	0.00041	0.01439	0.009	30.00	0.39	753.600	63.300
WSTLD-1	223	1.60	STARLING PLAZA	0.00013	0.00442	0.003	30.00	0.39	753.600	63.300
WSTLD-1	224	1.50	PO FOLKS SEAFOOD	0.00002	0.00076	0.000	30.00	0.39	753.600	63.300
WSTLD-1	227	1.20	SOUTH SEAS RSTRNT	0.00009	0.00302	0.002	30.00	0.39	753.600	63.300
WSTLD-1	228	1.10	SHADY PINES MHP	0.00046	0.01624	0.010	30.00	0.39	753.600	63.300
WSTLD-1	230	0.90	1421HWY190-ARMACOAT	0.00003	0.00099	0.001	30.00	0.39	753.600	63.300
WSTLD-1	231	0.80	FACDIR-STTAMBRACKETAG	0.00000	0.00012	0.000	30.00	0.39	753.600	63.300
WSTLD-1	232	0.70	NEW LIFE MINISTRIES	0.00002	0.00076	0.000	30.00	0.39	753.600	63.300
WSTLD-1	233	0.60	PEACE LUTH CHURCH	0.00010	0.00367	0.002	30.00	0.39	753.600	63.300
WSTLD-1	234	0.50	ERNEST WALDER	0.00002	0.00055	0.000	30.00	0.39	753.600	63.300
WSTLD-1	235	0.40	STOR N LOCK-TYMELESS	0.00001	0.00022	0.000	30.00	0.39	753.600	63.300
WSTLD-1	260	0.30	BONFOUCA SUPFND SITE	0.00063	0.02228	0.014	30.00	0.22	437.300	23.500
WSTLD-1	281	10.30	DOTD BNPCA BRIDGE	0.00000	0.00003	0.000	30.00	0.39	753.600	63.300
WSTLD-1	282	10.20	SLIDELL MARINE	0.00016	0.00572	0.004	30.00	0.39	753.600	63.300
WSTLD-1	284	0.30	ARC MECH CONTRACTORS	0.00000	0.00015	0.000	30.00	0.39	753.600	200.000
WSTLD-1	289	9.80	PEARL RIVER NAV	0.00015	0.00541	0.003	30.00	0.39	753.600	63.300
WSTLD-1	295	1.50	STP CONST BUILDING	0.00004	0.00124	0.001	30.00	0.39	753.600	63.300
WSTLD-1	346	1.90	ACADIAN GRDNS CONDOS	0.00033	0.01160	0.007	30.00	0.39	753.600	63.300
WSTLD-1	351	1.40	OAKWOOD ESTATES	0.00054	0.01918	0.012	30.00	0.39	753.600	63.300
WSTLD-1	389	5.20	COIN DU LESTIN SUB	0.00350	0.12376	0.080	30.00	0.32	628.100	54.300
WSTLD-1	439	2.40	NORTHSHORE SQUADRON	0.00000	0.00004	0.000	30.00	0.39	753.600	63.300
WSTLD-1	442	2.10	ANDY KNIGHT	0.00000	0.00006	0.000	30.00	0.39	753.600	63.300
WSTLD-1	470	0.30	THE MEADOWS SUB	0.01209	0.42698	0.276	30.00	0.55	1053.000	150.000
WSTLD-1	482	2.70	ROYAL GOLF CLUB	0.00019	0.00671	0.004	30.00	0.39	753.600	63.300
WSTLD-1	494	1.50	NATFINANCE-TEXTRON	0.00018	0.00619	0.004	30.00	0.39	753.600	63.300
WSTLD-1	495	1.40	GUARDIAN ANGELS	0.00004	0.00144	0.001	30.00	0.39	753.600	63.300
WSTLD-1	498	1.10	OAKMONT SUBDIVISIO	0.00309	0.10922	0.071	30.00	0.32	619.500	47.000
WSTLD-1	536	2.30	ASSUNTA'S RESTAURANT	0.00013	0.00448	0.003	30.00	0.39	753.600	63.300
WSTLD-1	544	1.50	INDIAN HILLS RV PARK	0.00035	0.01218	0.008	30.00	0.39	753.600	63.300
WSTLD-1	546	1.30	J&J AUTO BROKERS	0.00000	0.00006	0.000	30.00	0.39	753.600	63.300
WSTLD-1	548	1.10	7THDAY & DOLLAR GEN	0.00006	0.00212	0.001	30.00	0.39	753.600	63.300
WSTLD-1	550	0.90	OMNI STORAGE VI	0.00001	0.00046	0.000	30.00	0.39	753.600	63.300
WSTLD-1	551	0.80	ABC SUPPLY CO	0.00001	0.00022	0.000	30.00	0.39	753.600	63.300
WSTLD-1	552	0.70	LION CONSULTING	0.00000	0.00006	0.000	30.00	0.39	753.600	63.300
WSTLD-1	553	0.60	CHILL RITE	0.00001	0.00034	0.000	30.00	0.39	753.600	63.300
WSTLD-1	555	0.40	HERRON-2315/17/19	0.00002	0.00088	0.001	30.00	0.39	753.600	63.300
WSTLD-1	556	0.30	THOMGROC-ST POL JURY	0.00000	0.00015	0.000	30.00	0.39	753.600	63.300
WSTLD-1	557	0.20	PITSTOP3-REFLECTMIR	0.00006	0.00216	0.001	30.00	0.39	753.600	63.300
WSTLD-1	576	0.30	ALL AM ELKS LODGE	0.00007	0.00248	0.002	30.00	0.39	753.600	63.300
WSTLD-1	585	1.40	LAKE CASTLE SCHOOL	0.00038	0.01346	0.009	30.00	0.39	753.600	63.300
WSTLD-1	601	4.20	BLUEBELL-NULITE	0.00004	0.00133	0.001	30.00	0.39	753.600	63.300
WSTLD-1	602	4.10	ALBERS AC & HEATING	0.00001	0.00018	0.000	30.00	0.39	753.600	63.300
WSTLD-1	611	3.20	BAKER SALES WRHSE	0.00000	0.00006	0.000	30.00	0.39	753.600	63.300
WSTLD-1	614	2.90	CLECO SERVICE CENTER	0.00001	0.00031	0.000	30.00	0.39	753.600	63.300
WSTLD-1	615	2.80	G&S-UNITED MEDICAL	0.00002	0.00055	0.000	30.00	0.39	753.600	63.300
WSTLD-1	616	2.70	AIRGAS-HANNA-SUNBELT	0.00069	0.02444	0.016	30.00	0.39	753.600	63.300
WSTLD-1	617	2.60	RJD CONTRACTORS	0.00000	0.00003	0.000	30.00	0.39	753.600	63.300
WSTLD-1	619	2.40	M&R-WAGNERSHOPCTR	0.00009	0.00308	0.002	30.00	0.39	753.600	63.300
WSTLD-1	620	2.30	CALWES CENTER	0.00018	0.00641	0.004	30.00	0.39	753.600	63.300
WSTLD-1	621	2.20	BEAU'S-LA LUMBER	0.00002	0.00083	0.001	30.00	0.39	753.600	63.300
WSTLD-1	625	1.80	ADVANCE AUTO	0.00000	0.00015	0.000	30.00	0.39	753.600	63.300
WSTLD-1	633	1.00	HUNTWYCK VILLAGE	0.01218	0.43008	0.278	30.00	0.30	582.300	52.500
WSTLD-1	667	0.50	B LIBERTY WATER ASSN	0.00001	0.00028	0.000	30.00	0.39	753.600	63.300
WSTLD-1	680	1.60	THOMPSON RD BAPTIST	0.00004	0.00124	0.001	30.00	0.39	753.600	63.300
WSTLD-1	698	0.70	LIBERTY FOOD STORE	0.00002	0.00088	0.001	30.00	0.39	753.600	63.300
WSTLD-1	715	0.60	A-1 REMODELING & BLD	0.00001	0.00031	0.000	30.00	0.39	753.600	63.300
WSTLD-1	723	3.00	ST GENEVIEVE CATH CH	0.00013	0.00464	0.003	30.00	0.39	753.600	63.300
WSTLD-1	728	0.10	BAYOU LIBERTY MARINA	0.00000	0.00003	0.000	30.00	0.39	753.600	63.300
WSTLD-1	746	0.20	A BONFOUCA MARINA	0.00004	0.00133	0.001	30.00	0.39	753.600	63.300
WSTLD-1	762	8.60	WASTE MGMT OF LA	0.00002	0.00077	0.000	30.00	0.39	753.600	63.300
WSTLD-1	763	8.50	ACALIGN-ALLAM-CT-M&D	0.00001	0.00028	0.000	30.00	0.39	753.600	63.300
WSTLD-1	767	8.10	K-BAR-B YOUTH RANCH	0.00010	0.00356	0.002	30.00	0.39	753.600	63.300
WSTLD-1	776	7.20	BAYOU PAQUET HEADWAT	0.00283	0.10000	0.065	33.80	0.26	520.900	7.230
WSTLD-1	797	0.90	ACTS 1 TAX SERVICE	0.00000	0.00009	0.000	30.00	0.39	753.600	63.300
WSTLD-1	819	1.70	TIMBER RIDGE SUB	0.00195	0.06869	0.044	30.00	0.45	864.700	41.600

ENDATA24

\$\$\$ DATA TYPE 25 (WASTELOAD DATA FOR DO, BOD, AND NITROGEN) \$\$\$

CARD TYPE	ELEMENT	NAME	DO	BOD	% BOD RMVL	NBOD	% NITRIF	BOD2
-----------	---------	------	----	-----	---------------	------	-------------	------

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

			mg/L	mg/L		mg/L	mg/L		mg/L	mg/L
WSTLD-2	1	V H SEAL APARTMENTS	2.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00
WSTLD-2	40	GROUNDWATER	6.53	2.16	0.00	0.95	0.00	0.00	0.00	0.00
WSTLD-2	48	EAGLE LAKE MHP	6.40	6.81	0.00	2.41	0.00	0.00	0.00	0.00
WSTLD-2	63	J&K MANAGEMENT LLC	2.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00
WSTLD-2	67	STONES THROW APTS	2.00	11.50	0.00	11.50	0.00	0.00	0.00	0.00
WSTLD-2	73	GOOD VALUE AUTO SALE	2.00	13.80	0.00	13.80	0.00	0.00	0.00	0.00
WSTLD-2	74	ADAMS MHP	2.00	18.40	0.00	18.40	0.00	0.00	0.00	0.00
WSTLD-2	79	WADLEIGH OFFSHORE	2.00	23.00	0.00	23.00	0.00	0.00	0.00	0.00
WSTLD-2	80	EXXONMOBIL #51367	2.00	25.30	0.00	25.30	0.00	0.00	0.00	0.00
WSTLD-2	81	LCR-M PLUMBING SUPP	2.00	16.10	0.00	16.10	0.00	0.00	0.00	0.00
WSTLD-2	83	BAKER-BLLIS-SHAMROCK	2.00	25.07	0.00	25.07	0.00	0.00	0.00	0.00
WSTLD-2	84	NORTHSHORE CHEMICAL	2.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00
WSTLD-2	85	MANHEIM AUTO AUCTION	2.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00
WSTLD-2	87	WADLEIGH FITNESS	2.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00
WSTLD-2	102	JUBILEE #4815	2.00	23.00	0.00	23.00	0.00	0.00	0.00	0.00
WSTLD-2	107	JOHNSON-BLDG 2	2.00	40.25	0.00	40.25	0.00	0.00	0.00	0.00
WSTLD-2	119	CHARTER-JOHN'S AUTO	2.00	77.05	0.00	77.05	0.00	0.00	0.00	0.00
WSTLD-2	125	I-12 SHELL	2.00	18.40	0.00	18.40	0.00	0.00	0.00	0.00
WSTLD-2	135	ST TAM PAR SCH MAINT	2.00	16.10	0.00	16.10	0.00	0.00	0.00	0.00
WSTLD-2	136	J&D-VETS HEALTH/OMNI	2.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00
WSTLD-2	183	GOOD SHEPHERD CHURCH	2.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00
WSTLD-2	221	JOLLY APARTMENTS	2.00	25.30	0.00	25.30	0.00	0.00	0.00	0.00
WSTLD-2	222	PINEY RIDGE MHP	2.00	6.90	0.00	6.90	0.00	0.00	0.00	0.00
WSTLD-2	223	STARLING PLAZA	2.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00
WSTLD-2	224	PO FOLKS SEAFOOD	2.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00
WSTLD-2	227	SOUTH SEAS RSTRNT	2.00	621.00	0.00	621.00	0.00	0.00	0.00	0.00
WSTLD-2	228	SHADY PINES MHP	2.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00
WSTLD-2	230	1421HWY190-ARMACOAT	2.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00
WSTLD-2	231	FACDIR-STTAMBRACKETAG	2.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00
WSTLD-2	232	NEW LIFE MINISTRIES	2.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00
WSTLD-2	233	PEACE LUTH CHURCH	2.00	92.00	0.00	92.00	0.00	0.00	0.00	0.00
WSTLD-2	234	ERNEST WALDER	2.00	25.30	0.00	25.30	0.00	0.00	0.00	0.00
WSTLD-2	235	STOR N LOCK-TYMELESS	2.00	55.20	0.00	55.20	0.00	0.00	0.00	0.00
WSTLD-2	260	BONFOUCA SUPFND SITE	7.10	1.33	0.00	1.74	0.00	0.00	0.00	0.00
WSTLD-2	281	DOTD BNFC A BRIDGE	2.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00
WSTLD-2	282	SLIDELL MARINE	2.00	18.40	0.00	18.40	0.00	0.00	0.00	0.00
WSTLD-2	284	ARC MECH CONTRACTORS	2.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00
WSTLD-2	289	PEARL RIVER NAV	2.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00
WSTLD-2	295	STP CONST BUILDING	2.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00
WSTLD-2	346	ACADIAN GRDNS CONDOS	2.00	34.50	0.00	34.50	0.00	0.00	0.00	0.00
WSTLD-2	351	OAKWOOD ESTATES	2.00	2.30	0.00	2.30	0.00	0.00	0.00	0.00
WSTLD-2	389	COIN DU LESTIN SUB	3.60	3.10	0.00	2.41	0.00	0.00	0.00	0.00
WSTLD-2	439	NORTHSHORE SQUADRON	2.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00
WSTLD-2	442	ANDY KNIGHT	2.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00
WSTLD-2	470	THE MEADOWS SUB	4.97	10.17	0.00	3.01	0.00	0.00	0.00	0.00
WSTLD-2	482	ROYAL GOLF CLUB	2.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00
WSTLD-2	494	NATFINANCE-TEXTRON	2.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00
WSTLD-2	495	GUARDIAN ANGELS	2.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00
WSTLD-2	498	OAKMONT SUBDIVISIO	7.40	6.20	0.00	2.80	0.00	0.00	0.00	0.00
WSTLD-2	536	ASSUNTA'S RESTAURANT	2.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00
WSTLD-2	544	INDIAN HILLS RV PARK	2.00	39.10	0.00	39.10	0.00	0.00	0.00	0.00
WSTLD-2	546	J&J AUTO BROKERS	2.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00
WSTLD-2	548	7THDAY & DOLLAR GEN	2.00	56.93	0.00	56.93	0.00	0.00	0.00	0.00
WSTLD-2	550	OMNI STORAGE VI	2.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00
WSTLD-2	551	ABC SUPPLY CO	2.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00
WSTLD-2	552	LION CONSULTING	2.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00
WSTLD-2	553	CHILL RITE	2.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00
WSTLD-2	555	HERRON-2315/17/19	2.00	57.39	0.00	57.39	0.00	0.00	0.00	0.00
WSTLD-2	556	THOMGROC-ST POL JURY	2.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00
WSTLD-2	557	PITSTOP3-REFLECTMIR	2.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00
WSTLD-2	576	ALL AM ELKS LODGE	2.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00
WSTLD-2	585	LAKE CASTLE SCHOOL	2.00	46.00	0.00	46.00	0.00	0.00	0.00	0.00
WSTLD-2	601	BLUEBELL-NULITE	2.00	145.48	0.00	145.48	0.00	0.00	0.00	0.00
WSTLD-2	602	ALBERS AC & HEATING	2.00	20.70	0.00	20.70	0.00	0.00	0.00	0.00
WSTLD-2	611	BAKER SALES WRHSE	2.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00
WSTLD-2	614	CLECO SERVICE CENTER	2.00	57.50	0.00	57.50	0.00	0.00	0.00	0.00
WSTLD-2	615	G&S-UNITED MEDICAL	2.00	21.85	0.00	21.85	0.00	0.00	0.00	0.00
WSTLD-2	616	AIRGAS-HANNA-SUNBELT	2.00	36.57	0.00	36.57	0.00	0.00	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

WSTLD-2	617	RJD CONTRACTORS	2.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00
WSTLD-2	619	M&R-WAGNERSHOPCTR	2.00	11.50	0.00	11.50	0.00	0.00	0.00	0.00
WSTLD-2	620	CALWES CENTER	2.00	16.10	0.00	16.10	0.00	0.00	0.00	0.00
WSTLD-2	621	BEAU'S-LA LUMBER	2.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00
WSTLD-2	625	ADVANCE AUTO	2.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00
WSTLD-2	633	HUNTWYCK VILLAGE	7.10	4.68	0.00	3.01	0.00	0.00	0.00	0.00
WSTLD-2	667	B LIBERTY WATER ASSN	2.00	46.00	0.00	46.00	0.00	0.00	0.00	0.00
WSTLD-2	680	THOMPSON RD BAPTIST	2.00	32.20	0.00	32.20	0.00	0.00	0.00	0.00
WSTLD-2	698	LIBERTY FOOD STORE	2.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00
WSTLD-2	715	A-1 REMODELING & BLD	2.00	25.30	0.00	25.30	0.00	0.00	0.00	0.00
WSTLD-2	723	ST GENEVIEVE CATH CH	2.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00
WSTLD-2	728	BAYOU LIBERTY MARINA	2.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00
WSTLD-2	746	A BONFOUCA MARINA	2.00	128.80	0.00	128.80	0.00	0.00	0.00	0.00
WSTLD-2	762	WASTE MGMT OF LA	2.00	27.60	0.00	27.60	0.00	0.00	0.00	0.00
WSTLD-2	763	ACALIGN-ALLAM-CT-M&D	2.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00
WSTLD-2	767	K-BAR-B YOUTH RANCH	2.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00
WSTLD-2	776	BAYOU PAQUET HEADWAT	6.53	2.16	0.00	0.95	0.00	0.00	0.00	0.00
WSTLD-2	797	ACTS 1 TAX SERVICE	2.00	6.90	0.00	6.90	0.00	0.00	0.00	0.00
WSTLD-2	819	TIMBER RIDGE SUB	5.00	85.00	0.00	2.41	0.00	0.00	0.00	0.00

ENDATA25

\$\$\$ DATA TYPE 26 (WASTELOAD DATA FOR PHOSPHORUS, PHYTOPLANTON, COLIFORM, AND NONCONSERVATIVES) \$\$\$

CARD TYPE	ELEMENT	NAME	PO4-P mg/L	PHYTO		NCM	ORG-P mg/L
				CHL A µg/L	COLI #/100mL		
WSTLD-3	1	V H SEAL APARTMENTS	0.00	0.00	0.00	0.00	0.00
WSTLD-3	40	GROUNDWATER	0.00	0.00	0.00	0.00	0.00
WSTLD-3	48	EAGLE LAKE MHP	0.00	0.00	0.00	0.00	0.00
WSTLD-3	63	J&K MANAGEMENT LLC	0.00	0.00	0.00	0.00	0.00
WSTLD-3	67	STONES THROW APTS	0.00	0.00	0.00	0.00	0.00
WSTLD-3	73	GOOD VALUE AUTO SALE	0.00	0.00	0.00	0.00	0.00
WSTLD-3	74	ADAMS MHP	0.00	0.00	0.00	0.00	0.00
WSTLD-3	79	WADLEIGH OFFSHORE	0.00	0.00	0.00	0.00	0.00
WSTLD-3	80	EXXONMOBIL #51367	0.00	0.00	0.00	0.00	0.00
WSTLD-3	81	LCR-M PLUMBING SUPP	0.00	0.00	0.00	0.00	0.00
WSTLD-3	83	BAKER-ELLIS-SHAMROCK	0.00	0.00	0.00	0.00	0.00
WSTLD-3	84	NORTHSHORE CHEMICAL	0.00	0.00	0.00	0.00	0.00
WSTLD-3	85	MANHEIM AUTO AUCTION	0.00	0.00	0.00	0.00	0.00
WSTLD-3	87	WADLEIGH FITNESS	0.00	0.00	0.00	0.00	0.00
WSTLD-3	102	JUBILEE #4815	0.00	0.00	0.00	0.00	0.00
WSTLD-3	107	JOHNSON-BLDG 2	0.00	0.00	0.00	0.00	0.00
WSTLD-3	119	CHARTER-JOHN'S AUTO	0.00	0.00	0.00	0.00	0.00
WSTLD-3	125	I-12 SHELL	0.00	0.00	0.00	0.00	0.00
WSTLD-3	135	ST TAM PAR SCH MAINT	0.00	0.00	0.00	0.00	0.00
WSTLD-3	136	J&D-VETS HEALTH/OMNI	0.00	0.00	0.00	0.00	0.00
WSTLD-3	183	GOOD SHEPHERD CHURCH	0.00	0.00	0.00	0.00	0.00
WSTLD-3	221	JOLLY APARTMENTS	0.00	0.00	0.00	0.00	0.00
WSTLD-3	222	PINEY RIDGE MHP	0.00	0.00	0.00	0.00	0.00
WSTLD-3	223	STARLING PLAZA	0.00	0.00	0.00	0.00	0.00
WSTLD-3	224	PO FOLKS SEAFOOD	0.00	0.00	0.00	0.00	0.00
WSTLD-3	227	SOUTH SEAS RSTRNT	0.00	0.00	0.00	0.00	0.00
WSTLD-3	228	SHADY PINES MHP	0.00	0.00	0.00	0.00	0.00
WSTLD-3	230	1421HWY190-ARMACAT	0.00	0.00	0.00	0.00	0.00
WSTLD-3	231	FACDIR-STTAMBRACKETAG	0.00	0.00	0.00	0.00	0.00
WSTLD-3	232	NEW LIFE MINISTRIES	0.00	0.00	0.00	0.00	0.00
WSTLD-3	233	PEACE LUTH CHURCH	0.00	0.00	0.00	0.00	0.00
WSTLD-3	234	ERNEST WALDER	0.00	0.00	0.00	0.00	0.00
WSTLD-3	235	STOR N LOCK-TYMELESS	0.00	0.00	0.00	0.00	0.00
WSTLD-3	260	BONFOUCA SUPFND SITE	0.00	0.00	0.00	0.00	0.00
WSTLD-3	281	DOTD BNFCA BRIDGE	0.00	0.00	0.00	0.00	0.00
WSTLD-3	282	SLIDELL MARINE	0.00	0.00	0.00	0.00	0.00
WSTLD-3	284	ARC MECH CONTRACTORS	0.00	0.00	0.00	0.00	0.00
WSTLD-3	289	PEARL RIVER NAV	0.00	0.00	0.00	0.00	0.00
WSTLD-3	295	STP CONST BUILDING	0.00	0.00	0.00	0.00	0.00
WSTLD-3	346	ACADIAN GRDNS CONDOS	0.00	0.00	0.00	0.00	0.00
WSTLD-3	351	OAKWOOD ESTATES	0.00	0.00	0.00	0.00	0.00
WSTLD-3	389	COIN DU LESTIN SUB	0.00	0.00	0.00	0.00	0.00
WSTLD-3	439	NORTHSHORE SQUADRON	0.00	0.00	0.00	0.00	0.00
WSTLD-3	442	ANDY KNIGHT	0.00	0.00	0.00	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

WSTLD-3	470	THE MEADOWS SUB	0.00	0.00	0.00	0.00	0.00
WSTLD-3	482	ROYAL GOLF CLUB	0.00	0.00	0.00	0.00	0.00
WSTLD-3	494	NATFINANCE-TEXTRON	0.00	0.00	0.00	0.00	0.00
WSTLD-3	495	GUARDIAN ANGELS	0.00	0.00	0.00	0.00	0.00
WSTLD-3	498	OAKMONT SUBDIVISIO	0.00	0.00	0.00	0.00	0.00
WSTLD-3	536	ASSUNTA'S RESTAURANT	0.00	0.00	0.00	0.00	0.00
WSTLD-3	544	INDIAN HILLS RV PARK	0.00	0.00	0.00	0.00	0.00
WSTLD-3	546	J&J AUTO BROKERS	0.00	0.00	0.00	0.00	0.00
WSTLD-3	548	7THDAY & DOLLAR GEN	0.00	0.00	0.00	0.00	0.00
WSTLD-3	550	OMNI STORAGE VI	0.00	0.00	0.00	0.00	0.00
WSTLD-3	551	ABC SUPPLY CO	0.00	0.00	0.00	0.00	0.00
WSTLD-3	552	LION CONSULTING	0.00	0.00	0.00	0.00	0.00
WSTLD-3	553	CHILL RITE	0.00	0.00	0.00	0.00	0.00
WSTLD-3	555	HERRON-2315/17/19	0.00	0.00	0.00	0.00	0.00
WSTLD-3	556	THOMGROC-ST POL JURY	0.00	0.00	0.00	0.00	0.00
WSTLD-3	557	PITSTOP3-REFLECTMIR	0.00	0.00	0.00	0.00	0.00
WSTLD-3	576	ALL AM ELKS LODGE	0.00	0.00	0.00	0.00	0.00
WSTLD-3	585	LAKE CASTLE SCHOOL	0.00	0.00	0.00	0.00	0.00
WSTLD-3	601	BLUEBELL-NULITE	0.00	0.00	0.00	0.00	0.00
WSTLD-3	602	ALBERS AC & HEATING	0.00	0.00	0.00	0.00	0.00
WSTLD-3	611	BAKER SALES WRHSE	0.00	0.00	0.00	0.00	0.00
WSTLD-3	614	CLECO SERVICE CENTER	0.00	0.00	0.00	0.00	0.00
WSTLD-3	615	G&S-UNITED MEDICAL	0.00	0.00	0.00	0.00	0.00
WSTLD-3	616	AIRGAS-HANNA-SUNBELT	0.00	0.00	0.00	0.00	0.00
WSTLD-3	617	RJD CONTRACTORS	0.00	0.00	0.00	0.00	0.00
WSTLD-3	619	M&R-WAGNERSHOPCTR	0.00	0.00	0.00	0.00	0.00
WSTLD-3	620	CALWES CENTER	0.00	0.00	0.00	0.00	0.00
WSTLD-3	621	BEAU'S-LA LUMBER	0.00	0.00	0.00	0.00	0.00
WSTLD-3	625	ADVANCE AUTO	0.00	0.00	0.00	0.00	0.00
WSTLD-3	633	HUNTWYCK VILLAGE	0.00	0.00	0.00	0.00	0.00
WSTLD-3	667	B LIBERTY WATER ASSN	0.00	0.00	0.00	0.00	0.00
WSTLD-3	680	THOMPSON RD BAPTIST	0.00	0.00	0.00	0.00	0.00
WSTLD-3	698	LIBERTY FOOD STORE	0.00	0.00	0.00	0.00	0.00
WSTLD-3	715	A-1 REMODELING & BLD	0.00	0.00	0.00	0.00	0.00
WSTLD-3	723	ST GENEVIEVE CATH CH	0.00	0.00	0.00	0.00	0.00
WSTLD-3	728	BAYOU LIBERTY MARINA	0.00	0.00	0.00	0.00	0.00
WSTLD-3	746	A BONFOUCA MARINA	0.00	0.00	0.00	0.00	0.00
WSTLD-3	762	WASTE MGMT OF LA	0.00	0.00	0.00	0.00	0.00
WSTLD-3	763	ACALIGN-ALLAM-CT-M&D	0.00	0.00	0.00	0.00	0.00
WSTLD-3	767	K-BAR-B YOUTH RANCH	0.00	0.00	0.00	0.00	0.00
WSTLD-3	776	BAYOU PAQUET HEADWAT	0.00	0.00	0.00	0.00	0.00
WSTLD-3	797	ACTS 1 TAX SERVICE	0.00	0.00	0.00	0.00	0.00
WSTLD-3	819	TIMBER RIDGE SUB	0.00	0.00	0.00	0.00	0.00
ENDATA26							

\$\$\$ DATA TYPE 27 (LOWER BOUNDARY CONDITIONS) \$\$\$

CARD TYPE	CONSTITUENT	CONCENTRATION		
LOWER BC	TEMPERATURE	=	29.980	deg C
LOWER BC	SALINITY	=	3.940	ppt
LOWER BC	CONSERVATIVE MATERIAL I	=	7096.000	
LOWER BC	CONSERVATIVE MATERIAL II	=	2200.000	
LOWER BC	DISSOLVED OXYGEN	=	6.800	mg/L
LOWER BC	BOD1 BIOCHEMICAL OXYGEN DEMAND	=	7.820	mg/L
LOWER BC	BOD2 BIOCHEMICAL OXYGEN DEMAND	=	0.000	mg/L
LOWER BC	PHYTOPLANKTON	=	5.550	µg/L
LOWER BC	COLIFORM	=	0.000	#/100 mL
LOWER BC	NONCONSERVATIVE MATERIAL	=	0.000	
LOWER BC	NBOD	=	1.800	mg/L
ENDATA27				

\$\$\$ DATA TYPE 28 (DAM DATA) \$\$\$

CARD TYPE	ELEMENT	NAME	EQN	"A"	"B"	"H"
ENDATA28						

\$\$\$ DATA TYPE 29 (SENSITIVITY ANALYSIS DATA) \$\$\$

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

CARD TYPE	PARAMETER	COL 1	COL 2	COL 3	COL 4	COL 5	COL 6	COL 7	COL 8
SENSITIV	SOD	30.0	-30.0	0.0	0.0	0.0	0.0	0.0	0.0
SENSITIV	ARATIO	30.0	-30.0	0.0	0.0	0.0	0.0	0.0	0.0
SENSITIV	VELOCITY	30.0	-30.0	0.0	0.0	0.0	0.0	0.0	0.0
SENSITIV	TEMPERAT	2.0	-2.0	0.0	0.0	0.0	0.0	0.0	0.0
SENSITIV	BOD1 DEC	30.0	-30.0	0.0	0.0	0.0	0.0	0.0	0.0
SENSITIV	BOD1 SET	30.0	-30.0	0.0	0.0	0.0	0.0	0.0	0.0
SENSITIV	NBOD DEC	30.0	-30.0	0.0	0.0	0.0	0.0	0.0	0.0
SENSITIV	NBOD SET	30.0	-30.0	0.0	0.0	0.0	0.0	0.0	0.0
SENSITIV	DISPERSI	30.0	-30.0	0.0	0.0	0.0	0.0	0.0	0.0
SENSITIV	REABRATI	30.0	-30.0	0.0	0.0	0.0	0.0	0.0	0.0
SENSITIV	HDW FLOW	30.0	-30.0	0.0	0.0	0.0	0.0	0.0	0.0
SENSITIV	HDW DO	30.0	-30.0	0.0	0.0	0.0	0.0	0.0	0.0
SENSITIV	HDW BOD1	30.0	-30.0	0.0	0.0	0.0	0.0	0.0	0.0
SENSITIV	HDW NBOD	30.0	-30.0	0.0	0.0	0.0	0.0	0.0	0.0
SENSITIV	DEPTH	30.0	-30.0	0.0	0.0	0.0	0.0	0.0	0.0
SENSITIV	WSL FLOW	30.0	-30.0	0.0	0.0	0.0	0.0	0.0	0.0
SENSITIV	WSL TEMP	2.0	-2.0	0.0	0.0	0.0	0.0	0.0	0.0
SENSITIV	WSL DO	30.0	-30.0	0.0	0.0	0.0	0.0	0.0	0.0
SENSITIV	WSL BOD1	30.0	-30.0	0.0	0.0	0.0	0.0	0.0	0.0
SENSITIV	WSL NBOD	30.0	-30.0	0.0	0.0	0.0	0.0	0.0	0.0
SENSITIV	LBC TEMP	2.0	-2.0	0.0	0.0	0.0	0.0	0.0	0.0
SENSITIV	LBC DO	30.0	-30.0	0.0	0.0	0.0	0.0	0.0	0.0
SENSITIV	LBC BOD1	30.0	-30.0	0.0	0.0	0.0	0.0	0.0	0.0
SENSITIV	LBC NBOD	30.0	-30.0	0.0	0.0	0.0	0.0	0.0	0.0
ENDATA29									

\$\$\$ DATA TYPE 30 (PLOT CONTROL CARDS) \$\$\$

PLOT1
RCH 1 2 3 4 6 8 10 11 12 17 19 20 22 24 27 28 30 33 34 35 36 37 91
PLOT2
RCH 13 15 16
PLOT3
RCH 38 40 42 44 45 47 48 50 52 54 55 56 57 60 63 66 67 70 72 74 90
PLOT4
RCH 75 76 78 80 81 82 83 85 88 89
PLOT5
RCH 41
PLOT6
RCH 43
PLOT7
RCH 53
PLOT8
RCH 79
PLOT9
RCH 5
ENDATA30

\$\$\$ DATA TYPE 31 (OVERLAY PLOT DATA) \$\$\$

OVERLAY1 VINCENT-BONFOUCA.OVL
OVERLAY2 UPPER_BONFOUCA.OVL
OVERLAY3 LIBERTY.OVL
OVERLAY4 PAQUET.OVL
OVERLAY5 MEADOWS.OVL
OVERLAY6 OAKMONT.OVL
OVERLAY7 HWY 190 E - LIBERTY.OVL
OVERLAY8 TIMBER_RIDGE.OVL
OVERLAY9 BROWNS_VILLAGE.OVL
ENDATA31

.....NO ERRORS DETECTED IN INPUT DATA
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN 49 ITERATIONS

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

.....CONSTITUENT CALCULATIONS COMPLETED
GRAPHICS DATA FOR PLOT 1 WRITTEN TO UNIT 11
GRAPHICS DATA FOR PLOT 2 WRITTEN TO UNIT 12
GRAPHICS DATA FOR PLOT 3 WRITTEN TO UNIT 13
GRAPHICS DATA FOR PLOT 4 WRITTEN TO UNIT 14
GRAPHICS DATA FOR PLOT 5 WRITTEN TO UNIT 15
GRAPHICS DATA FOR PLOT 6 WRITTEN TO UNIT 16
GRAPHICS DATA FOR PLOT 7 WRITTEN TO UNIT 17
GRAPHICS DATA FOR PLOT 8 WRITTEN TO UNIT 18
GRAPHICS DATA FOR PLOT 9 WRITTEN TO UNIT 19

FINAL REPORT B VINCENT & BONFOUCA
 REACH NO. 1 DRAINAGE DITCH 1

WATER QUALITY/HYDRAULIC MODEL FOR:
 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
1	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	2.20	0.00	2.20	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
1	WSTLD	0.00003	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
1	24.20	24.10	0.00032	10.4	0.00588	0.20	0.20	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
2	24.10	24.00	0.00032	10.4	0.00588	0.20	0.39	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
3	24.00	23.90	0.00032	10.4	0.00588	0.20	0.59	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
4	23.90	23.80	0.00032	10.4	0.00588	0.20	0.79	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
5	23.80	23.70	0.00032	10.4	0.00588	0.20	0.98	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
6	23.70	23.60	0.00032	10.4	0.00588	0.20	1.18	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
7	23.60	23.50	0.00032	10.4	0.00588	0.20	1.38	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
8	23.50	23.40	0.00032	10.4	0.00588	0.20	1.58	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
9	23.40	23.30	0.00032	10.4	0.00588	0.20	1.77	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
10	23.30	23.20	0.00032	10.4	0.00588	0.20	1.97	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
11	23.20	23.10	0.00032	10.4	0.00588	0.20	2.17	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
12	23.10	23.00	0.00032	10.4	0.00588	0.20	2.36	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
13	23.00	22.90	0.00032	10.4	0.00588	0.20	2.56	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
14	22.90	22.80	0.00032	10.4	0.00588	0.20	2.76	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
15	22.80	22.70	0.00032	10.4	0.00588	0.20	2.95	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
16	22.70	22.60	0.00032	10.4	0.00588	0.20	3.15	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
17	22.60	22.50	0.00032	10.4	0.00588	0.20	3.35	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
18	22.50	22.40	0.00032	10.4	0.00588	0.20	3.54	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
19	22.40	22.30	0.00032	10.4	0.00588	0.20	3.74	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
20	22.30	22.20	0.00032	10.4	0.00588	0.20	3.94	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
21	22.20	22.10	0.00032	10.4	0.00588	0.20	4.14	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
22	22.10	22.00	0.00032	10.4	0.00588	0.20	4.33	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
23	22.00	21.90	0.00032	10.4	0.00588	0.20	4.53	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
24	21.90	21.80	0.00032	10.4	0.00588	0.20	4.73	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
25	21.80	21.70	0.00032	10.4	0.00588	0.20	4.92	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
26	21.70	21.60	0.00032	10.4	0.00588	0.20	5.12	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
27	21.60	21.50	0.00032	10.4	0.00588	0.20	5.32	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
28	21.50	21.40	0.00032	10.4	0.00588	0.20	5.51	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
29	21.40	21.30	0.00032	10.4	0.00588	0.20	5.71	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
30	21.30	21.20	0.00032	10.4	0.00588	0.20	5.91	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
31	21.20	21.10	0.00032	10.4	0.00588	0.20	6.10	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
32	21.10	21.00	0.00032	10.4	0.00588	0.20	6.30	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
33	21.00	20.90	0.00032	10.4	0.00588	0.20	6.50	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
34	20.90	20.80	0.00032	10.4	0.00588	0.20	6.70	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
35	20.80	20.70	0.00032	10.4	0.00588	0.20	6.89	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
36	20.70	20.60	0.00032	10.4	0.00588	0.20	7.09	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
37	20.60	20.50	0.00032	10.4	0.00588	0.20	7.29	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

38	20.50	20.40	0.00032	10.4	0.00588	0.20	7.48	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
39	20.40	20.30	0.00032	10.4	0.00588	0.20	7.68	0.05	1.03	5.37	103.32	0.05	0.00	0.000	0.000	0.006
TOT							7.68				209.56					
AVG					0.0059				0.05	1.03						0.05

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR 1/da	BOD2 DECAT 1/da	BOD2 SETT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR	ORG-N SETT 1/da	NH3-N DECAT 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da	
1	24.100	7.53	17.33	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.94	1.43	1.43	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	24.000	7.52	17.36	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.95	1.37	1.37	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	23.900	7.51	17.39	0.13	1.23	0.00	0.00	0.00	0.00	0.00	0.96	1.32	1.32	0.06	1.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	23.800	7.50	17.42	0.13	1.23	0.00	0.00	0.00	0.00	0.00	0.96	1.28	1.28	0.06	1.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	23.700	7.48	17.45	0.13	1.23	0.00	0.00	0.00	0.00	0.00	0.97	1.25	1.25	0.06	1.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	23.600	7.47	17.48	0.13	1.24	0.00	0.00	0.00	0.00	0.00	0.97	1.23	1.23	0.06	1.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	23.500	7.46	17.50	0.13	1.24	0.00	0.00	0.00	0.00	0.00	0.98	1.21	1.21	0.06	1.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	23.400	7.45	17.53	0.13	1.24	0.00	0.00	0.00	0.00	0.00	0.99	1.20	1.20	0.06	1.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	23.300	7.43	17.56	0.13	1.24	0.00	0.00	0.00	0.00	0.00	0.99	1.19	1.19	0.06	1.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	23.200	7.42	17.59	0.13	1.25	0.00	0.00	0.00	0.00	0.00	1.00	1.19	1.19	0.06	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	23.100	7.41	17.62	0.13	1.25	0.00	0.00	0.00	0.00	0.00	1.00	1.18	1.18	0.06	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	23.000	7.40	17.65	0.13	1.25	0.00	0.00	0.00	0.00	0.00	1.01	1.18	1.18	0.06	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	22.900	7.38	17.68	0.13	1.26	0.00	0.00	0.00	0.00	0.00	1.02	1.18	1.18	0.06	1.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	22.800	7.37	17.71	0.13	1.26	0.00	0.00	0.00	0.00	0.00	1.02	1.19	1.19	0.06	1.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	22.700	7.36	17.74	0.14	1.26	0.00	0.00	0.00	0.00	0.00	1.03	1.19	1.19	0.06	1.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	22.600	7.35	17.77	0.14	1.26	0.00	0.00	0.00	0.00	0.00	1.04	1.19	1.19	0.06	1.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	22.500	7.34	17.80	0.14	1.27	0.00	0.00	0.00	0.00	0.00	1.04	1.20	1.20	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	22.400	7.32	17.83	0.14	1.27	0.00	0.00	0.00	0.00	0.00	1.05	1.20	1.20	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	22.300	7.31	17.86	0.14	1.27	0.00	0.00	0.00	0.00	0.00	1.06	1.21	1.21	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	22.200	7.30	17.89	0.14	1.28	0.00	0.00	0.00	0.00	0.00	1.06	1.21	1.21	0.06	1.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	22.100	7.29	17.92	0.14	1.28	0.00	0.00	0.00	0.00	0.00	1.07	1.22	1.22	0.06	1.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	22.000	7.27	17.95	0.14	1.28	0.00	0.00	0.00	0.00	0.00	1.07	1.22	1.22	0.06	1.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	21.900	7.26	17.97	0.14	1.29	0.00	0.00	0.00	0.00	0.00	1.08	1.23	1.23	0.07	1.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	21.800	7.25	18.01	0.14	1.29	0.00	0.00	0.00	0.00	0.00	1.09	1.24	1.24	0.07	1.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	21.700	7.24	18.04	0.14	1.29	0.00	0.00	0.00	0.00	0.00	1.10	1.24	1.24	0.07	1.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	21.600	7.23	18.06	0.14	1.29	0.00	0.00	0.00	0.00	0.00	1.10	1.25	1.25	0.07	1.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	21.500	7.22	18.09	0.14	1.30	0.00	0.00	0.00	0.00	0.00	1.11	1.26	1.26	0.07	1.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	21.400	7.20	18.12	0.14	1.30	0.00	0.00	0.00	0.00	0.00	1.12	1.26	1.26	0.07	1.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	21.300	7.19	18.15	0.14	1.30	0.00	0.00	0.00	0.00	0.00	1.12	1.27	1.27	0.07	1.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	21.200	7.18	18.18	0.14	1.31	0.00	0.00	0.00	0.00	0.00	1.13	1.28	1.28	0.07	1.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	21.100	7.17	18.21	0.15	1.31	0.00	0.00	0.00	0.00	0.00	1.14	1.28	1.28	0.07	1.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
32	21.000	7.16	18.24	0.15	1.31	0.00	0.00	0.00	0.00	0.00	1.14	1.29	1.29	0.07	1.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
33	20.900	7.14	18.27	0.15	1.32	0.00	0.00	0.00	0.00	0.00	1.15	1.30	1.30	0.07	1.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
34	20.800	7.13	18.30	0.15	1.32	0.00	0.00	0.00	0.00	0.00	1.16	1.30	1.30	0.07	1.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
35	20.700	7.12	18.33	0.15	1.32	0.00	0.00	0.00	0.00	0.00	1.16	1.31	1.31	0.07	1.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
36	20.600	7.11	18.36	0.15	1.33	0.00	0.00	0.00	0.00	0.00	1.17	1.32	1.32	0.07	1.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37	20.500	7.10	18.39	0.15	1.33	0.00	0.00	0.00	0.00	0.00	1.18	1.33	1.33	0.07	1.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
38	20.400	7.09	18.42	0.15	1.33	0.00	0.00	0.00	0.00	0.00	1.19	1.33	1.33	0.07	1.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
39	20.300	7.08	18.45	0.15	1.33	0.00	0.00	0.00	0.00	0.00	1.19	1.34	1.34	0.07	1.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG	20 DEG C RATE	14.38	0.08	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.50			0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00

***** WATER QUALITY CONSTITUENT VALUES

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A ug/L	PERIP g/m²	COLI #/100mL		
1	24.100	30.10	0.27	545.07	13.05	5.80	7.70	0.00	7.70	0.00	6.64	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	24.000	30.20	0.27	545.07	13.05	5.91	6.57	0.00	6.57	0.00	5.51	0.10	0.10	0.00	0.00	0.00	0.00	0.								

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
40	20.30	20.20	0.00582	95.1	0.11203	0.01	7.69	0.05	1.02	5.19	101.73	0.05	0.00	0.000	0.000	0.112
41	20.20	20.10	0.00582	95.1	0.11203	0.01	7.70	0.05	1.02	5.19	101.73	0.05	0.00	0.000	0.000	0.112
42	20.10	20.00	0.00582	95.1	0.11203	0.01	7.71	0.05	1.02	5.19	101.73	0.05	0.00	0.000	0.000	0.112
43	20.00	19.90	0.00582	95.1	0.11203	0.01	7.72	0.05	1.02	5.19	101.73	0.05	0.00	0.000	0.000	0.112
44	19.90	19.80	0.00582	95.1	0.11203	0.01	7.73	0.05	1.02	5.19	101.73	0.05	0.00	0.000	0.000	0.112
45	19.80	19.70	0.00582	95.1	0.11203	0.01	7.74	0.05	1.02	5.19	101.73	0.05	0.00	0.000	0.000	0.112
46	19.70	19.60	0.00582	95.1	0.11203	0.01	7.75	0.05	1.02	5.19	101.73	0.05	0.00	0.000	0.000	0.112
47	19.60	19.50	0.00582	95.1	0.11203	0.01	7.76	0.05	1.02	5.19	101.73	0.05	0.00	0.000	0.000	0.112
TOT AVG					0.1120	0.08		0.05	1.02	41.53	813.83	0.05				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECATY	BOD1 SETT	ABOD1 DECATY	BOD1 HYDR	BOD2 DECATY	BOD2 SETT	ABOD2 DECATY	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECATY	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECATY	NCM DECATY	NCM SETT	
40	20.200	7.08	32.08	0.15	1.36	0.00	0.00	0.00	0.00	0.00	0.72	0.87	0.87	0.07	1.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
41	20.100	7.08	32.08	0.15	1.36	0.00	0.00	0.00	0.00	0.00	0.72	0.87	0.87	0.07	1.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
42	20.000	7.08	32.08	0.15	1.36	0.00	0.00	0.00	0.00	0.00	0.72	0.87	0.87	0.07	1.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
43	19.900	7.08	32.08	0.15	1.36	0.00	0.00	0.00	0.00	0.00	0.72	0.87	0.87	0.07	1.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
44	19.800	7.08	32.08	0.15	1.36	0.00	0.00	0.00	0.00	0.00	0.72	0.87	0.87	0.07	1.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
45	19.700	7.08	32.08	0.15	1.36	0.00	0.00	0.00	0.00	0.00	0.72	0.87	0.87	0.07	1.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
46	19.600	7.08	32.08	0.15	1.36	0.00	0.00	0.00	0.00	0.00	0.72	0.87	0.87	0.07	1.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
47	19.500	7.08	32.08	0.15	1.36	0.00	0.00	0.00	0.00	0.00	0.72	0.87	0.87	0.07	1.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
AVG	20 DEG C	RATE	25.00	0.08	0.12	0.00	0.00	0.00	0.00	0.00	0.30			0.03	0.12	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO	BOD1	BOD2	EBOD1	EBOD2	ORG-N	NH3-N	NO3-N	TOT-N	EORG-N	ETOT-N	ORG-P	PO4-P	TOT-P	EORG-P	ETOT-P	CHL A	PERIP	COLI
40	20.200	33.82	0.26	522.21	7.55	6.50	2.16	0.00	2.16	0.00	0.95	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
41	20.100	33.82	0.26	522.21	7.55	6.51	2.15	0.00	2.15	0.00	0.95	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
42	20.000	33.82	0.26	522.21	7.55	6.51	2.15	0.00	2.15	0.00	0.94	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
43	19.900	33.82	0.26	522.21	7.55	6.52	2.15	0.00	2.15	0.00	0.94	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
44	19.800	33.82	0.26	522.21	7.55	6.52	2.15	0.00	2.15	0.00	0.94	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
45	19.700	33.82	0.26	522.21	7.55	6.53	2.15	0.00	2.15	0.00	0.94	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
46	19.600	33.82	0.26	522.21	7.55	6.53	2.15	0.00	2.15	0.00	0.94	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
47	19.500	33.82	0.26	522.21	7.55	6.53	2.15	0.00	2.15	0.00	0.94	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
40	20.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
41	20.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
42	20.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
43	19.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
44	19.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
45	19.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
46	19.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
47	19.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20 DEG C RATE										0.000	0.000	0.000	0.000											0.000	0.000	0.000	

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT B VINCENT & BONFOUCA WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 3 VINCENT FROM BV01 RKM 18.5 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
48	UPR RCH	0.00582	33.82	0.26	522.21	7.55	6.53	2.15	0.00	2.15	0.00	0.94	0.10	0.10	0.00	0.00	0.00	0.00
48	WSTLD	0.00276	30.00	0.40	774.00	34.40	6.40	6.81	0.00	6.81	0.00	2.41	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s				
48	19.50	19.40	0.00858	96.7	0.12785	0.01	7.77	0.06	1.14	6.71	114.30	0.07	0.00	0.000	0.000	0.128				
49	19.40	19.30	0.00858	96.7	0.12785	0.01	7.78	0.06	1.14	6.71	114.30	0.07	0.00	0.000	0.000	0.128				
50	19.30	19.20	0.00858	96.7	0.12785	0.01	7.79	0.06	1.14	6.71	114.30	0.07	0.00	0.000	0.000	0.128				
51	19.20	19.10	0.00858	96.7	0.12785	0.01	7.80	0.06	1.14	6.71	114.30	0.07	0.00	0.000	0.000	0.128				
52	19.10	19.00	0.00858	96.7	0.12785	0.01	7.81	0.06	1.14	6.71	114.30	0.07	0.00	0.000	0.000	0.128				
53	19.00	18.90	0.00858	96.7	0.12785	0.01	7.82	0.06	1.14	6.71	114.30	0.07	0.00	0.000	0.000	0.128				
54	18.90	18.80	0.00858	96.7	0.12785	0.01	7.83	0.06	1.14	6.71	114.30	0.07	0.00	0.000	0.000	0.128				
55	18.80	18.70	0.00858	96.7	0.12785	0.01	7.84	0.06	1.14	6.71	114.30	0.07	0.00	0.000	0.000	0.128				
56	18.70	18.60	0.00858	96.7	0.12785	0.01	7.84	0.06	1.14	6.71	114.30	0.07	0.00	0.000	0.000	0.128				
57	18.60	18.50	0.00858	96.7	0.12785	0.01	7.85	0.06	1.14	6.71	114.30	0.07	0.00	0.000	0.000	0.128				
TOT						0.09										67.08	1143.01			
AVG					0.1279				0.06	1.14				0.07						

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR 1/da	BOD2 DECAT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAT 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI 1/da	NCM DECAT 1/da	NCM SETT 1/da
48	19.400	7.15	31.72	0.15	1.16	0.00	0.00	0.00	0.00	0.00	13.74	14.00	14.00	0.07	1.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
49	19.300	7.23	31.37	0.14	1.15	0.00	0.00	0.00	0.00	0.00	13.18	13.45	13.45	0.06	1.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
50	19.200	7.31	31.03	0.14	1.13	0.00	0.00	0.00	0.00	0.00	12.64	12.91	12.91	0.05	1.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
51	19.100	7.40	30.68	0.13	1.11	0.00	0.00	0.00	0.00	0.00	12.13	12.40	12.40	0.05	1.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
52	19.000	7.48	30.34	0.13	1.09	0.00	0.00	0.00	0.00	0.00	11.63	11.91	11.91	0.04	1.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
53	18.900	7.56	29.99	0.12	1.08	0.00	0.00	0.00	0.00	0.00	11.16	11.44	11.44	0.03	1.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
54	18.800	7.65	29.65	0.11	1.06	0.00	0.00	0.00	0.00	0.00	10.70	10.99	10.99	0.02	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
55	18.700	7.74	29.31	0.10	1.04	0.00	0.00	0.00	0.00	0.00	10.27	10.56	10.56	0.02	1.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

56	18.600	7.83	28.97	0.10	1.03	0.00	0.00	0.00	0.00	0.00	0.00	9.85	10.15	10.15	0.02	1.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
57	18.500	7.92	28.63	0.10	1.01	0.00	0.00	0.00	0.00	0.00	0.00	9.45	9.75	9.75	0.02	1.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE				25.00	0.08	0.09	0.00	0.00	0.00	0.00	0.00	6.00				0.03	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
* g/m ² /d		** mg/L/day																									

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	
48	19.400	33.16	0.31	603.25	16.19	4.95	3.79	0.00	3.79	0.00	1.40	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
49	19.300	32.50	0.31	603.25	16.19	3.84	3.93	0.00	3.93	0.00	1.39	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
50	19.200	31.84	0.31	603.25	16.19	3.04	4.08	0.00	4.08	0.00	1.39	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
51	19.100	31.18	0.31	603.25	16.19	2.48	4.22	0.00	4.22	0.00	1.38	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
52	19.000	30.51	0.31	603.25	16.19	2.11	4.36	0.00	4.36	0.00	1.37	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
53	18.900	29.85	0.31	603.25	16.19	1.89	4.50	0.00	4.50	0.00	1.36	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
54	18.800	29.19	0.31	603.25	16.19	1.77	4.64	0.00	4.64	0.00	1.36	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
55	18.700	28.53	0.31	603.25	16.19	1.73	4.78	0.00	4.78	0.00	1.35	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
56	18.600	27.87	0.31	603.25	16.19	1.75	4.92	0.00	4.92	0.00	1.34	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
57	18.500	27.21	0.31	603.25	16.19	1.82	5.06	0.00	5.06	0.00	1.34	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
48	19.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
49	19.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
50	19.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
51	19.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
52	19.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
53	18.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
54	18.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
55	18.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
56	18.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
57	18.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20 DEG C RATE										0.000	0.000	0.000	0.000														

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT B VINCENT & BONFOUCA
REACH NO. 4 VINCENT FROM RKM 18.5 TO BV02

WATER QUALITY/HYDRAULIC MODEL FOR:
BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

58	UPR	RCH	0.00858	27.21	0.31	603.25	16.19	1.82	5.06	0.00	5.06	0.00	1.34	0.10	0.10	0.00	0.00	0.00	0.00	
63	WSTLD		0.00001	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
58	18.50	18.40	0.00858	96.7	0.12785	0.01	7.86	0.06	1.14	6.71	114.30	0.07	0.00	0.000	0.000	0.128
59	18.40	18.30	0.00858	96.7	0.12785	0.01	7.87	0.06	1.14	6.71	114.30	0.07	0.00	0.000	0.000	0.128
60	18.30	18.20	0.00858	96.7	0.12785	0.01	7.88	0.06	1.14	6.71	114.30	0.07	0.00	0.000	0.000	0.128
61	18.20	18.10	0.00858	96.7	0.12785	0.01	7.89	0.06	1.14	6.71	114.30	0.07	0.00	0.000	0.000	0.128
62	18.10	18.00	0.00858	96.7	0.12785	0.01	7.90	0.06	1.14	6.71	114.30	0.07	0.00	0.000	0.000	0.128
63	18.00	17.90	0.00858	96.7	0.12789	0.01	7.91	0.06	1.14	6.71	114.33	0.07	0.00	0.000	0.000	0.128
64	17.90	17.80	0.00858	96.7	0.12789	0.01	7.92	0.06	1.14	6.71	114.33	0.07	0.00	0.000	0.000	0.128
65	17.80	17.70	0.00858	96.7	0.12789	0.01	7.93	0.06	1.14	6.71	114.33	0.07	0.00	0.000	0.000	0.128
66	17.70	17.60	0.00858	96.7	0.12789	0.01	7.93	0.06	1.14	6.71	114.33	0.07	0.00	0.000	0.000	0.128
TOT						0.08				60.39	1028.83					
AVG				0.1279				0.06	1.14			0.07				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECAT	BOD1 SETT	ABOD1 DECAT	BOD1 HYDR	BOD2 DECAT	BOD2 SETT	ABOD2 DECAT	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECAT	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECAT	NCM DECAT	NCM SETT		
58	18.400	7.92	28.63	0.09	1.01	0.00	0.00	0.00	0.00	0.00	11.02	11.33	11.33	0.02	1.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
59	18.300	7.92	28.63	0.09	1.01	0.00	0.00	0.00	0.00	0.00	11.02	11.34	11.34	0.01	1.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
60	18.200	7.92	28.63	0.08	1.01	0.00	0.00	0.00	0.00	0.00	11.02	11.35	11.35	0.01	1.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
61	18.100	7.92	28.63	0.08	1.01	0.00	0.00	0.00	0.00	0.00	11.02	11.36	11.36	0.01	1.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
62	18.000	7.92	28.63	0.08	1.01	0.00	0.00	0.00	0.00	0.00	11.02	11.37	11.37	0.01	1.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
63	17.900	7.92	28.63	0.07	1.01	0.00	0.00	0.00	0.00	0.00	11.02	11.38	11.38	0.01	1.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
64	17.800	7.92	28.63	0.07	1.01	0.00	0.00	0.00	0.00	0.00	11.02	11.39	11.39	0.01	1.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
65	17.700	7.92	28.63	0.07	1.01	0.00	0.00	0.00	0.00	0.00	11.02	11.40	11.40	0.01	1.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
66	17.600	7.92	28.63	0.07	1.01	0.00	0.00	0.00	0.00	0.00	11.02	11.41	11.41	0.01	1.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
AVG 20	DEG C	RATE	25.00	0.08	0.09	0.00	0.00	0.00	0.00	0.00	7.00			0.03	0.09	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00		
*	g/m ² /d		**	mg/L/day																								

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	
58	18.400	27.21	0.31	603.25	16.19	1.69	5.21	0.00	5.21	0.00	1.33	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0
59	18.300	27.21	0.31	603.25	16.19	1.58	5.37	0.00	5.37	0.00	1.33	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	
60	18.200	27.21	0.31	603.25	16.19	1.49	5.53	0.00	5.53	0.00	1.32	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0		
61	18.100	27.21	0.31	603.25	16.19	1.42	5.68	0.00	5.68	0.00	1.32	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0		
62	18.000	27.21	0.31	603.25	16.19	1.36	5.83	0.00	5.83	0.00	1.31	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0		
63	17.900	27.21	0.31	603.39	16.23	1.32	6.04	0.00	6.04	0.00	1.37	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0		
64	17.800	27.21	0.31	603.39	16.23	1.28	6.19	0.00	6.19	0.00	1.37	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0		
65	17.700	27.21	0.31	603.39	16.23	1.25	6.34	0.00	6.34	0.00	1.36	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0		

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

NO.	DIST	D.O. mg/L	RATE 1/da	DECAY 1/da	SETT 1/da	DECAY 1/da	HYDR 1/da	DECAY 1/da	SETT 1/da	DECAY 1/da	SOD *	SOD *	SOD *	HYDR 1/da	SETT 1/da	DECAY 1/da	SRCE *	RATE 1/da	HYDR 1/da	SETT 1/da	SRCE *	PROD **	PROD **	DECAY 1/da	DECAY 1/da	SETT 1/da	
88	17.550	7.92	28.63	0.11	0.96	0.00	0.00	0.00	0.00	0.00	11.02	11.40	11.40	0.03	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
89	17.500	7.92	28.63	0.10	0.96	0.00	0.00	0.00	0.00	0.00	11.02	11.41	11.41	0.03	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90	17.450	7.92	28.63	0.10	0.96	0.00	0.00	0.00	0.00	0.00	11.02	11.41	11.41	0.02	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
91	17.400	7.92	28.63	0.10	0.96	0.00	0.00	0.00	0.00	0.00	11.02	11.42	11.42	0.02	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
92	17.350	7.92	28.63	0.10	0.96	0.00	0.00	0.00	0.00	0.00	11.02	11.42	11.42	0.02	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
93	17.300	7.92	28.63	0.10	0.96	0.00	0.00	0.00	0.00	0.00	11.02	11.43	11.43	0.02	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
94	17.250	7.92	28.63	0.09	0.96	0.00	0.00	0.00	0.00	0.00	11.02	11.43	11.43	0.02	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95	17.200	7.92	28.63	0.09	0.96	0.00	0.00	0.00	0.00	0.00	11.02	11.44	11.44	0.02	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
96	17.150	7.92	28.63	0.09	0.96	0.00	0.00	0.00	0.00	0.00	11.02	11.44	11.44	0.02	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
97	17.100	7.92	28.63	0.09	0.96	0.00	0.00	0.00	0.00	0.00	11.02	11.45	11.45	0.02	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
98	17.050	7.92	28.63	0.09	0.96	0.00	0.00	0.00	0.00	0.00	11.02	11.45	11.45	0.02	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
99	17.000	7.92	28.63	0.09	0.96	0.00	0.00	0.00	0.00	0.00	11.02	11.46	11.46	0.01	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100	16.950	7.92	28.63	0.09	0.96	0.00	0.00	0.00	0.00	0.00	11.02	11.46	11.46	0.01	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
101	16.900	7.92	28.63	0.09	0.96	0.00	0.00	0.00	0.00	0.00	11.02	11.47	11.47	0.01	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20	DEG C	RATE	25.00	0.08	0.06	0.00	0.00	0.00	0.00	0.00	7.00			0.03	0.12	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00
*	g/m ² /d			**	mg/L/day																						

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO	BOD1	BOD2	EBOD1	EBOD2	ORG-N	NH3-N	NO3-N	TOT-N	EORG-N	ETOT-N	ORG-P	PO4-P	TOT-P	EORG-P	ETOT-P	CHL A	PERIP	COLI
						mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	g/m ²	#/100mL
88	17.550	27.21	0.31	618.30	21.38	1.93	6.42	0.00	6.42	0.00	1.90	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
89	17.500	27.21	0.31	618.30	21.38	1.88	6.51	0.00	6.51	0.00	1.90	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
90	17.450	27.21	0.31	618.30	21.38	1.84	6.60	0.00	6.60	0.00	1.89	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
91	17.400	27.21	0.31	618.30	21.38	1.80	6.68	0.00	6.68	0.00	1.89	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
92	17.350	27.21	0.31	618.30	21.38	1.76	6.77	0.00	6.77	0.00	1.88	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
93	17.300	27.21	0.31	618.30	21.38	1.73	6.85	0.00	6.85	0.00	1.88	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
94	17.250	27.21	0.31	618.30	21.38	1.70	6.94	0.00	6.94	0.00	1.88	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
95	17.200	27.21	0.31	618.30	21.38	1.68	7.02	0.00	7.02	0.00	1.87	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
96	17.150	27.21	0.31	618.30	21.38	1.65	7.10	0.00	7.10	0.00	1.87	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
97	17.100	27.21	0.31	618.30	21.38	1.63	7.19	0.00	7.19	0.00	1.86	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
98	17.050	27.21	0.31	618.30	21.38	1.61	7.27	0.00	7.27	0.00	1.86	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
99	17.000	27.21	0.31	618.30	21.38	1.59	7.35	0.00	7.35	0.00	1.86	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
100	16.950	27.21	0.31	618.30	21.38	1.58	7.43	0.00	7.43	0.00	1.85	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
101	16.900	27.21	0.31	618.30	21.38	1.56	7.52	0.00	7.52	0.00	1.85	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
88	17.550	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
89	17.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
90	17.450	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
140	16.00	15.90	0.01077	89.5	0.13815	0.01	8.08	0.06	1.22	7.80	122.39	0.08	0.00	0.000	0.138
141	15.90	15.80	0.01077	89.5	0.13815	0.01	8.09	0.06	1.22	7.80	122.39	0.08	0.00	0.000	0.138
142	15.80	15.70	0.01077	89.5	0.13815	0.01	8.10	0.06	1.22	7.80	122.39	0.08	0.00	0.000	0.138
143	15.70	15.60	0.01077	89.5	0.13815	0.01	8.10	0.06	1.22	7.80	122.39	0.08	0.00	0.000	0.138
144	15.60	15.50	0.01077	89.5	0.13815	0.01	8.11	0.06	1.22	7.80	122.39	0.08	0.00	0.000	0.138
145	15.50	15.40	0.01077	89.5	0.13815	0.01	8.12	0.06	1.22	7.80	122.39	0.08	0.00	0.000	0.138
146	15.40	15.30	0.01077	89.5	0.13815	0.01	8.13	0.06	1.22	7.80	122.39	0.08	0.00	0.000	0.138
147	15.30	15.20	0.01077	89.5	0.13815	0.01	8.14	0.06	1.22	7.80	122.39	0.08	0.00	0.000	0.138
TOT						0.07				62.37	979.08				
AVG				0.1381				0.06	1.22			0.08			

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER 1/da	BOD1 DECAT 1/da	BOD1 SETT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR 1/da	BOD2 DECAT 1/da	BOD2 SETT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAT 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI 1/da	NCM DECAT 1/da	NCM SETT 1/da	
140	15.900	7.83	28.99	0.09	0.95	0.00	0.00	0.00	0.00	0.00	11.51	12.03	12.03	0.01	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
141	15.800	7.83	28.99	0.08	0.95	0.00	0.00	0.00	0.00	0.00	11.51	12.02	12.02	0.01	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
142	15.700	7.83	28.99	0.08	0.95	0.00	0.00	0.00	0.00	0.00	11.51	12.02	12.02	0.01	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
143	15.600	7.83	28.99	0.08	0.95	0.00	0.00	0.00	0.00	0.00	11.51	12.01	12.01	0.01	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
144	15.500	7.83	28.99	0.08	0.95	0.00	0.00	0.00	0.00	0.00	11.51	12.01	12.01	0.01	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
145	15.400	7.83	28.99	0.08	0.95	0.00	0.00	0.00	0.00	0.00	11.51	12.01	12.01	0.01	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
146	15.300	7.83	28.99	0.08	0.95	0.00	0.00	0.00	0.00	0.00	11.51	12.00	12.00	0.01	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
147	15.200	7.83	28.99	0.07	0.95	0.00	0.00	0.00	0.00	0.00	11.51	12.00	12.00	0.01	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
AVG 20	DEG C RATE	25.00	0.08	0.10	0.00	0.00	0.00	0.00	0.00	0.00	7.00			0.03	0.10	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	
*	g/m ² /d		**	mg/L/day																							

***** WATER QUALITY CONSTITUENT VALUES

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND mg/L	CL mg/L	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL
140	15.900	27.90	0.31	615.54	21.37	1.48	8.51	0.00	8.84	0.00	1.92	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.1	0.0	0.
141	15.800	27.90	0.31	615.54	21.37	1.44	8.45	0.00	9.11	0.00	1.91	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.2	0.0	0.
142	15.700	27.90	0.31	615.54	21.37	1.42	8.39	0.00	9.38	0.00	1.90	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.2	0.0	0.
143	15.600	27.90	0.31	615.54	21.37	1.39	8.34	0.00	9.65	0.00	1.89	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.3	0.0	0.
144	15.500	27.90	0.31	615.54	21.37	1.37	8.28	0.00	9.92	0.00	1.88	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.4	0.0	0.
145	15.400	27.90	0.31	615.54	21.37	1.36	8.22	0.00	10.19	0.00	1.87	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18.5	0.0	0.
146	15.300	27.90	0.31	615.54	21.37	1.35	8.17	0.00	10.46	0.00	1.87	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21.5	0.0	0.
147	15.200	27.90	0.31	615.54	21.37	1.27	8.10	0.00	10.73	0.00	1.83	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.6	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

140	15.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
141	15.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
142	15.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
143	15.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	12.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
144	15.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	15.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
145	15.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	18.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
146	15.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	21.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
147	15.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	24.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT B VINCENT & BONFOUCA
REACH NO. 11 VINCENT FROM RKM 15.2 TO BV03

WATER QUALITY/HYDRAULIC MODEL FOR:
BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
148	UPR RCH	0.01077	27.90	0.31	615.54	21.37	1.27	8.10	0.00	10.73	0.00	1.83	0.10	0.10	0.00	24.60	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
148	15.20	15.15	0.01077	89.5	0.00841	0.07	8.21	0.27	4.72	64.01	236.20	1.28	23.62	0.001	0.567	0.008
149	15.15	15.10	0.01077	89.5	0.00841	0.07	8.28	0.27	4.72	64.01	236.20	1.28	47.24	0.001	0.567	0.008
150	15.10	15.05	0.01077	89.5	0.00841	0.07	8.34	0.27	4.72	64.01	236.20	1.28	70.86	0.002	0.567	0.008
151	15.05	15.00	0.01077	89.5	0.00841	0.07	8.41	0.27	4.72	64.01	236.20	1.28	94.48	0.002	0.567	0.008
152	15.00	14.95	0.01077	89.5	0.00841	0.07	8.48	0.27	4.72	64.01	236.20	1.28	118.10	0.003	0.567	0.008
153	14.95	14.90	0.01077	89.5	0.00841	0.07	8.55	0.27	4.72	64.01	236.20	1.28	141.72	0.003	0.567	0.008
TOT AVG				0.0084		0.41		0.27	4.72	384.06	1417.20	1.28				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR 1/da	BOD2 DECAT 1/da	BOD2 SETT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAT 1/da	NH3-N SRCE 1/da	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da	
148	15.150	7.83	3.36	0.06	0.22	0.00	0.00	0.00	0.00	0.00	6.91	7.39	7.22	0.00	0.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
149	15.100	7.83	3.36	0.05	0.22	0.00	0.00	0.00	0.00	0.00	6.91	7.39	6.68	0.00	0.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
150	15.050	7.83	3.36	0.05	0.22	0.00	0.00	0.00	0.00	0.00	6.91	7.39	6.44	0.00	0.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
151	15.000	7.83	3.36	0.05	0.22	0.00	0.00	0.00	0.00	0.00	6.91	7.39	6.33	0.00	0.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
152	14.950	7.83	3.36	0.05	0.22	0.00	0.00	0.00	0.00	0.00	6.91	7.39	6.28	0.00	0.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
153	14.900	7.83	3.36	0.05	0.22	0.00	0.00	0.00	0.00	0.00	6.91	7.39	6.24	0.00	0.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			2.89	0.08	0.03	0.00	0.00	0.00	0.00	0.00	4.20			0.03	0.09	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL
148	15.150	27.90	0.31	615.54	21.37	1.27	8.10	0.00	10.73	0.00	1.83	0.10	0.10	0.00	24.60	0.00	24.60	0.00	0.00	0.00	0.00	24.60	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

148	15.150	27.90	0.31	615.54	21.37	0.98	8.09	0.00	10.71	0.00	1.74	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.6	0.0	0.
0.00																									
149	15.100	27.90	0.31	615.55	21.37	0.90	8.08	0.00	10.71	0.00	1.70	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.6	0.0	0.
0.00																									
150	15.050	27.90	0.31	615.56	21.38	0.87	8.07	0.00	10.70	0.00	1.66	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.6	0.0	0.
0.00																									
151	15.000	27.90	0.31	615.58	21.39	0.86	8.06	0.00	10.69	0.00	1.62	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.6	0.0	0.
0.00																									
152	14.950	27.90	0.31	615.61	21.41	0.85	8.06	0.00	10.68	0.00	1.60	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.6	0.0	0.
0.00																									
153	14.900	27.90	0.31	615.66	21.44	0.84	8.05	0.00	10.68	0.00	1.60	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.6	0.0	0.
0.00																									

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
148	15.150	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	24.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
149	15.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	24.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
150	15.050	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	24.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
151	15.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	24.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
152	14.950	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	24.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
153	14.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	24.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT B VINCENT & BONFOUCA WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 12 VINCENT FROM BV03 TO BONFOUCA BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
154	UPR RCH	0.01077	27.90	0.31	615.66	21.44	0.84	8.05	0.00	10.68	0.00	1.60	0.10	0.10	0.00	24.60	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
154	14.90	14.80	0.01077	89.5	0.00841	0.14	8.69	0.27	4.72	128.02	472.40	1.28	188.96	0.004	0.567	0.008
155	14.80	14.70	0.01077	89.5	0.00841	0.14	8.83	0.27	4.72	128.02	472.40	1.28	236.20	0.005	0.567	0.008
156	14.70	14.60	0.01077	89.5	0.00841	0.14	8.96	0.27	4.72	128.02	472.40	1.28	283.44	0.006	0.577	0.009
157	14.60	14.50	0.01077	89.5	0.00841	0.14	9.10	0.27	4.72	128.02	472.40	1.28	330.68	0.007	0.614	0.009
158	14.50	14.40	0.01077	89.5	0.00841	0.14	9.24	0.27	4.72	128.02	472.40	1.28	377.92	0.008	0.662	0.010
TOT AVG					0.0084	0.69			0.27	4.72	640.10	2362.00		1.28		

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT DECAT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR DECAT 1/da	BOD2 DECAT 1/da	BOD2 SETT DECAT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAT 1/da	NH3-N SRCE 1/da	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da
----------	-------------	----------	-----------------	-----------------	----------------------	------------------	----------------------	-----------------	----------------------	------------------	------------	------------	------------	-----------------	-----------------	------------------	-----------------	-----------------	-----------------	-----------------	------------	---------------	---------------	-----------------	----------------	---------------

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

219	14.40	14.30	0.01393	69.5	0.00148	0.78	10.02	0.87	10.84	943.08	1084.00	9.43	486.32	0.001	0.306	0.002
220	14.30	14.20	0.01393	69.5	0.00148	0.78	10.81	0.87	10.84	943.08	1084.00	9.43	594.72	0.002	0.351	0.002
TOT						1.57				1886.16	2168.00					
AVG				0.0015				0.87	10.84			9.43				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECA	BOD1 SETT	ABOD1 DECA	BOD1 HYDR	BOD2 DECA	BOD2 SETT	ABOD2 DECA	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECA	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECA	NCM DECA	NCM SETT			
219	14.300	7.60	0.96	0.07	0.07	0.00	0.00	0.00	0.00	0.00	5.13	5.57	5.57	0.00	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
220	14.200	7.60	0.96	0.06	0.07	0.00	0.00	0.00	0.00	0.00	5.13	5.60	5.33	0.00	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20	DEG C	RATE	0.80	0.08	0.03	0.00	0.00	0.00	0.00	0.00	2.80			0.03	0.09	0.00	0.00	0.00	0.00	0.00	0.00				0.00	0.00	0.00		

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO	BOD1	BOD2	EBOD1	EBOD2	ORG-N	NH3-N	NO3-N	TOT-N	EORG-N	ETOT-N	ORG-P	PO4-P	TOT-P	EORG-P	ETOT-P	CHL A	PERIP	COLI				
219	14.300	29.60	0.32	630.20	29.96	1.08	7.11	0.00	11.09	0.00	2.12	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
220	14.200	29.60	0.33	646.10	35.18	0.95	7.60	0.00	12.93	0.00	2.55	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

***** PHYTOPLANKTON AND PERIPHYTON DATA

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
219	14.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	37.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
220	14.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	49.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20	DEG C	RATE							0.000	0.000	0.000	0.000									0.000	0.000	0.000			

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT REACH NO. 19 B VINCENT & BONFOUCA BONFOUCA FROM HWY 190 TO BB02 WATER QUALITY/HYDRAULIC MODEL FOR: BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO	BOD1	BOD2	EBOD1	EBOD2	ORG-N	NH3-N	NO3-N	PO4-P	CHL A	COLI	NCM
239	UPR RCH	0.01393	29.60	0.33	646.10	35.18	0.95	7.60	0.00	12.93	0.00	2.55	0.10	0.10	0.00	49.90	0.00	0.00
239	TRIB	0.00181	29.60	0.37	717.23	54.54	4.40	25.39	0.00	30.72	0.00	27.18	0.10	0.10	0.00	49.90	0.00	0.00

***** HYDRAULIC PARAMETER VALUES

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
----------	---------------	----------------	------------------------	---------	-----------------	------------------	---------------	---------	---------	-----------------------	-----------------------------	----------------------------	----------------------------	----------------	---------------------------	---------------

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

239	14.20	14.10	0.01574	71.2	0.00167	0.69	11.50	0.87	10.84	943.08	1084.00	9.43	703.12	0.002	0.410	0.002
240	14.10	14.00	0.01574	71.2	0.00167	0.69	12.19	0.87	10.84	943.08	1084.00	9.43	811.52	0.002	0.460	0.003
241	14.00	13.90	0.01574	71.2	0.00167	0.69	12.89	0.87	10.84	943.08	1084.00	9.43	919.92	0.003	0.512	0.003
242	13.90	13.80	0.01574	71.2	0.00167	0.69	13.58	0.87	10.84	943.08	1084.00	9.43	1028.32	0.003	0.565	0.003
243	13.80	13.70	0.01574	71.2	0.00167	0.69	14.27	0.87	10.84	943.08	1084.00	9.43	1136.72	0.003	0.619	0.003
244	13.70	13.60	0.01574	71.2	0.00167	0.69	14.97	0.87	10.84	943.08	1084.00	9.43	1245.12	0.004	0.674	0.004
245	13.60	13.50	0.01574	71.2	0.00167	0.69	15.66	0.87	10.84	943.08	1084.00	9.43	1353.52	0.004	0.729	0.004
246	13.50	13.40	0.01574	71.2	0.00167	0.69	16.35	0.87	10.84	943.08	1084.00	9.43	1461.92	0.004	0.784	0.004
247	13.40	13.30	0.01574	71.2	0.00167	0.69	17.05	0.87	10.84	943.08	1084.00	9.43	1570.32	0.005	0.840	0.005
TOT							6.24				8487.72		9756.00			
AVG					0.0017				0.87	10.84				9.43		

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR 1/da	BOD2 DECAT 1/da	BOD2 SETT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAT 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da	
239	14.100	7.60	0.96	0.05	0.07	0.00	0.00	0.00	0.00	0.00	6.59	7.12	6.00	0.00	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
240	14.000	7.60	0.96	0.05	0.07	0.00	0.00	0.00	0.00	0.00	6.59	7.14	5.56	0.00	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
241	13.900	7.60	0.97	0.05	0.07	0.00	0.00	0.00	0.00	0.00	6.59	7.16	5.45	0.00	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
242	13.800	7.59	0.97	0.05	0.07	0.00	0.00	0.00	0.00	0.00	6.59	7.17	5.43	0.00	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
243	13.700	7.59	0.98	0.05	0.07	0.00	0.00	0.00	0.00	0.00	6.59	7.19	5.44	0.00	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
244	13.600	7.59	0.99	0.05	0.07	0.00	0.00	0.00	0.00	0.00	6.59	7.20	5.46	0.00	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
245	13.500	7.59	0.99	0.05	0.07	0.00	0.00	0.00	0.00	0.00	6.59	7.22	5.48	0.00	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
246	13.400	7.59	1.00	0.05	0.07	0.00	0.00	0.00	0.00	0.00	6.59	7.23	5.50	0.00	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
247	13.300	7.59	1.00	0.05	0.07	0.00	0.00	0.00	0.00	0.00	6.59	7.25	5.52	0.00	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
AVG	20 DEG C RATE		0.82	0.08	0.07	0.00	0.00	0.00	0.00	0.00	3.60			0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL
239	14.100	29.60	0.34	665.99	41.71	0.84	8.51	0.00	13.84	0.00	3.24	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.9	0.0	0.
240	14.000	29.60	0.35	687.88	49.08	0.78	8.78	0.00	14.10	0.00	3.11	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.9	0.0	0.
241	13.900	29.60	0.37	714.99	58.20	0.76	9.03	0.00	14.36	0.00	2.99	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.9	0.0	0.
242	13.800	29.60	0.39	747.87	69.26	0.76	9.28	0.00	14.60	0.00	2.89	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.9	0.0	0.
243	13.700	29.60	0.41	787.05	82.45	0.76	9.51	0.00	14.84	0.00	2.81	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.9	0.0	0.
244	13.600	29.60	0.43	833.07	97.93	0.76	9.75	0.00	15.08	0.00	2.74	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.9	0.0	0.
245	13.500	29.60	0.46	886.44	115.89	0.76	9.99	0.00	15.32	0.00	2.69	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.9	0.0	0.
246	13.400	29.60	0.50	947.69	136.50	0.76	10.24	0.00	15.57	0.00	2.64	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.9	0.0	0.
247	13.300	29.60	0.54	1017.34	159.93	0.76	10.50	0.00	15.82	0.00	2.62	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.9	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
----------	-------------	-----------------	----------------	-------------	--------------	------------	------------	--------------	--------------	----------------	----------------	-----------------	----------------	----------------	------------	-------------	--------------	------------	------------	--------------	--------------	--------------	----------------	----------------	-----------------	----------------	------------------------

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

258	12.200	7.55	1.07	0.05	0.07	0.00	0.00	0.00	0.00	0.00	6.59	7.24	6.08	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
259	12.100	7.55	1.08	0.06	0.07	0.00	0.00	0.00	0.00	0.00	6.59	7.21	6.46	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.87	0.08	0.00	0.00	0.00	0.00	0.00	0.00	3.60			0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
* g/m ² /d			** mg/L/day																						

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	
248	13.200	29.60	0.58	1095.90	186.36	0.76	10.77	0.00	15.73	0.00	2.60	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	46.5	0.0	0.
249	13.100	29.60	0.63	1183.89	215.97	0.77	10.99	0.00	15.59	0.00	2.58	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	43.1	0.0	0.
250	13.000	29.60	0.69	1281.81	248.92	0.77	11.16	0.00	15.39	0.00	2.56	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	39.6	0.0	0.
251	12.900	29.60	0.75	1390.17	285.38	0.77	11.27	0.00	15.14	0.00	2.54	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	36.2	0.0	0.
252	12.800	29.60	0.81	1509.47	325.52	0.77	11.33	0.00	14.83	0.00	2.52	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	32.8	0.0	0.
253	12.700	29.60	0.89	1640.22	369.51	0.78	11.32	0.00	14.46	0.00	2.50	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	29.4	0.0	0.
254	12.600	29.60	0.97	1782.91	417.52	0.78	11.26	0.00	14.03	0.00	2.47	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.9	0.0	0.
255	12.500	29.60	1.05	1938.03	469.72	0.79	11.14	0.00	13.54	0.00	2.44	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	22.5	0.0	0.
256	12.400	29.60	1.15	2106.08	526.26	0.80	10.95	0.00	12.99	0.00	2.41	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	19.1	0.0	0.
257	12.300	29.60	1.25	2287.56	587.32	0.81	10.69	0.00	12.36	0.00	2.37	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.7	0.0	0.
258	12.200	29.60	1.36	2482.94	653.06	0.84	10.36	0.00	11.66	0.00	2.33	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.2	0.0	0.
259	12.100	29.60	1.48	2692.72	723.65	0.89	9.94	0.00	10.88	0.00	2.29	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
248	13.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	46.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
249	13.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	43.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
250	13.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	39.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
251	12.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	36.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
252	12.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	32.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
253	12.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	29.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
254	12.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	25.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
255	12.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	22.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
256	12.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	19.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
257	12.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	15.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
258	12.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	12.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
259	12.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT B VINCENT & BONFOUCA
REACH NO. 22 BONFOUCA FROM WD TO DD6

WATER QUALITY/HYDRAULIC MODEL FOR:
BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

***** REACH INPUTS

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
263	UPR RCH	0.01574	29.60	1.48	2692.72	723.65	0.89	9.94	0.00	10.88	0.00	2.29	0.10	0.10	0.00	8.80	0.00	0.00
263	TRIB	0.00091	29.60	1.56	2849.81	776.81	1.15	9.49	0.00	10.43	0.00	2.24	0.10	0.10	0.00	8.80	0.00	0.00
281	WSTLD	0.00000	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00	0.00
282	WSTLD	0.00016	30.00	0.39	753.60	63.30	2.00	18.40	0.00	18.40	0.00	18.40	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
263	12.10	12.00	0.01666	71.1	0.00025	4.67	30.04	1.24	54.25	6727.00	5425.00	67.27	3503.62	0.001	0.349	0.001
264	12.00	11.90	0.01666	71.1	0.00025	4.67	34.71	1.24	54.25	6727.00	5425.00	67.27	4046.12	0.002	0.403	0.002
265	11.90	11.80	0.01666	71.1	0.00025	4.67	39.39	1.24	54.25	6727.00	5425.00	67.27	4588.62	0.002	0.457	0.002
266	11.80	11.70	0.01666	71.1	0.00025	4.67	44.06	1.24	54.25	6727.00	5425.00	67.27	5131.12	0.002	0.511	0.002
267	11.70	11.60	0.01666	71.1	0.00025	4.67	48.74	1.24	54.25	6727.00	5425.00	67.27	5673.62	0.002	0.565	0.002
268	11.60	11.50	0.01666	71.1	0.00025	4.67	53.41	1.24	54.25	6727.00	5425.00	67.27	6216.12	0.003	0.620	0.003
269	11.50	11.40	0.01666	71.1	0.00025	4.67	58.08	1.24	54.25	6727.00	5425.00	67.27	6758.62	0.003	0.674	0.003
270	11.40	11.30	0.01666	71.1	0.00025	4.67	62.76	1.24	54.25	6727.00	5425.00	67.27	7301.12	0.003	0.728	0.003
271	11.30	11.20	0.01666	71.1	0.00025	4.67	67.43	1.24	54.25	6727.00	5425.00	67.27	7843.62	0.003	0.782	0.003
272	11.20	11.10	0.01666	71.1	0.00025	4.67	72.11	1.24	54.25	6727.00	5425.00	67.27	8386.12	0.004	0.836	0.003
273	11.10	11.00	0.01666	71.1	0.00025	4.67	76.78	1.24	54.25	6727.00	5425.00	67.27	8928.62	0.004	0.891	0.004
274	11.00	10.90	0.01666	71.1	0.00025	4.67	81.45	1.24	54.25	6727.00	5425.00	67.27	9471.12	0.004	0.945	0.004
275	10.90	10.80	0.01666	71.1	0.00025	4.67	86.13	1.24	54.25	6727.00	5425.00	67.27	10013.62	0.004	0.999	0.004
276	10.80	10.70	0.01666	71.1	0.00025	4.67	90.80	1.24	54.25	6727.00	5425.00	67.27	10556.12	0.004	1.053	0.004
277	10.70	10.60	0.01666	71.1	0.00025	4.67	95.48	1.24	54.25	6727.00	5425.00	67.27	11098.62	0.005	1.107	0.005
278	10.60	10.50	0.01666	71.1	0.00025	4.67	100.15	1.24	54.25	6727.00	5425.00	67.27	11641.12	0.005	1.162	0.005
279	10.50	10.40	0.01666	71.1	0.00025	4.67	104.82	1.24	54.25	6727.00	5425.00	67.27	12183.62	0.005	1.216	0.005
280	10.40	10.30	0.01666	71.1	0.00025	4.67	109.50	1.24	54.25	6727.00	5425.00	67.27	12726.12	0.005	1.270	0.005
281	10.30	10.20	0.01666	71.1	0.00025	4.67	114.17	1.24	54.25	6727.00	5425.00	67.27	13268.62	0.006	1.324	0.006
282	10.20	10.10	0.01682	71.4	0.00025	4.63	118.80	1.24	54.25	6727.00	5425.00	67.27	13811.12	0.006	1.379	0.006
283	10.10	10.00	0.01682	71.4	0.00025	4.63	123.43	1.24	54.25	6727.00	5425.00	67.27	14353.62	0.006	1.433	0.006
TOT AVG					0.0002	98.06		1.24	54.25	141267.02	113925.00	67.27				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR 1/da	BOD2 DECAT 1/da	BOD2 SETT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAT 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da	
263	12.000	7.53	0.68	0.06	0.05	0.00	0.00	0.00	0.00	0.00	4.23	4.84	4.77	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
264	11.900	7.52	0.68	0.06	0.05	0.00	0.00	0.00	0.00	0.00	4.26	4.85	4.76	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
265	11.800	7.50	0.68	0.06	0.05	0.00	0.00	0.00	0.00	0.00	4.28	4.86	4.77	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
266	11.700	7.49	0.68	0.06	0.05	0.00	0.00	0.00	0.00	0.00	4.31	4.88	4.77	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
267	11.600	7.47	0.68	0.06	0.05	0.00	0.00	0.00	0.00	0.00	4.33	4.89	4.78	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
268	11.500	7.46	0.68	0.06	0.05	0.00	0.00	0.00	0.00	0.00	4.36	4.91	4.79	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
269	11.400	7.44	0.68	0.06	0.05	0.00	0.00	0.00	0.00	0.00	4.39	4.93	4.80	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
270	11.300	7.43	0.68	0.06	0.05	0.00	0.00	0.00	0.00	0.00	4.41	4.95	4.80	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
271	11.200	7.42	0.68	0.06	0.05	0.00	0.00	0.00	0.00	0.00	4.44	4.97	4.81	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
272	11.100	7.40	0.68	0.06	0.05	0.00	0.00	0.00	0.00	0.00	4.46	4.99	4.82	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
273	11.000	7.39	0.69	0.06	0.05	0.00	0.00	0.00	0.00	0.00	4.49	5.02	4.84	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
274	10.900	7.37	0.69	0.06	0.05	0.00	0.00	0.00	0.00	0.00	4.51	5.04	4.87	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
275	10.800	7.36	0.69	0.06	0.05	0.00	0.00	0.00	0.00	0.00	4.54	5.06	4.92	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
276	10.700	7.35	0.69	0.07	0.05	0.00	0.00	0.00	0.00	0.00	4.57	5.08	5.02	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
277	10.600	7.33	0.69	0.07	0.05	0.00	0.00	0.00	0.00	0.00	4.59	5.10	5.10	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
278	10.500	7.32	0.69	0.07	0.05	0.00	0.00	0.00	0.00	0.00	4.62	5.12	5.12	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
279	10.400	7.31	0.69	0.08	0.05	0.00	0.00	0.00	0.00	0.00	4.65	5.15	5.15	0.01	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
280	10.300	7.29	0.69	0.09	0.05	0.00	0.00	0.00	0.00	0.00	4.67	5.17	5.17	0.01	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

291	9.500	7.25	0.62	0.14	0.04	0.00	0.00	0.00	0.00	0.00	1.03	1.53	1.53	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
292	9.400	7.25	0.62	0.14	0.04	0.00	0.00	0.00	0.00	0.00	1.03	1.52	1.52	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
293	9.300	7.25	0.62	0.14	0.04	0.00	0.00	0.00	0.00	0.00	1.03	1.52	1.52	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
294	9.200	7.25	0.62	0.14	0.04	0.00	0.00	0.00	0.00	0.00	1.03	1.52	1.52	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

AVG 20 DEG C RATE 0.50 0.08 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.50 0.03 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	
287	9.900	31.54	2.73	4933.27	1475.28	2.74	7.45	0.00	8.39	0.00	1.75	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.
288	9.800	31.54	2.76	4989.84	1494.25	3.06	7.46	0.00	8.40	0.00	1.73	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.
289	9.700	31.54	2.79	5043.94	1512.39	3.29	7.47	0.00	8.41	0.00	1.72	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.
290	9.600	31.54	2.82	5096.27	1529.94	3.47	7.47	0.00	8.41	0.00	1.70	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.
291	9.500	31.54	2.85	5146.54	1546.80	3.60	7.47	0.00	8.41	0.00	1.69	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.
292	9.400	31.54	2.88	5194.95	1563.03	3.71	7.46	0.00	8.40	0.00	1.67	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.
293	9.300	31.54	2.90	5241.64	1578.69	3.81	7.46	0.00	8.40	0.00	1.66	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.
294	9.200	31.54	2.93	5286.74	1593.82	3.89	7.45	0.00	8.39	0.00	1.65	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT P/R	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
287	9.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
288	9.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
289	9.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
290	9.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
291	9.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
292	9.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
293	9.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
294	9.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT B VINCENT & BONFOUCA WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 27 BONFOUCA FROM TRIB 2 TO BB03 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
310	UPR RCH	0.01726	31.54	2.93	5286.74	1593.82	3.89	7.45	0.00	8.39	0.00	1.65	0.10	0.10	0.00	8.80	0.00	0.00
310	TRIB	0.00032	31.54	2.95	5323.88	1606.28	4.04	7.31	0.00	8.25	0.00	1.63	0.10	0.10	0.00	8.80	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
310	9.20	9.10	0.01758	69.4	0.00012	9.82	213.47	1.60	93.08	14920.72	9308.00	149.21	23330.82	0.004	1.301	0.004
311	9.10	9.00	0.01758	69.4	0.00012	9.82	223.29	1.60	93.08	14920.72	9308.00	149.21	24261.62	0.005	1.353	0.005
312	9.00	8.90	0.01758	69.4	0.00012	9.82	233.12	1.60	93.08	14920.72	9308.00	149.21	25192.43	0.005	1.405	0.005
313	8.90	8.80	0.01758	69.4	0.00012	9.82	242.94	1.60	93.08	14920.72	9308.00	149.21	26123.23	0.005	1.457	0.005
314	8.80	8.70	0.01758	69.4	0.00012	9.82	252.76	1.60	93.08	14920.72	9308.00	149.21	27054.03	0.005	1.509	0.005
315	8.70	8.60	0.01758	69.4	0.00012	9.82	262.59	1.60	93.08	14920.72	9308.00	149.21	27984.83	0.005	1.561	0.005
TOT AVG				0.0001		58.94				89524.35	55848.00					

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECA	BOD1 SETT	ABOD1 DECA	BOD1 HYDR	BOD2 DECA	BOD2 SETT	ABOD2 DECA	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECA	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECA	NCM DECA	NCM SETT		
310	9.100	7.24	0.62	0.14	0.04	0.00	0.00	0.00	0.00	0.00	0.83	1.32	1.32	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
311	9.000	7.24	0.62	0.14	0.04	0.00	0.00	0.00	0.00	0.00	0.83	1.32	1.32	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
312	8.900	7.24	0.62	0.14	0.04	0.00	0.00	0.00	0.00	0.00	0.83	1.32	1.32	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
313	8.800	7.24	0.62	0.14	0.04	0.00	0.00	0.00	0.00	0.00	0.83	1.32	1.32	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
314	8.700	7.24	0.62	0.14	0.04	0.00	0.00	0.00	0.00	0.00	0.83	1.31	1.31	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
315	8.600	7.24	0.62	0.14	0.04	0.00	0.00	0.00	0.00	0.00	0.83	1.31	1.31	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
AVG 20	DEG C	RATE	0.50	0.08	0.01	0.00	0.00	0.00	0.00	0.00	0.40			0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00	
*	g/m ² /d			**	mg/L/day																							

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL
310	9.100	31.54	2.95	5329.79	1608.26	3.96	7.44	0.00	8.38	0.00	1.64	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.
311	9.000	31.54	2.97	5371.76	1622.33	4.01	7.44	0.00	8.38	0.00	1.63	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.
312	8.900	31.54	3.00	5412.50	1635.99	4.06	7.43	0.00	8.37	0.00	1.62	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.
313	8.800	31.54	3.02	5452.10	1649.27	4.10	7.42	0.00	8.36	0.00	1.61	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.
314	8.700	31.54	3.04	5490.62	1662.19	4.13	7.40	0.00	8.34	0.00	1.60	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.
315	8.600	31.54	3.06	5528.13	1674.77	4.16	7.37	0.00	8.31	0.00	1.58	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT P/R	PHYT GROW	PHYT DEATH	PHYT SETT	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW	PERI RESP	PERI DEATH	PERI P/R RATIO	PERIP g/m ²
310	9.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.000
311	9.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.000
312	8.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.000
313	8.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.000
314	8.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.000

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

317	8.400	31.54	3.10	5600.36	1698.99	4.22	7.30	0.00	8.29	0.00	1.55	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.2	0.0	0.0
0.00																								
318	8.300	31.54	3.12	5635.18	1710.67	4.25	7.28	0.00	8.29	0.00	1.54	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.5	0.0	0.0
0.00																								
319	8.200	31.54	3.14	5669.20	1722.07	4.28	7.26	0.00	8.30	0.00	1.53	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.7	0.0	0.0
0.00																								
320	8.100	31.54	3.16	5702.45	1733.22	4.32	7.25	0.00	8.31	0.00	1.53	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.9	0.0	0.0
0.00																								
321	8.000	31.54	3.18	5734.97	1744.13	4.36	7.24	0.00	8.32	0.00	1.52	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.2	0.0	0.0
0.00																								
322	7.900	31.54	3.20	5766.81	1754.81	4.40	7.23	0.00	8.34	0.00	1.52	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.4	0.0	0.0
0.00																								
323	7.800	31.54	3.21	5797.99	1765.26	4.45	7.23	0.00	8.36	0.00	1.51	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.6	0.0	0.0
0.00																								

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
316	8.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
317	8.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
318	8.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
319	8.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
320	8.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
321	8.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
322	7.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
323	7.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT B VINCENT & BONFOUCA WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 30 BONFOUCA FROM CANAL 26 TO TRIB 4 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
344	UPR RCH	0.01758	31.54	3.21	5797.99	1765.26	4.45	7.23	0.00	8.36	0.00	1.51	0.10	0.10	0.00	10.60	0.00	0.00
344	TRIB	0.00028	31.54	3.23	5818.58	1772.17	4.53	6.78	0.00	7.91	0.00	1.48	0.10	0.10	0.00	10.60	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
344	7.80	7.70	0.01786	68.3	0.00012	9.27	350.45	1.87	76.51	14307.37	7651.00	143.07	58996.34	0.012	3.905	0.012
345	7.70	7.60	0.01786	68.3	0.00012	9.27	359.72	1.87	76.51	14307.37	7651.00	143.07	59761.44	0.012	3.956	0.012
TOT AVG					0.0001	18.54		1.87	76.51	28614.74	15302.00	143.07				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECAY	BOD1 SETT	ABOD1 DECAY	BOD1 HYDR	BOD2 DECAY	BOD2 SETT	ABOD2 DECAY	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N SRCE	NH3-N RATE	DENIT HYDR	ORG-P SETT	ORG-P SRCE	PO4 PROD	PHYTO PROD	PERIP PROD	COLI DECAY	NCM DECAY	NCM SETT
----------	-------------	----------	------------	------------	-----------	-------------	-----------	------------	-----------	-------------	----------	----------	----------	------------	------------	------------	------------	------------	------------	------------	----------	------------	------------	------------	-----------	----------

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

	mg/L	1/da	*	*	*	1/da	1/da	1/da	*	1/da	1/da	1/da	*	**	**	1/da	1/da	1/da									
344	7.700	7.25	0.59	0.14	0.04	0.00	0.00	0.00	0.00	0.00	0.82	1.29	1.29	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
345	7.600	7.26	0.59	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.81	1.29	1.29	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
AVG 20 DEG C RATE	0.48	0.08	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40			0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00				0.00	0.00	0.00

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO	BOD1	BOD2	EBOD1	EBOD2	ORG-N	NH3-N	NO3-N	TOT-N	EORG-N	ETOT-N	ORG-P	PO4-P	TOT-P	EORG-P	ETOT-P	CHL A	PERIP	COLI	
						mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	g/m ²	#/100mL	
344	7.700	31.42	3.23	5819.39	1772.44	4.49	7.23	0.00	8.40	0.00	1.51	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.0	0.0	0.
345	7.600	31.29	3.23	5835.96	1778.00	4.52	7.31	0.00	8.52	0.00	1.52	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.3	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P N&P LIM	PHYT TOT LIM	PHYT GROW	PHYT RESP	PHYT DEATH	PHYT SETT	PHYT P/R RATIO	PHYTO	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P N&P LIM	PERI SPC TOT LIM	PERI GROW	PERI RESP	PERI DEATH	PERI P/R RATIO	PERIP	
344	7.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	11.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0
345	7.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	11.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0
20 DEG C RATE									0.000	0.000	0.000	0.000								0.000	0.000	0.000			

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT REACH NO. 33 B VINCENT & BONFOUCA BONFOUCA FROM TRIB 4 TO BB04 WATER QUALITY/HYDRAULIC MODEL FOR: BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO	BOD1	BOD2	EBOD1	EBOD2	ORG-N	NH3-N	NO3-N	PO4-P	CHL A	COLI	NCM
365	UPR RCH	0.01786	31.29	3.23	5835.96	1778.00	4.52	7.31	0.00	8.52	0.00	1.52	0.10	0.10	0.00	11.30	0.00	0.00
365	TRIB	0.00115	31.29	3.24	5839.48	1779.16	4.56	7.14	0.00	8.35	0.00	1.50	0.10	0.10	0.00	11.30	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
365	7.60	7.50	0.01902	68.7	0.00013	8.71	368.43	1.87	76.51	14307.37	7651.00	143.07	61966.54	0.012	4.102	0.012
366	7.50	7.40	0.01902	68.7	0.00013	8.71	377.13	1.87	76.51	14307.37	7651.00	143.07	62731.64	0.012	4.153	0.012
367	7.40	7.30	0.01902	68.7	0.00013	8.71	385.84	1.87	76.51	14307.37	7651.00	143.07	63496.74	0.012	4.203	0.012
368	7.30	7.20	0.01902	68.7	0.00013	8.71	394.55	1.87	76.51	14307.37	7651.00	143.07	64261.84	0.013	4.254	0.013
369	7.20	7.10	0.01902	68.7	0.00013	8.71	403.26	1.87	76.51	14307.37	7651.00	143.07	65026.95	0.013	4.305	0.013
370	7.10	7.00	0.01902	68.7	0.00013	8.71	411.96	1.87	76.51	14307.37	7651.00	143.07	65792.05	0.013	4.355	0.013
371	7.00	6.90	0.01902	68.7	0.00013	8.71	420.67	1.87	76.51	14307.37	7651.00	143.07	66557.15	0.013	4.406	0.013
372	6.90	6.80	0.01902	68.7	0.00013	8.71	429.38	1.87	76.51	14307.37	7651.00	143.07	67322.25	0.013	4.457	0.013
TOT AVG					0.0001	69.66		1.87	76.51	114458.95	61208.00	143.07				

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT DECAT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR DECAT 1/da	BOD2 DECAT 1/da	BOD2 SETT DECAT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT DECAT 1/da	NH3-N DECAT 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da		
365	7.500	7.26	0.59	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.41	0.89	0.89	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
366	7.400	7.26	0.59	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.41	0.89	0.89	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
367	7.300	7.26	0.59	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.41	0.89	0.89	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
368	7.200	7.26	0.59	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.41	0.89	0.89	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
369	7.100	7.26	0.59	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.41	0.89	0.89	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
370	7.000	7.26	0.59	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.41	0.90	0.90	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
371	6.900	7.26	0.59	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.41	0.90	0.90	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
372	6.800	7.26	0.59	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.41	0.90	0.90	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
AVG 20	DEG C RATE		0.48	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.20			0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00	
*	g/m ² /d		**	mg/L/day																								

***** WATER QUALITY CONSTITUENT VALUES

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	
365	7.500	31.29	3.24	5852.18	1783.43	4.55	7.32	0.00	8.53	0.00	1.51	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.3	0.0	0.
366	7.400	31.29	3.25	5869.08	1789.10	4.57	7.35	0.00	8.56	0.00	1.51	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.3	0.0	0.
367	7.300	31.29	3.26	5885.82	1794.71	4.60	7.38	0.00	8.59	0.00	1.50	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.3	0.0	0.
368	7.200	31.29	3.27	5902.41	1800.28	4.62	7.41	0.00	8.62	0.00	1.50	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.3	0.0	0.
369	7.100	31.29	3.28	5918.86	1805.79	4.65	7.44	0.00	8.65	0.00	1.50	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.3	0.0	0.
370	7.000	31.29	3.29	5935.16	1811.26	4.67	7.48	0.00	8.68	0.00	1.49	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.3	0.0	0.
371	6.900	31.29	3.30	5951.33	1816.68	4.70	7.51	0.00	8.72	0.00	1.49	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.3	0.0	0.
372	6.800	31.29	3.31	5967.36	1822.06	4.72	7.54	0.00	8.75	0.00	1.49	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.3	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
365	7.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	11.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
366	7.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	11.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
367	7.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	11.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
368	7.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	11.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
369	7.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	11.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
370	7.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	11.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
371	6.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	11.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
372	6.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	11.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20	DEG C RATE									0.000	0.000	0.000	0.000										0.000	0.000	0.000		

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

REACH NO. 34 BONFOUCA FROM BB04 TO RKM 5.6

BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
373	UPR RCH	0.01902	31.29	3.31	5967.36	1822.06	4.72	7.54	0.00	8.75	0.00	1.49	0.10	0.10	0.00	11.30	0.00	0.00

***** HYDRAULIC PARAMETER VALUES

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
373	6.80	6.70	0.01902	68.7	0.00011	10.51	439.89	1.89	91.40	17274.60	9140.00	172.75	68236.25	0.011	3.775	0.011
374	6.70	6.60	0.01902	68.7	0.00011	10.51	450.41	1.89	91.40	17274.60	9140.00	172.75	69150.25	0.011	3.825	0.011
375	6.60	6.50	0.01902	68.7	0.00011	10.51	460.92	1.89	91.40	17274.60	9140.00	172.75	70064.25	0.011	3.876	0.011
376	6.50	6.40	0.01902	68.7	0.00011	10.51	471.43	1.89	91.40	17274.60	9140.00	172.75	70978.25	0.012	3.926	0.012
377	6.40	6.30	0.01902	68.7	0.00011	10.51	481.95	1.89	91.40	17274.60	9140.00	172.75	71892.25	0.012	3.977	0.012
378	6.30	6.20	0.01902	68.7	0.00011	10.51	492.46	1.89	91.40	17274.60	9140.00	172.75	72806.25	0.012	4.028	0.012
379	6.20	6.10	0.01902	68.7	0.00011	10.51	502.98	1.89	91.40	17274.60	9140.00	172.75	73720.25	0.012	4.078	0.012
380	6.10	6.00	0.01902	68.7	0.00011	10.51	513.49	1.89	91.40	17274.60	9140.00	172.75	74634.25	0.012	4.129	0.012
381	6.00	5.90	0.01902	68.7	0.00011	10.51	524.00	1.89	91.40	17274.60	9140.00	172.75	75548.25	0.012	4.179	0.012
382	5.90	5.80	0.01902	68.7	0.00011	10.51	534.52	1.89	91.40	17274.60	9140.00	172.75	76462.25	0.012	4.230	0.012
383	5.80	5.70	0.01902	68.7	0.00011	10.51	545.03	1.89	91.40	17274.60	9140.00	172.75	77376.25	0.013	4.281	0.013
384	5.70	5.60	0.01902	68.7	0.00011	10.51	555.54	1.89	91.40	17274.60	9140.00	172.75	78290.25	0.013	4.331	0.013
TOT AVG				0.0001		126.16		1.89	91.40	207295.17	109680.00	172.75				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECAT	BOD1 SETT	ABOD1 DECAT	BOD1 HYDR	BOD2 DECAT	BOD2 SETT	ABOD2 DECAT	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECAT	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECAT	NCM DECAT	NCM SETT		
373	6.700	7.26	0.59	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.50	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
374	6.600	7.26	0.59	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.50	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
375	6.500	7.26	0.59	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.50	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
376	6.400	7.26	0.59	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.50	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
377	6.300	7.26	0.59	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.50	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
378	6.200	7.26	0.59	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.50	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
379	6.100	7.26	0.59	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.51	0.51	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
380	6.000	7.26	0.59	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.51	0.51	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
381	5.900	7.26	0.59	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.51	0.51	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
382	5.800	7.26	0.59	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.51	0.51	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
383	5.700	7.26	0.59	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.51	0.51	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
384	5.600	7.26	0.59	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.51	0.51	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
AVG 20	DEG C RATE	0.48	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00	
*	g/m²/d		**	mg/L/day																								

***** WATER QUALITY CONSTITUENT VALUES

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL		
373	6.700	31.29	3.32	5983.17	1827.36	4.75	7.58	0.00	8.80	0.00	1.49	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.4	0.0	0.

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

374	6.600	31.29	3.33	5998.75	1832.59	4.78	7.61	0.00	8.84	0.00	1.48	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.6	0.0	0.0
375	6.500	31.29	3.33	6014.17	1837.76	4.80	7.64	0.00	8.89	0.00	1.48	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.7	0.0	0.0
376	6.400	31.29	3.34	6029.43	1842.88	4.83	7.67	0.00	8.93	0.00	1.48	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.8	0.0	0.0
377	6.300	31.29	3.35	6044.53	1847.94	4.85	7.69	0.00	8.97	0.00	1.47	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.0	0.0	0.0
378	6.200	31.29	3.36	6059.49	1852.96	4.86	7.71	0.00	9.01	0.00	1.47	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.1	0.0	0.0
379	6.100	31.29	3.37	6074.30	1857.93	4.88	7.74	0.00	9.04	0.00	1.47	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.2	0.0	0.0
380	6.000	31.29	3.38	6088.97	1862.84	4.90	7.76	0.00	9.08	0.00	1.46	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.4	0.0	0.0
381	5.900	31.29	3.38	6103.50	1867.72	4.92	7.78	0.00	9.11	0.00	1.46	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.5	0.0	0.0
382	5.800	31.29	3.39	6117.90	1872.54	4.94	7.80	0.00	9.14	0.00	1.46	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.6	0.0	0.0
383	5.700	31.29	3.40	6132.16	1877.33	4.96	7.81	0.00	9.18	0.00	1.45	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.8	0.0	0.0
384	5.600	31.29	3.41	6146.28	1882.06	4.98	7.83	0.00	9.21	0.00	1.45	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.9	0.0	0.0

***** PHYTOPLANKTON AND PERIPHYTON DATA

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
373	6.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	11.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
374	6.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	11.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
375	6.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	11.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
376	6.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	11.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
377	6.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	12.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
378	6.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	12.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
379	6.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	12.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
380	6.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	12.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
381	5.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	12.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
382	5.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	12.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
383	5.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	12.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
384	5.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	12.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT B VINCENT & BONFOUCA WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 35 BONFOUCA FROM RKM 5.6 TO BB05 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
385	UPR RCH	0.01902	31.29	3.41	6146.28	1882.06	4.98	7.83	0.00	9.21	0.00	1.45	0.10	0.10	0.00	12.90	0.00	0.00
389	WSTLD	0.00350	30.00	0.32	628.10	54.30	3.60	3.10	0.00	3.10	0.00	2.41	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
----------	---------------	----------------	-----------	---------	-----------------	------------------	---------------	---------	---------	-----------	-----------------	----------------	----------------	----------------	--------------	---------------

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

385	5.60	5.50	0.01902	68.7	0.00010	11.62	567.16	1.67	114.30	19088.10	11430.00	190.88	79433.25	0.012	3.587	0.012
386	5.50	5.40	0.01902	68.7	0.00010	11.62	578.78	1.67	114.30	19088.10	11430.00	190.88	80576.25	0.012	3.639	0.012
387	5.40	5.30	0.01902	68.7	0.00010	11.62	590.40	1.67	114.30	19088.10	11430.00	190.88	81719.25	0.012	3.691	0.012
388	5.30	5.20	0.01902	68.7	0.00010	11.62	602.01	1.67	114.30	19088.10	11430.00	190.88	82862.25	0.012	3.742	0.012
389	5.20	5.10	0.02252	73.6	0.00012	9.81	611.82	1.67	114.30	19088.10	11430.00	190.88	84005.25	0.012	3.794	0.012
390	5.10	5.00	0.02252	73.6	0.00012	9.81	621.63	1.67	114.30	19088.10	11430.00	190.88	85148.25	0.013	3.845	0.013
391	5.00	4.90	0.02252	73.6	0.00012	9.81	631.44	1.67	114.30	19088.10	11430.00	190.88	86291.25	0.013	3.897	0.013
392	4.90	4.80	0.02252	73.6	0.00012	9.81	641.25	1.67	114.30	19088.10	11430.00	190.88	87434.25	0.013	3.949	0.013
393	4.80	4.70	0.02252	73.6	0.00012	9.81	651.06	1.67	114.30	19088.10	11430.00	190.88	88577.25	0.013	4.000	0.013
394	4.70	4.60	0.02252	73.6	0.00012	9.81	660.87	1.67	114.30	19088.10	11430.00	190.88	89720.25	0.013	4.052	0.013
395	4.60	4.50	0.02252	73.6	0.00012	9.81	670.68	1.67	114.30	19088.10	11430.00	190.88	90863.25	0.013	4.104	0.013
TOT						115.14				209969.08	125730.00					
AVG					0.0001			1.67	114.30			190.88				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECA	BOD1 SETT	ABOD1 DECA	BOD1 HYDR	BOD2 DECA	BOD2 SETT	ABOD2 DECA	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECA	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECA	NCM DECA	NCM SETT	
385	5.500	7.26	0.67	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.51	0.51	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
386	5.400	7.26	0.67	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.51	0.51	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
387	5.300	7.26	0.67	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.51	0.51	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
388	5.200	7.26	0.67	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.51	0.51	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
389	5.100	7.26	0.67	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.51	0.51	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
390	5.000	7.26	0.67	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.51	0.51	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
391	4.900	7.26	0.67	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.51	0.51	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
392	4.800	7.25	0.67	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.51	0.51	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
393	4.700	7.25	0.67	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.51	0.51	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
394	4.600	7.25	0.67	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.51	0.51	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
395	4.500	7.25	0.67	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.50	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20	DEG C	RATE	0.54	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00
*	g/m ² /d		**	mg/L/day																							

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL
385	5.500	31.29	3.42	6160.99	1887.00	5.00	7.84	0.00	9.22	0.00	1.44	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.9	0.0	0.
386	5.400	31.29	3.43	6176.30	1892.13	5.03	7.86	0.00	9.23	0.00	1.44	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.9	0.0	0.
387	5.300	31.29	3.43	6191.45	1897.21	5.05	7.86	0.00	9.24	0.00	1.43	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.9	0.0	0.
388	5.200	31.29	3.44	6206.42	1902.23	5.07	7.86	0.00	9.24	0.00	1.42	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.9	0.0	0.
389	5.100	31.29	3.45	6221.23	1907.20	5.09	7.85	0.00	9.23	0.00	1.41	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.9	0.0	0.
390	5.000	31.29	3.46	6238.56	1913.00	5.11	7.84	0.00	9.22	0.00	1.39	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.9	0.0	0.
391	4.900	31.29	3.47	6255.72	1918.74	5.14	7.83	0.00	9.21	0.00	1.38	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.9	0.0	0.
392	4.800	31.29	3.48	6272.70	1924.43	5.16	7.81	0.00	9.18	0.00	1.36	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.9	0.0	0.
393	4.700	31.29	3.49	6289.52	1930.06	5.18	7.78	0.00	9.16	0.00	1.34	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.9	0.0	0.
394	4.600	31.29	3.50	6306.16	1935.63	5.21	7.75	0.00	9.13	0.00	1.33	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.9	0.0	0.
395	4.500	31.29	3.51	6322.65	1941.15	5.23	7.71	0.00	9.09	0.00	1.31	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.9	0.0	0.

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

***** PHYTOPLANKTON AND PERIPHYTON DATA

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
385	5.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	12.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
386	5.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	12.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
387	5.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	12.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
388	5.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	12.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
389	5.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	12.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
390	5.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	12.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
391	4.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	12.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
392	4.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	12.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
393	4.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	12.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
394	4.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	12.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
395	4.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	12.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20 DEG C RATE										0.000	0.000	0.000	0.000								0.000	0.000	0.000				

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT B VINCENT & BONFOUCA WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 36 BONFOUCA FROM BB05 TO RKM 2.7 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
396	UPR RCH	0.02252	31.29	3.51	6322.65	1941.15	5.23	7.71	0.00	9.09	0.00	1.31	0.10	0.10	0.00	12.90	0.00	0.00

***** HYDRAULIC PARAMETER VALUES

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
396	4.50	4.40	0.02252	73.6	0.00020	5.75	676.43	1.44	77.70	11188.80	7770.00	111.89	91640.25	0.023	6.241	0.023
397	4.40	4.30	0.02252	73.6	0.00020	5.75	682.18	1.44	77.70	11188.80	7770.00	111.89	92417.25	0.023	6.294	0.023
398	4.30	4.20	0.02252	73.6	0.00020	5.75	687.93	1.44	77.70	11188.80	7770.00	111.89	93194.25	0.023	6.347	0.023
399	4.20	4.10	0.02252	73.6	0.00020	5.75	693.68	1.44	77.70	11188.80	7770.00	111.89	93971.25	0.024	6.400	0.024
400	4.10	4.00	0.02252	73.6	0.00020	5.75	699.43	1.44	77.70	11188.80	7770.00	111.89	94748.25	0.024	6.452	0.024
401	4.00	3.90	0.02252	73.6	0.00020	5.75	705.18	1.44	77.70	11188.80	7770.00	111.89	95525.25	0.024	6.505	0.024
402	3.90	3.80	0.02252	73.6	0.00020	5.75	710.93	1.44	77.70	11188.80	7770.00	111.89	96302.25	0.024	6.558	0.024
403	3.80	3.70	0.02252	73.6	0.00020	5.75	716.68	1.44	77.70	11188.80	7770.00	111.89	97079.25	0.024	6.611	0.024
404	3.70	3.60	0.02252	73.6	0.00020	5.75	722.43	1.44	77.70	11188.80	7770.00	111.89	97856.25	0.025	6.664	0.025
405	3.60	3.50	0.02252	73.6	0.00020	5.75	728.18	1.44	77.70	11188.80	7770.00	111.89	98633.25	0.025	6.717	0.025
406	3.50	3.40	0.02252	73.6	0.00020	5.75	733.93	1.44	77.70	11188.80	7770.00	111.89	99410.25	0.025	6.770	0.025
407	3.40	3.30	0.02252	73.6	0.00020	5.75	739.68	1.44	77.70	11188.80	7770.00	111.89	100187.25	0.025	6.823	0.025
408	3.30	3.20	0.02252	73.6	0.00020	5.75	745.43	1.44	77.70	11188.80	7770.00	111.89	100964.25	0.025	6.876	0.025
409	3.20	3.10	0.02252	73.6	0.00020	5.75	751.18	1.44	77.70	11188.80	7770.00	111.89	101741.25	0.026	6.929	0.026
410	3.10	3.00	0.02252	73.6	0.00020	5.75	756.93	1.44	77.70	11188.80	7770.00	111.89	102518.25	0.026	6.982	0.026
411	3.00	2.90	0.02252	73.6	0.00020	5.75	762.68	1.44	77.70	11188.80	7770.00	111.89	103295.25	0.026	7.035	0.026
412	2.90	2.80	0.02252	73.6	0.00020	5.75	768.43	1.44	77.70	11188.80	7770.00	111.89	104072.25	0.026	7.088	0.026
413	2.80	2.70	0.02252	73.6	0.00020	5.75	774.18	1.44	77.70	11188.80	7770.00	111.89	104849.25	0.026	7.141	0.026
TOT						103.50				201398.36	139859.98					
AVG						0.0002		1.44	77.70			111.89				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECATY 1/da	BOD1 SETT 1/da	ABOD1 DECATY 1/da	BOD1 HYDR 1/da	BOD2 DECATY 1/da	BOD2 SETT 1/da	ABOD2 DECATY 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECATY 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECATY 1/da	NCM DECATY 1/da	NCM SETT 1/da	
396	4.400	7.25	0.81	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.10	0.60	0.60	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
397	4.300	7.25	0.81	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.10	0.60	0.60	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
398	4.200	7.25	0.81	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.10	0.60	0.60	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
399	4.100	7.25	0.81	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.10	0.59	0.59	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
400	4.000	7.25	0.81	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.10	0.59	0.59	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
401	3.900	7.25	0.81	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.10	0.58	0.58	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
402	3.800	7.25	0.81	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.10	0.58	0.58	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
403	3.700	7.25	0.81	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.10	0.57	0.57	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
404	3.600	7.25	0.81	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.10	0.57	0.57	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
405	3.500	7.25	0.81	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.10	0.56	0.56	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
406	3.400	7.25	0.81	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.10	0.55	0.55	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
407	3.300	7.25	0.81	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.10	0.55	0.55	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
408	3.200	7.25	0.81	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.10	0.54	0.54	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
409	3.100	7.25	0.81	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.10	0.53	0.53	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
410	3.000	7.25	0.81	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.10	0.53	0.53	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
411	2.900	7.25	0.81	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.10	0.52	0.52	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
412	2.800	7.25	0.81	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.10	0.51	0.51	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
413	2.700	7.25	0.81	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.10	0.50	0.50	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20	DEG C	RATE	0.66	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.05			0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00
*	g/m ² /d		**	mg/L/day																							

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL
396	4.400	31.29	3.52	6340.02	1946.96	5.26	7.67	0.00	9.03	0.00	1.28	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.8	0.0	0.
397	4.300	31.29	3.53	6358.43	1953.12	5.30	7.61	0.00	8.96	0.00	1.26	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.6	0.0	0.
398	4.200	31.29	3.54	6376.74	1959.25	5.32	7.56	0.00	8.89	0.00	1.24	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.4	0.0	0.
399	4.100	31.29	3.55	6394.96	1965.35	5.35	7.50	0.00	8.81	0.00	1.22	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.3	0.0	0.
400	4.000	31.29	3.56	6413.08	1971.42	5.38	7.43	0.00	8.73	0.00	1.20	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.1	0.0	0.
401	3.900	31.29	3.57	6431.11	1977.45	5.41	7.36	0.00	8.64	0.00	1.19	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.0	0.0	0.
402	3.800	31.29	3.58	6449.05	1983.46	5.43	7.28	0.00	8.55	0.00	1.17	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.8	0.0	0.
403	3.700	31.29	3.59	6466.91	1989.43	5.46	7.20	0.00	8.45	0.00	1.16	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.7	0.0	0.
404	3.600	31.29	3.60	6484.67	1995.38	5.48	7.12	0.00	8.35	0.00	1.15	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.5	0.0	0.
405	3.500	31.29	3.61	6502.35	2001.30	5.50	7.03	0.00	8.25	0.00	1.15	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.4	0.0	0.
406	3.400	31.29	3.62	6519.94	2007.19	5.53	6.93	0.00	8.13	0.00	1.14	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.2	0.0	0.
407	3.300	31.29	3.63	6537.45	2013.05	5.55	6.83	0.00	8.02	0.00	1.14	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.1	0.0	0.
408	3.200	31.29	3.64	6554.87	2018.88	5.58	6.72	0.00	7.89	0.00	1.13	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.9	0.0	0.
409	3.100	31.29	3.65	6572.21	2024.68	5.60	6.61	0.00	7.76	0.00	1.13	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.8	0.0	0.
410	3.000	31.29	3.66	6589.47	2030.46	5.62	6.49	0.00	7.63	0.00	1.13	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.6	0.0	0.
411	2.900	31.29	3.67	6606.64	2036.21	5.65	6.36	0.00	7.48	0.00	1.13	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.5	0.0	0.
412	2.800	31.29	3.68	6623.74	2041.93	5.67	6.23	0.00	7.33	0.00	1.14	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.3	0.0	0.

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

413 2.700 31.29 3.69 6640.76 2047.63 5.69 6.08 0.00 7.17 0.00 1.14 0.10 0.10 0.00 0.00 0.00 0.00 0.00 0.00 0.00 10.2 0.0 0.0

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
396	4.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	12.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
397	4.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	12.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
398	4.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	12.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
399	4.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	12.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
400	4.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	12.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
401	3.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	12.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
402	3.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	11.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
403	3.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	11.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
404	3.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	11.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
405	3.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	11.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
406	3.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	11.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
407	3.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	11.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
408	3.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
409	3.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
410	3.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
411	2.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
412	2.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
413	2.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT B VINCENT & BONFOUCA WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 37 BONFOUCA FROM RKM 2.7 TO LIBERTY BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
414	UPR RCH	0.02252	31.29	3.69	6640.76	2047.63	5.69	6.08	0.00	7.17	0.00	1.14	0.10	0.10	0.00	10.20	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
414	2.70	2.60	0.02252	73.6	0.00016	7.24	781.41	1.60	88.00	14080.00	8800.00	140.80	105729.25	0.021	6.247	0.021
415	2.60	2.50	0.02252	73.6	0.00016	7.24	788.65	1.60	88.00	14080.00	8800.00	140.80	106609.25	0.021	6.299	0.021
416	2.50	2.40	0.02252	73.6	0.00016	7.24	795.88	1.60	88.00	14080.00	8800.00	140.80	107489.25	0.021	6.351	0.021
417	2.40	2.30	0.02252	73.6	0.00016	7.24	803.12	1.60	88.00	14080.00	8800.00	140.80	108369.25	0.022	6.403	0.022
418	2.30	2.20	0.02252	73.6	0.00016	7.24	810.36	1.60	88.00	14080.00	8800.00	140.80	109249.25	0.022	6.455	0.022
419	2.20	2.10	0.02252	73.6	0.00016	7.24	817.59	1.60	88.00	14080.00	8800.00	140.80	110129.25	0.022	6.507	0.022
420	2.10	2.00	0.02252	73.6	0.00016	7.24	824.83	1.60	88.00	14080.00	8800.00	140.80	111009.25	0.022	6.559	0.022
421	2.00	1.90	0.02252	73.6	0.00016	7.24	832.06	1.60	88.00	14080.00	8800.00	140.80	111889.25	0.022	6.611	0.022
422	1.90	1.80	0.02252	73.6	0.00016	7.24	839.30	1.60	88.00	14080.00	8800.00	140.80	112769.25	0.023	6.663	0.023
423	1.80	1.70	0.02252	73.6	0.00016	7.24	846.53	1.60	88.00	14080.00	8800.00	140.80	113649.25	0.023	6.715	0.023
424	1.70	1.60	0.02252	73.6	0.00016	7.24	853.77	1.60	88.00	14080.00	8800.00	140.80	114529.25	0.023	6.767	0.023
425	1.60	1.50	0.02252	73.6	0.00016	7.24	861.01	1.60	88.00	14080.00	8800.00	140.80	115409.25	0.023	6.819	0.023
426	1.50	1.40	0.02252	73.6	0.00016	7.24	868.24	1.60	88.00	14080.00	8800.00	140.80	116289.25	0.023	6.871	0.023
427	1.40	1.30	0.02252	73.6	0.00016	7.24	875.48	1.60	88.00	14080.00	8800.00	140.80	117169.25	0.023	6.923	0.023
428	1.30	1.20	0.02252	73.6	0.00016	7.24	882.71	1.60	88.00	14080.00	8800.00	140.80	118049.25	0.024	6.975	0.024

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

429	1.20	1.10	0.02252	73.6	0.00016	7.24	889.95	1.60	88.00	14080.00	8800.00	140.80	118929.25	0.024	7.027	0.024
430	1.10	1.00	0.02252	73.6	0.00016	7.24	897.18	1.60	88.00	14080.00	8800.00	140.80	119809.25	0.024	7.079	0.024
431	1.00	0.90	0.02252	73.6	0.00016	7.24	904.42	1.60	88.00	14080.00	8800.00	140.80	120689.25	0.024	7.131	0.024
432	0.90	0.80	0.02252	73.6	0.00016	7.24	911.66	1.60	88.00	14080.00	8800.00	140.80	121569.25	0.024	7.183	0.024

TOT						137.48				267520.00	167200.00					
AVG					0.0002				1.60	88.00		140.80				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECA 1/da	BOD1 SETT 1/da	ABOD1 DECA 1/da	BOD1 HYDR 1/da	BOD2 DECA 1/da	BOD2 SETT 1/da	ABOD2 DECA 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECA 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECA 1/da	NCM DECA 1/da	NCM SETT 1/da	
414	2.600	7.25	0.71	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.39	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
415	2.500	7.26	0.71	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.38	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
416	2.400	7.27	0.71	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.37	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
417	2.300	7.27	0.71	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.37	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
418	2.200	7.28	0.71	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.36	0.36	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
419	2.100	7.29	0.71	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.36	0.36	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
420	2.000	7.29	0.71	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.36	0.36	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
421	1.900	7.30	0.71	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.36	0.36	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
422	1.800	7.31	0.71	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.36	0.36	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
423	1.700	7.31	0.71	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.36	0.36	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
424	1.600	7.32	0.70	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.36	0.36	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
425	1.500	7.33	0.70	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.36	0.36	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
426	1.400	7.33	0.70	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.37	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
427	1.300	7.34	0.70	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.37	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
428	1.200	7.35	0.70	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.38	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
429	1.100	7.35	0.70	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.38	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
430	1.000	7.36	0.70	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.39	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
431	0.900	7.37	0.70	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.40	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
432	0.800	7.37	0.70	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.41	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
AVG 20 DEG C RATE			0.58	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.03	0.00	0.00	0.00	0.00	0.00	0.00				0.00	0.00	0.00	
*	g/m ² /d		**	mg/L/day																							

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A ug/L	PERIP g/m ²	COLI #/100mL	
414	2.600	31.23	3.69	6656.95	2053.05	5.71	5.94	0.00	7.01	0.00	1.15	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.1	0.0	0.
415	2.500	31.18	3.70	6672.37	2058.21	5.73	5.82	0.00	6.88	0.00	1.16	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.9	0.0	0.
416	2.400	31.12	3.71	6687.70	2063.34	5.75	5.73	0.00	6.77	0.00	1.17	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.8	0.0	0.
417	2.300	31.06	3.72	6702.95	2068.44	5.77	5.65	0.00	6.67	0.00	1.18	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.6	0.0	0.
418	2.200	31.01	3.73	6718.11	2073.52	5.79	5.59	0.00	6.60	0.00	1.19	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.5	0.0	0.
419	2.100	30.95	3.74	6733.19	2078.56	5.81	5.54	0.00	6.54	0.00	1.21	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.3	0.0	0.
420	2.000	30.90	3.75	6748.18	2083.58	5.83	5.52	0.00	6.49	0.00	1.23	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.2	0.0	0.
421	1.900	30.84	3.75	6763.09	2088.57	5.85	5.51	0.00	6.47	0.00	1.25	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.0	0.0	0.
422	1.800	30.78	3.76	6777.92	2093.54	5.87	5.51	0.00	6.46	0.00	1.27	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.9	0.0	0.
423	1.700	30.73	3.77	6792.67	2098.48	5.89	5.54	0.00	6.47	0.00	1.30	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.7	0.0	0.
424	1.600	30.67	3.78	6807.34	2103.39	5.91	5.58	0.00	6.49	0.00	1.32	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.6	0.0	0.

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

425	1.500	30.61	3.79	6821.94	2108.27	5.93	5.63	0.00	6.53	0.00	1.35	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.4	0.0	0.
0.00																								
426	1.400	30.56	3.79	6836.46	2113.13	5.95	5.70	0.00	6.59	0.00	1.38	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.3	0.0	0.
0.00																								
427	1.300	30.50	3.80	6850.90	2117.97	5.97	5.79	0.00	6.66	0.00	1.42	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.1	0.0	0.
0.00																								
428	1.200	30.45	3.81	6865.26	2122.78	5.99	5.89	0.00	6.75	0.00	1.45	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.0	0.0	0.
0.00																								
429	1.100	30.39	3.82	6879.56	2127.56	6.02	6.01	0.00	6.85	0.00	1.49	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.8	0.0	0.
0.00																								
430	1.000	30.33	3.83	6893.78	2132.32	6.05	6.15	0.00	6.97	0.00	1.53	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.7	0.0	0.
0.00																								
431	0.900	30.28	3.83	6907.93	2137.05	6.08	6.30	0.00	7.11	0.00	1.57	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.5	0.0	0.
0.00																								
432	0.800	30.22	3.84	6922.00	2141.77	6.11	6.47	0.00	7.26	0.00	1.62	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.4	0.0	0.
0.00																								

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
414	2.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
415	2.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
416	2.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
417	2.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
418	2.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
419	2.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
420	2.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
421	1.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
422	1.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
423	1.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
424	1.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
425	1.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
426	1.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
427	1.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
428	1.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
429	1.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
430	1.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
431	0.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
432	0.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT B VINCENT & BONFOUCA WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 91 BONFOUCA FROM LIBERTY TO BB06 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
899	UPR RCH	0.02252	30.22	3.84	6922.00	2141.77	6.11	6.47	0.00	7.26	0.00	1.62	0.10	0.10	0.00	7.40	0.00	0.00
899	TRIB	0.04302	30.22	3.84	6911.05	2138.10	6.07	6.71	0.00	7.50	0.00	1.67	0.10	0.10	0.00	7.40	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
----------	---------------	----------------	-----------	---------	-----------------	------------------	---------------	---------	---------	-----------	-----------------	----------------	----------------	----------------	--------------	---------------

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

899	0.80	0.70	0.06554	78.8	0.00032	3.65	915.31	1.96	105.59	20695.64	10559.00	206.96	188246.19	0.026	8.958	0.026
900	0.70	0.60	0.06554	78.8	0.00032	3.65	918.97	1.96	105.59	20695.64	10559.00	206.96	189302.09	0.026	9.008	0.026
901	0.60	0.50	0.06554	78.8	0.00032	3.65	922.62	1.96	105.59	20695.64	10559.00	206.96	190358.00	0.026	9.059	0.026
902	0.50	0.40	0.06554	78.8	0.00032	3.65	926.27	1.96	105.59	20695.64	10559.00	206.96	191413.91	0.026	9.109	0.026
903	0.40	0.30	0.06554	78.8	0.00032	3.65	929.93	1.96	105.59	20695.64	10559.00	206.96	192469.81	0.026	9.159	0.026
904	0.30	0.20	0.06554	78.8	0.00032	3.65	933.58	1.96	105.59	20695.64	10559.00	206.96	193525.72	0.026	9.210	0.026
905	0.20	0.10	0.06554	78.8	0.00032	3.65	937.24	1.96	105.59	20695.64	10559.00	206.96	194581.62	0.026	9.260	0.026
906	0.10	0.00	0.06554	78.8	0.00032	3.65	940.89	1.96	105.59	20695.64	10559.00	206.96	195637.53	0.027	9.310	0.027
TOT							29.24			165565.11	84472.00					
AVG					0.0003			1.96	105.59			206.96				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECA	BOD1 SETT	ABOD1 DECA	BOD1 HYDR	BOD2 DECA	BOD2 SETT	ABOD2 DECA	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECA	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECA	NCM DECA	NCM SETT	
		mg/L	1/da	1/da	1/da	1/da	1/da	1/da	1/da	1/da	*	*	*	1/da	1/da	1/da	*	1/da	1/da	1/da	*	**	**	1/da	1/da	1/da	
899	0.700	7.38	0.61	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
900	0.600	7.38	0.61	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
901	0.500	7.38	0.61	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
902	0.400	7.39	0.61	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
903	0.300	7.39	0.60	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
904	0.200	7.39	0.60	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
905	0.100	7.40	0.60	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
906	0.000	7.40	0.60	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
AVG 20	DEG C	RATE	0.50	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	
*		g/m ² /d		**		mg/L/day																					

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO	BOD1	BOD2	EBOD1	EBOD2	ORG-N	NH3-N	NO3-N	TOT-N	EORG-N	ETOT-N	ORG-P	PO4-P	TOT-P	EORG-P	ETOT-P	CHL A	PERIP	COLI		
						mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	g/m ²	#/100mL	
899	0.700	30.19	3.85	6931.93	2145.09	6.14	6.60	0.00	7.36	0.00	1.65	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.2	0.0	0.
900	0.600	30.16	3.86	6953.94	2152.46	6.22	6.64	0.00	7.38	0.00	1.66	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.9	0.0	0.
901	0.500	30.13	3.87	6975.91	2159.81	6.29	6.69	0.00	7.41	0.00	1.68	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.7	0.0	0.
902	0.400	30.10	3.89	6997.84	2167.15	6.37	6.76	0.00	7.45	0.00	1.70	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.5	0.0	0.
903	0.300	30.07	3.90	7019.73	2174.47	6.46	6.84	0.00	7.50	0.00	1.72	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.2	0.0	0.
904	0.200	30.04	3.91	7041.57	2181.78	6.55	6.93	0.00	7.57	0.00	1.74	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.0	0.0	0.
905	0.100	30.01	3.92	7063.36	2189.08	6.64	7.04	0.00	7.66	0.00	1.76	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.8	0.0	0.
906	0.000	29.98	3.93	7085.12	2196.36	6.75	7.16	0.00	7.75	0.00	1.79	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.6	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
899	0.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
900	0.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
901	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAy 1/da	BOD1 SETT 1/da	ABOD1 DECAy 1/da	BOD1 HYDR 1/da	BOD2 DECAy 1/da	BOD2 SETT 1/da	ABOD2 DECAy 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAy 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAy 1/da	NCM DECAy 1/da	NCM SETT 1/da	
67	2.000	7.56	11.59	0.13	0.77	0.00	0.00	0.00	0.00	0.00	0.93	1.46	1.46	0.05	0.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
68	1.900	7.58	11.56	0.13	0.77	0.00	0.00	0.00	0.00	0.00	0.92	1.40	1.40	0.05	0.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
69	1.800	7.60	11.54	0.12	0.76	0.00	0.00	0.00	0.00	0.00	0.92	1.35	1.35	0.05	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
70	1.700	7.61	11.51	0.12	0.76	0.00	0.00	0.00	0.00	0.00	0.91	1.31	1.31	0.05	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
71	1.600	7.63	11.48	0.12	0.76	0.00	0.00	0.00	0.00	0.00	0.90	1.27	1.27	0.05	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
72	1.500	7.65	11.46	0.12	0.76	0.00	0.00	0.00	0.00	0.00	0.89	1.23	1.23	0.05	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
73	1.400	7.67	11.42	0.12	0.75	0.00	0.00	0.00	0.00	0.00	0.89	1.20	1.20	0.05	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
74	1.300	7.68	11.13	0.12	0.73	0.00	0.00	0.00	0.00	0.00	0.88	1.22	1.22	0.05	0.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
75	1.200	7.70	11.10	0.12	0.73	0.00	0.00	0.00	0.00	0.00	0.87	1.19	1.19	0.05	0.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
76	1.100	7.72	11.07	0.12	0.73	0.00	0.00	0.00	0.00	0.00	0.86	1.16	1.16	0.05	0.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
77	1.000	7.74	11.05	0.12	0.72	0.00	0.00	0.00	0.00	0.00	0.86	1.13	1.13	0.05	0.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
78	0.900	7.76	11.02	0.12	0.72	0.00	0.00	0.00	0.00	0.00	0.85	1.10	1.10	0.05	0.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
79	0.800	7.77	10.90	0.12	0.71	0.00	0.00	0.00	0.00	0.00	0.84	1.11	1.11	0.05	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
80	0.700	7.79	10.61	0.12	0.69	0.00	0.00	0.00	0.00	0.00	0.83	1.18	1.18	0.05	0.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
81	0.600	7.81	10.57	0.12	0.69	0.00	0.00	0.00	0.00	0.00	0.83	1.15	1.15	0.05	0.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
82	0.500	7.83	10.54	0.11	0.68	0.00	0.00	0.00	0.00	0.00	0.82	1.12	1.12	0.05	0.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
83	0.400	7.85	10.48	0.11	0.68	0.00	0.00	0.00	0.00	0.00	0.81	1.11	1.11	0.05	0.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
84	0.300	7.87	10.45	0.11	0.68	0.00	0.00	0.00	0.00	0.00	0.81	1.09	1.09	0.05	0.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
85	0.200	7.88	10.35	0.11	0.67	0.00	0.00	0.00	0.00	0.00	0.80	1.14	1.14	0.05	0.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
86	0.100	7.90	10.33	0.11	0.67	0.00	0.00	0.00	0.00	0.00	0.79	1.11	1.11	0.05	0.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
87	0.000	7.92	10.28	0.11	0.66	0.00	0.00	0.00	0.00	0.00	0.79	1.11	1.11	0.05	0.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20	DEG C	RATE	9.36	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.50			0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	
*	g/m ² /d			**	mg/L/day																						

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	
67	2.000	29.87	0.36	695.02	49.19	4.74	8.35	0.00	8.35	0.00	8.07	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
68	1.900	29.73	0.36	695.02	49.19	5.48	7.63	0.00	7.63	0.00	7.36	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
69	1.800	29.60	0.36	695.02	49.19	5.83	6.98	0.00	6.98	0.00	6.72	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
70	1.700	29.47	0.36	695.02	49.19	6.01	6.40	0.00	6.40	0.00	6.15	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
71	1.600	29.34	0.36	695.02	49.19	6.12	5.89	0.00	5.89	0.00	5.63	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
72	1.500	29.20	0.36	695.02	49.19	6.20	5.42	0.00	5.42	0.00	5.16	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
73	1.400	29.07	0.36	695.16	49.22	6.27	5.03	0.00	5.03	0.00	4.75	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
74	1.300	28.94	0.36	699.57	50.28	6.15	5.58	0.00	5.58	0.00	5.32	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
75	1.200	28.80	0.36	699.57	50.28	6.27	5.17	0.00	5.17	0.00	4.90	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
76	1.100	28.67	0.36	699.57	50.28	6.35	4.80	0.00	4.80	0.00	4.52	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
77	1.000	28.54	0.36	699.57	50.28	6.42	4.47	0.00	4.47	0.00	4.18	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
78	0.900	28.41	0.36	699.57	50.28	6.47	4.17	0.00	4.17	0.00	3.87	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
79	0.800	28.27	0.36	701.08	50.64	6.44	4.38	0.00	4.38	0.00	4.08	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
80	0.700	28.14	0.36	705.30	51.66	6.29	5.64	0.00	5.64	0.00	5.36	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
81	0.600	28.01	0.36	705.48	51.70	6.40	5.29	0.00	5.29	0.00	5.01	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
82	0.500	27.87	0.36	705.48	51.70	6.48	4.94	0.00	4.94	0.00	4.66	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

83	0.400	27.74	0.36	706.12	51.86	6.51	4.87	0.00	4.87	0.00	4.58	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
84	0.300	27.61	0.36	706.20	51.88	6.57	4.66	0.00	4.66	0.00	4.37	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
85	0.200	27.48	0.36	707.22	52.12	6.52	5.64	0.00	5.64	0.00	5.36	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
86	0.100	27.34	0.36	707.22	52.12	6.58	5.27	0.00	5.27	0.00	4.99	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
87	0.000	27.21	0.36	707.64	52.23	6.59	5.47	0.00	5.47	0.00	5.19	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
67	2.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
68	1.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
69	1.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
70	1.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
71	1.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
72	1.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
73	1.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
74	1.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
75	1.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
76	1.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
77	1.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
78	0.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
79	0.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
80	0.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
81	0.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
82	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
83	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
84	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
85	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
86	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
87	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT DRAINAGE DITCH 8 WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 7 DRAINAGE DITCH 8 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
102	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	2.20	0.00	2.20	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
102	WSTLD	0.00007	30.00	0.39	753.60	63.30	2.00	23.00	0.00	23.00	0.00	23.00	0.00	0.00	0.00	0.00	0.00	0.00
107	WSTLD	0.00006	30.00	0.39	753.60	63.30	2.00	40.25	0.00	40.25	0.00	40.25	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
102	0.80	0.70	0.00036	20.8	0.00613	0.19	0.19	0.05	1.07	5.83	107.23	0.06	0.00	0.000	0.000	0.006
103	0.70	0.60	0.00036	20.8	0.00613	0.19	0.38	0.05	1.07	5.83	107.23	0.06	0.00	0.000	0.000	0.006

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

104	0.60	0.50	0.00036	20.8	0.00613	0.19	0.57	0.05	1.07	5.83	107.23	0.06	0.00	0.000	0.000	0.006
105	0.50	0.40	0.00036	20.8	0.00613	0.19	0.76	0.05	1.07	5.83	107.23	0.06	0.00	0.000	0.000	0.006
106	0.40	0.30	0.00036	20.8	0.00613	0.19	0.94	0.05	1.07	5.83	107.23	0.06	0.00	0.000	0.000	0.006
107	0.30	0.20	0.00042	32.4	0.00647	0.18	1.12	0.06	1.12	6.47	112.45	0.06	0.00	0.000	0.000	0.006
108	0.20	0.10	0.00042	32.4	0.00647	0.18	1.30	0.06	1.12	6.47	112.45	0.06	0.00	0.000	0.000	0.006
109	0.10	0.00	0.00042	32.4	0.00647	0.18	1.48	0.06	1.12	6.47	112.45	0.06	0.00	0.000	0.000	0.006
TOT						1.48				48.57	873.49					
AVG			0.0063					0.06	1.09							0.06

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECA	BOD1 SETT	ABOD1 DECA	BOD1 HYDR	BOD2 DECA	BOD2 SETT	ABOD2 DECA	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECA	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECA	NCM DECA	NCM SETT	
		mg/L	1/da	1/da	1/da	1/da	1/da	1/da	1/da	1/da	*	*	*	1/da	1/da	1/da	*	1/da	1/da	1/da	*	**	**	1/da	1/da	1/da	
102	0.700	7.59	16.52	0.12	1.16	0.00	0.00	0.00	0.00	0.00	0.92	1.27	1.27	0.05	1.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
103	0.600	7.64	16.42	0.12	1.15	0.00	0.00	0.00	0.00	0.00	0.90	1.20	1.20	0.05	1.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
104	0.500	7.68	16.33	0.12	1.14	0.00	0.00	0.00	0.00	0.00	0.88	1.15	1.15	0.05	1.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
105	0.400	7.73	16.23	0.12	1.13	0.00	0.00	0.00	0.00	0.00	0.86	1.10	1.10	0.05	1.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
106	0.300	7.78	16.13	0.12	1.12	0.00	0.00	0.00	0.00	0.00	0.84	1.05	1.05	0.05	1.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
107	0.200	7.83	15.24	0.12	1.05	0.00	0.00	0.00	0.00	0.00	0.82	1.28	1.28	0.05	1.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
108	0.100	7.88	15.14	0.11	1.04	0.00	0.00	0.00	0.00	0.00	0.80	1.20	1.20	0.05	1.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
109	0.000	7.92	15.05	0.11	1.03	0.00	0.00	0.00	0.00	0.00	0.79	1.13	1.13	0.05	1.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20	DEG C	RATE	13.57	0.08	0.11	0.00	0.00	0.00	0.00	0.00	0.50			0.03	0.11	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	
*	g/m ² /d		**	mg/L/day																							

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO	BOD1	BOD2	EBOD1	EBOD2	ORG-N	NH3-N	NO3-N	TOT-N	EORG-N	ETOT-N	ORG-P	PO4-P	TOT-P	EORG-P	ETOT-P	CHL A	PERIP	COLI		
						mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	g/m ²	#/100mL		
102	0.700	29.65	0.29	569.34	18.90	5.89	5.62	0.00	5.62	0.00	4.71	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
103	0.600	29.30	0.29	569.34	18.90	6.16	4.89	0.00	4.89	0.00	4.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
104	0.500	28.95	0.29	569.34	18.90	6.30	4.31	0.00	4.31	0.00	3.43	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
105	0.400	28.60	0.29	569.34	18.90	6.42	3.85	0.00	3.85	0.00	2.97	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
106	0.300	28.26	0.29	569.34	18.90	6.51	3.48	0.00	3.48	0.00	2.60	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
107	0.200	27.91	0.30	596.32	25.40	6.17	7.65	0.00	7.65	0.00	6.93	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
108	0.100	27.56	0.30	596.32	25.40	6.36	6.66	0.00	6.66	0.00	5.94	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
109	0.000	27.21	0.30	596.32	25.40	6.50	5.85	0.00	5.85	0.00	5.13	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
102	0.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
103	0.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
104	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
105	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
106	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
107	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

171	3.80	3.70	0.00283	0.0	0.05667	0.02	0.27	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
172	3.70	3.60	0.00283	0.0	0.05667	0.02	0.29	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
173	3.60	3.50	0.00283	0.0	0.05667	0.02	0.31	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
174	3.50	3.40	0.00283	0.0	0.05667	0.02	0.33	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
175	3.40	3.30	0.00283	0.0	0.05667	0.02	0.35	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
176	3.30	3.20	0.00283	0.0	0.05667	0.02	0.37	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
177	3.20	3.10	0.00283	0.0	0.05667	0.02	0.39	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
178	3.10	3.00	0.00283	0.0	0.05667	0.02	0.41	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
179	3.00	2.90	0.00283	0.0	0.05667	0.02	0.43	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
180	2.90	2.80	0.00283	0.0	0.05667	0.02	0.45	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
181	2.80	2.70	0.00283	0.0	0.05667	0.02	0.47	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
182	2.70	2.60	0.00283	0.0	0.05667	0.02	0.49	0.05	1.00	5.00	100.01	0.05	0.00	0.000	0.000	0.057
TOT						0.49				119.93	2400.16					
AVG					0.0567			0.05	1.00			0.05				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT DECAT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR DECAT 1/da	BOD2 DECAT 1/da	BOD2 SETT DECAT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT DECAT 1/da	NH3-N DECAT 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da	
159	4.900	7.55	30.07	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.94	1.08	1.08	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
160	4.800	7.55	30.07	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.94	1.08	1.08	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
161	4.700	7.55	30.07	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.94	1.08	1.08	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
162	4.600	7.55	30.07	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.94	1.08	1.08	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
163	4.500	7.55	30.07	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.94	1.08	1.08	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
164	4.400	7.55	30.07	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.94	1.08	1.08	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
165	4.300	7.55	30.07	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.94	1.08	1.08	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
166	4.200	7.55	30.07	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.94	1.08	1.08	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
167	4.100	7.55	30.07	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.94	1.08	1.08	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
168	4.000	7.55	30.07	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.94	1.08	1.08	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
169	3.900	7.55	30.07	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.94	1.08	1.08	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
170	3.800	7.55	30.07	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.94	1.08	1.08	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
171	3.700	7.55	30.07	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.94	1.08	1.08	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
172	3.600	7.55	30.07	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.94	1.08	1.08	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
173	3.500	7.55	30.07	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.94	1.08	1.08	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
174	3.400	7.55	30.07	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.94	1.08	1.08	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
175	3.300	7.55	30.07	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.94	1.08	1.08	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
176	3.200	7.55	30.07	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.94	1.08	1.08	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
177	3.100	7.55	30.07	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.94	1.08	1.08	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
178	3.000	7.55	30.07	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.94	1.08	1.08	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
179	2.900	7.55	30.07	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.94	1.08	1.08	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
180	2.800	7.55	30.07	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.94	1.08	1.08	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
181	2.700	7.55	30.07	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.94	1.08	1.08	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
182	2.600	7.55	30.07	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.94	1.08	1.08	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
AVG 20	DEG C	RATE	25.00	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.50			0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	
*	g/m ² /d		**	mg/L/day																							

***** WATER QUALITY CONSTITUENT VALUES

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	
159	4.900	30.00	0.26	520.90	7.23	6.31	2.20	0.00	2.20	0.00	1.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
160	4.800	30.00	0.26	520.90	7.23	6.50	2.20	0.00	2.20	0.00	1.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.	
161	4.700	30.00	0.26	520.90	7.23	6.62	2.20	0.00	2.20	0.00	1.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.	
162	4.600	30.00	0.26	520.90	7.23	6.70	2.20	0.00	2.20	0.00	1.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.	

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

206	1.200	7.55	30.07	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.94	1.08	1.08	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
207	1.100	7.55	30.07	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.94	1.08	1.08	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE	25.00	0.08	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50			0.03	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	
193	2.500	30.00	0.26	524.44	8.08	6.79	2.29	0.00	2.29	0.00	1.11	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
194	2.400	30.00	0.26	524.44	8.08	6.81	2.29	0.00	2.29	0.00	1.11	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
195	2.300	30.00	0.26	524.44	8.08	6.82	2.29	0.00	2.29	0.00	1.11	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
196	2.200	30.00	0.26	524.44	8.08	6.83	2.29	0.00	2.29	0.00	1.10	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
197	2.100	30.00	0.26	524.44	8.08	6.83	2.29	0.00	2.29	0.00	1.10	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
198	2.000	30.00	0.26	524.44	8.08	6.84	2.29	0.00	2.29	0.00	1.10	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
199	1.900	30.00	0.26	524.44	8.08	6.84	2.29	0.00	2.29	0.00	1.09	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
200	1.800	30.00	0.26	524.44	8.08	6.84	2.29	0.00	2.29	0.00	1.09	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
201	1.700	30.00	0.26	524.44	8.08	6.84	2.29	0.00	2.29	0.00	1.09	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
202	1.600	30.00	0.26	524.44	8.08	6.84	2.30	0.00	2.30	0.00	1.09	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
203	1.500	30.00	0.26	524.44	8.08	6.84	2.30	0.00	2.30	0.00	1.08	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
204	1.400	30.00	0.26	524.44	8.08	6.84	2.30	0.00	2.30	0.00	1.08	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
205	1.300	30.00	0.26	524.44	8.08	6.84	2.30	0.00	2.30	0.00	1.08	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
206	1.200	30.00	0.26	524.44	8.08	6.84	2.30	0.00	2.30	0.00	1.08	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
207	1.100	30.00	0.26	524.44	8.08	6.84	2.30	0.00	2.30	0.00	1.08	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
193	2.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
194	2.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
195	2.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
196	2.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
197	2.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
198	2.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
199	1.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
200	1.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
201	1.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
202	1.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
203	1.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
204	1.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
205	1.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
206	1.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
207	1.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

20 DEG C RATE

0.000 0.000 0.000 0.000

0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT UPPER B BONFOUCA
REACH NO. 16 UB FROM BB01 TO BAYOU VINCENT

WATER QUALITY/HYDRAULIC MODEL FOR:
BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
208	UPR RCH	0.00316	30.00	0.26	524.44	8.08	6.84	2.30	0.00	2.30	0.00	1.08	0.10	0.10	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
208	1.10	1.00	0.00316	1.5	0.02613	0.04	0.83	0.08	1.55	12.10	155.06	0.12	0.00	0.000	0.000	0.026
209	1.00	0.90	0.00316	1.5	0.02613	0.04	0.87	0.08	1.55	12.10	155.06	0.12	0.00	0.000	0.000	0.026
210	0.90	0.80	0.00316	1.5	0.02613	0.04	0.92	0.08	1.55	12.10	155.06	0.12	0.00	0.000	0.000	0.026
211	0.80	0.70	0.00316	1.5	0.02613	0.04	0.96	0.08	1.55	12.10	155.06	0.12	0.00	0.000	0.000	0.026
212	0.70	0.60	0.00316	1.5	0.02613	0.04	1.01	0.08	1.55	12.10	155.06	0.12	0.00	0.000	0.000	0.026
213	0.60	0.50	0.00316	1.5	0.02613	0.04	1.05	0.08	1.55	12.10	155.06	0.12	0.00	0.000	0.000	0.026
214	0.50	0.40	0.00316	1.5	0.02613	0.04	1.10	0.08	1.55	12.10	155.06	0.12	0.00	0.000	0.000	0.026
215	0.40	0.30	0.00316	1.5	0.02613	0.04	1.14	0.08	1.55	12.10	155.06	0.12	0.00	0.000	0.000	0.026
216	0.30	0.20	0.00316	1.5	0.02613	0.04	1.18	0.08	1.55	12.10	155.06	0.12	0.00	0.000	0.000	0.026
217	0.20	0.10	0.00316	1.5	0.02613	0.04	1.23	0.08	1.55	12.10	155.06	0.12	0.00	0.000	0.000	0.026
218	0.10	0.00	0.00316	1.5	0.02613	0.04	1.27	0.08	1.55	12.10	155.06	0.12	0.00	0.000	0.000	0.026
TOT AVG					0.0261	0.49			0.08	1.55	133.15	1705.66			0.12	

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECA	BOD1 SETT	ABOD1 DECA	BOD1 HYDR	BOD2 DECA	BOD2 SETT	ABOD2 DECA	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECA	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECA	NCM DECA	NCM SETT	
208	1.000	7.55	15.97	0.13	0.81	0.00	0.00	0.00	0.00	0.00	0.94	1.08	1.08	0.06	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
209	0.900	7.56	15.96	0.13	0.81	0.00	0.00	0.00	0.00	0.00	0.93	1.08	1.08	0.06	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
210	0.800	7.56	15.95	0.13	0.81	0.00	0.00	0.00	0.00	0.00	0.93	1.08	1.08	0.06	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
211	0.700	7.57	15.94	0.13	0.81	0.00	0.00	0.00	0.00	0.00	0.93	1.07	1.07	0.06	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
212	0.600	7.57	15.93	0.13	0.81	0.00	0.00	0.00	0.00	0.00	0.93	1.07	1.07	0.06	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
213	0.500	7.58	15.93	0.13	0.81	0.00	0.00	0.00	0.00	0.00	0.93	1.07	1.07	0.06	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
214	0.400	7.58	15.91	0.13	0.81	0.00	0.00	0.00	0.00	0.00	0.92	1.07	1.07	0.06	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
215	0.300	7.59	15.90	0.12	0.81	0.00	0.00	0.00	0.00	0.00	0.92	1.07	1.07	0.06	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
216	0.200	7.59	15.89	0.12	0.81	0.00	0.00	0.00	0.00	0.00	0.92	1.06	1.06	0.06	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
217	0.100	7.60	15.88	0.12	0.80	0.00	0.00	0.00	0.00	0.00	0.92	1.06	1.06	0.06	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
218	0.000	7.60	15.87	0.12	0.80	0.00	0.00	0.00	0.00	0.00	0.92	1.06	1.06	0.06	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE		13.29	0.08	0.06	0.00	0.00	0.00	0.00	0.00	0.50				0.03	0.06	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES

ELEM NO.	ENDING DIST	TEMP	SALN	COND	CL	DO	BOD1	BOD2	EBOD1	EBOD2	ORG-N	NH3-N	NO3-N	TOT-N	EORG-N	ETOT-N	ORG-P	PO4-P	TOT-P	EORG-P	ETOT-P	CHL A	PERIP	COLI
----------	-------------	------	------	------	----	----	------	------	-------	-------	-------	-------	-------	-------	--------	--------	-------	-------	-------	--------	--------	-------	-------	------

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

NO.	DIST	deg C	ppt	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	g/m²	#/100mL	
208	1.000	29.96	0.26	524.44	8.08	6.77	2.29	0.00	2.53	0.00	1.07	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.2	0.0	0.
209	0.900	29.93	0.26	524.44	8.08	6.73	2.29	0.00	2.77	0.00	1.07	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.5	0.0	0.
210	0.800	29.89	0.26	524.44	8.08	6.71	2.29	0.00	3.01	0.00	1.06	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.7	0.0	0.
211	0.700	29.85	0.26	524.44	8.08	6.70	2.29	0.00	3.24	0.00	1.06	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.9	0.0	0.
212	0.600	29.82	0.26	524.44	8.08	6.69	2.29	0.00	3.48	0.00	1.06	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.2	0.0	0.
213	0.500	29.78	0.26	524.44	8.08	6.69	2.29	0.00	3.72	0.00	1.05	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.4	0.0	0.
214	0.400	29.75	0.26	524.44	8.08	6.70	2.28	0.00	3.96	0.00	1.05	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.7	0.0	0.
215	0.300	29.71	0.26	524.44	8.08	6.70	2.28	0.00	4.19	0.00	1.05	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17.9	0.0	0.
216	0.200	29.67	0.26	524.44	8.08	6.71	2.28	0.00	4.43	0.00	1.05	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.1	0.0	0.
217	0.100	29.64	0.26	524.44	8.08	6.71	2.28	0.00	4.67	0.00	1.04	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	22.4	0.0	0.
218	0.000	29.60	0.26	524.44	8.08	6.72	2.28	0.00	4.91	0.00	1.04	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.6	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
208	1.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
209	0.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	4.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
210	0.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
211	0.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
212	0.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	11.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
213	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	13.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
214	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	15.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
215	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	17.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
216	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	20.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
217	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	22.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
218	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	24.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT DRAINAGE DITCH 23 WATER QUALITY/HYDRAULIC MODEL FOR: BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
183	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	2.20	0.00	2.20	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
183	WSTLD	0.00005	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
----------	---------------	----------------	-----------	---------	-----------------	------------------	---------------	---------	---------	-----------	-----------------	----------------	----------------	----------------	--------------	---------------

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

183	1.00	0.90	0.00033	14.5	0.00597	0.19	0.19	0.05	1.05	5.54	104.80	0.06	0.00	0.000	0.000	0.006
184	0.90	0.80	0.00033	14.5	0.00597	0.19	0.39	0.05	1.05	5.54	104.80	0.06	0.00	0.000	0.000	0.006
185	0.80	0.70	0.00033	14.5	0.00597	0.19	0.58	0.05	1.05	5.54	104.80	0.06	0.00	0.000	0.000	0.006
186	0.70	0.60	0.00033	14.5	0.00597	0.19	0.78	0.05	1.05	5.54	104.80	0.06	0.00	0.000	0.000	0.006
187	0.60	0.50	0.00033	14.5	0.00597	0.19	0.97	0.05	1.05	5.54	104.80	0.06	0.00	0.000	0.000	0.006
188	0.50	0.40	0.00033	14.5	0.00597	0.19	1.16	0.05	1.05	5.54	104.80	0.06	0.00	0.000	0.000	0.006
189	0.40	0.30	0.00033	14.5	0.00597	0.19	1.36	0.05	1.05	5.54	104.80	0.06	0.00	0.000	0.000	0.006
190	0.30	0.20	0.00033	14.5	0.00597	0.19	1.55	0.05	1.05	5.54	104.80	0.06	0.00	0.000	0.000	0.006
191	0.20	0.10	0.00033	14.5	0.00597	0.19	1.74	0.05	1.05	5.54	104.80	0.06	0.00	0.000	0.000	0.006
192	0.10	0.00	0.00033	14.5	0.00597	0.19	1.94	0.05	1.05	5.54	104.80	0.06	0.00	0.000	0.000	0.006
TOT							1.94			55.44	1048.00					
AVG				0.0060				0.05	1.05						0.06	

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR 1/da	BOD2 DECAT 1/da	BOD2 SETT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAT 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da	
183	0.900	7.55	17.04	0.13	1.20	0.00	0.00	0.00	0.00	0.00	0.94	1.57	1.57	0.06	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
184	0.800	7.55	17.04	0.13	1.20	0.00	0.00	0.00	0.00	0.00	0.94	1.46	1.46	0.06	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
185	0.700	7.55	17.04	0.13	1.20	0.00	0.00	0.00	0.00	0.00	0.94	1.38	1.38	0.06	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
186	0.600	7.55	17.04	0.13	1.20	0.00	0.00	0.00	0.00	0.00	0.94	1.32	1.32	0.06	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
187	0.500	7.55	17.04	0.13	1.20	0.00	0.00	0.00	0.00	0.00	0.94	1.27	1.27	0.06	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
188	0.400	7.55	17.04	0.13	1.20	0.00	0.00	0.00	0.00	0.00	0.94	1.23	1.23	0.06	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
189	0.300	7.55	17.04	0.13	1.20	0.00	0.00	0.00	0.00	0.00	0.94	1.19	1.19	0.06	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
190	0.200	7.55	17.04	0.13	1.20	0.00	0.00	0.00	0.00	0.00	0.94	1.17	1.17	0.06	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
191	0.100	7.55	17.04	0.13	1.20	0.00	0.00	0.00	0.00	0.00	0.94	1.15	1.15	0.06	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
192	0.000	7.55	17.04	0.13	1.20	0.00	0.00	0.00	0.00	0.00	0.94	1.13	1.13	0.06	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
AVG 20	DEG C RATE	14.17	0.08	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.50			0.03	0.09	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	
*	g/m ² /d		**	mg/L/day																							

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	
183	0.900	30.00	0.28	554.71	15.38	5.64	9.89	0.00	9.89	0.00	8.94	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
184	0.800	30.00	0.28	554.71	15.38	5.79	8.28	0.00	8.28	0.00	7.37	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.	
185	0.700	30.00	0.28	554.71	15.38	5.91	7.00	0.00	7.00	0.00	6.11	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.	
186	0.600	30.00	0.28	554.71	15.38	6.00	5.99	0.00	5.99	0.00	5.10	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.	
187	0.500	30.00	0.28	554.71	15.38	6.07	5.18	0.00	5.18	0.00	4.29	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.	
188	0.400	30.00	0.28	554.71	15.38	6.12	4.54	0.00	4.54	0.00	3.63	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.	
189	0.300	30.00	0.28	554.71	15.38	6.17	4.02	0.00	4.02	0.00	3.10	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.	
190	0.200	30.00	0.28	554.71	15.38	6.20	3.62	0.00	3.62	0.00	2.68	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.	
191	0.100	30.00	0.28	554.71	15.38	6.23	3.29	0.00	3.29	0.00	2.34	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.	
192	0.000	30.00	0.28	554.71	15.38	6.26	3.03	0.00	3.03	0.00	2.06	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.	

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

ELEM NO.	ENDING DIST	BANK SHADE Frac	SECCHI DEPTH m	PHYT N	PHYT LIT	PHYT N	PHYT P	PHYT N&P	PHYT TOT	PHYT GROW	PHYT RESP	PHYT DEATH	PHYT SETT	PHYT P/R	PHYTO	PERI N	PERI LIT	PERI N	PERI P	PERI N&P	PERI SPC	PERI TOT	PERI GROW	PERI RESP	PERI DEATH	PERI P/R	PERIP
				PREF	LIM	LIM	LIM	LIM	LIM	LIM	LIM	LIM	LIM	LIM	LIM	LIM	LIM	LIM	LIM	LIM	LIM	LIM	LIM	LIM	LIM	LIM	LIM
183	0.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
184	0.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
185	0.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
186	0.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
187	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
188	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
189	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
190	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
191	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
192	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT HIGHWAY 190 (DD 5) WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 18 HWY 190 (DRAINAGE DITCH 5) BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
221	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	2.20	0.00	2.20	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
221	WSTLD	0.00025	30.00	0.39	753.60	63.30	2.00	25.30	0.00	25.30	0.00	25.30	0.00	0.00	0.00	0.00	0.00	0.00
222	WSTLD	0.00041	30.00	0.39	753.60	63.30	2.00	6.90	0.00	6.90	0.00	6.90	0.00	0.00	0.00	0.00	0.00	0.00
223	WSTLD	0.00013	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00	0.00
224	WSTLD	0.00002	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00	0.00
227	WSTLD	0.00009	30.00	0.39	753.60	63.30	2.00	621.00	0.00	621.00	0.00	621.00	0.00	0.00	0.00	0.00	0.00	0.00
228	WSTLD	0.00046	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00	0.00
230	WSTLD	0.00003	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00	0.00
231	WSTLD	0.00000	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00	0.00
232	WSTLD	0.00002	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00	0.00
233	WSTLD	0.00010	30.00	0.39	753.60	63.30	2.00	92.00	0.00	92.00	0.00	92.00	0.00	0.00	0.00	0.00	0.00	0.00
234	WSTLD	0.00002	30.00	0.39	753.60	63.30	2.00	25.30	0.00	25.30	0.00	25.30	0.00	0.00	0.00	0.00	0.00	0.00
235	WSTLD	0.00001	30.00	0.39	753.60	63.30	2.00	55.20	0.00	55.20	0.00	55.20	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
221	1.80	1.70	0.00053	46.9	0.00702	0.16	0.16	0.06	1.21	7.59	120.87	0.08	0.00	0.000	0.000	0.007
222	1.70	1.60	0.00094	69.9	0.00852	0.14	0.30	0.08	1.43	11.04	143.33	0.11	0.00	0.000	0.000	0.009
223	1.60	1.50	0.00107	73.4	0.00889	0.13	0.43	0.08	1.49	11.99	148.81	0.12	0.00	0.000	0.000	0.009
224	1.50	1.40	0.00109	74.0	0.00895	0.13	0.56	0.08	1.50	12.15	149.70	0.12	0.00	0.000	0.000	0.009
225	1.40	1.30	0.00109	74.0	0.00895	0.13	0.69	0.08	1.50	12.15	149.70	0.12	0.00	0.000	0.000	0.009
226	1.30	1.20	0.00109	74.0	0.00895	0.13	0.82	0.08	1.50	12.15	149.70	0.12	0.00	0.000	0.000	0.009
227	1.20	1.10	0.00117	75.9	0.00918	0.13	0.95	0.08	1.53	12.77	153.13	0.13	0.00	0.000	0.000	0.009
228	1.10	1.00	0.00163	82.7	0.01027	0.11	1.06	0.09	1.69	15.89	169.12	0.16	0.00	0.000	0.000	0.010
229	1.00	0.90	0.00163	82.7	0.01027	0.11	1.17	0.09	1.69	15.89	169.12	0.16	0.00	0.000	0.000	0.010
230	0.90	0.80	0.00166	83.0	0.01033	0.11	1.28	0.09	1.70	16.07	169.99	0.16	0.00	0.000	0.000	0.010
231	0.80	0.70	0.00166	83.0	0.01034	0.11	1.39	0.09	1.70	16.09	170.10	0.16	0.00	0.000	0.000	0.010
232	0.70	0.60	0.00169	83.2	0.01039	0.11	1.51	0.10	1.71	16.23	170.75	0.16	0.00	0.000	0.000	0.010
233	0.60	0.50	0.00179	84.2	0.01060	0.11	1.62	0.10	1.74	16.88	173.84	0.17	0.00	0.000	0.000	0.011
234	0.50	0.40	0.00180	84.3	0.01063	0.11	1.72	0.10	1.74	16.98	174.30	0.17	0.00	0.000	0.000	0.011
235	0.40	0.30	0.00181	84.4	0.01064	0.11	1.83	0.10	1.74	17.01	174.47	0.17	0.00	0.000	0.000	0.011
236	0.30	0.20	0.00181	84.4	0.01064	0.11	1.94	0.10	1.74	17.01	174.47	0.17	0.00	0.000	0.000	0.011
237	0.20	0.10	0.00181	84.4	0.01064	0.11	2.05	0.10	1.74	17.01	174.47	0.17	0.00	0.000	0.000	0.011

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

238	0.10	0.00	0.00181	84.4	0.01064	0.11	2.16	0.10	1.74	17.01	174.47	0.17	0.00	0.000	0.000	0.011
TOT						2.16				261.90	2910.34					
AVG					0.0096			0.09	1.62			0.15				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REARER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR 1/da	BOD2 DECAT 1/da	BOD2 SETT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da	
221	1.700	7.55	14.64	0.13	1.01	0.00	0.00	0.00	0.00	0.00	0.94	1.65	1.65	0.05	1.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
222	1.600	7.55	12.26	0.13	0.82	0.00	0.00	0.00	0.00	0.00	0.94	1.47	1.47	0.05	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
223	1.500	7.55	11.79	0.13	0.79	0.00	0.00	0.00	0.00	0.00	0.93	1.82	1.82	0.05	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
224	1.400	7.56	11.72	0.13	0.78	0.00	0.00	0.00	0.00	0.00	0.93	1.80	1.80	0.05	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
225	1.300	7.56	11.71	0.13	0.78	0.00	0.00	0.00	0.00	0.00	0.93	1.72	1.72	0.05	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
226	1.200	7.56	11.71	0.13	0.78	0.00	0.00	0.00	0.00	0.00	0.93	1.64	1.64	0.05	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
227	1.100	7.56	11.44	0.13	0.76	0.00	0.00	0.00	0.00	0.00	0.93	4.10	4.10	0.05	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
228	1.000	7.57	10.35	0.13	0.67	0.00	0.00	0.00	0.00	0.00	0.93	4.15	4.15	0.04	0.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
229	0.900	7.57	10.34	0.13	0.67	0.00	0.00	0.00	0.00	0.00	0.93	3.89	3.89	0.04	0.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
230	0.800	7.57	10.29	0.13	0.67	0.00	0.00	0.00	0.00	0.00	0.93	3.67	3.67	0.05	0.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
231	0.700	7.58	10.28	0.13	0.67	0.00	0.00	0.00	0.00	0.00	0.92	3.45	3.45	0.05	0.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
232	0.600	7.58	10.23	0.13	0.66	0.00	0.00	0.00	0.00	0.00	0.92	3.27	3.27	0.05	0.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
233	0.500	7.58	10.05	0.12	0.65	0.00	0.00	0.00	0.00	0.00	0.92	3.28	3.28	0.05	0.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
234	0.400	7.58	10.02	0.12	0.65	0.00	0.00	0.00	0.00	0.00	0.92	3.09	3.09	0.05	0.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
235	0.300	7.59	10.01	0.12	0.64	0.00	0.00	0.00	0.00	0.00	0.92	2.93	2.93	0.05	0.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
236	0.200	7.59	10.00	0.12	0.64	0.00	0.00	0.00	0.00	0.00	0.92	2.78	2.78	0.05	0.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
237	0.100	7.59	10.00	0.12	0.64	0.00	0.00	0.00	0.00	0.00	0.92	2.64	2.64	0.05	0.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
238	0.000	7.60	10.00	0.12	0.64	0.00	0.00	0.00	0.00	0.00	0.92	2.51	2.51	0.05	0.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			9.12	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.50			0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	
221	1.700	29.98	0.32	629.98	33.51	5.18	11.24	0.00	11.54	0.00	10.66	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.8	0.0	0.
222	1.600	29.96	0.35	683.55	46.42	5.09	8.45	0.00	9.04	0.00	8.14	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.5	0.0	0.
223	1.500	29.93	0.36	691.79	48.41	5.15	14.06	0.00	14.95	0.00	13.86	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.3	0.0	0.
224	1.400	29.91	0.36	693.01	48.70	5.31	13.69	0.00	14.88	0.00	13.55	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.1	0.0	0.
225	1.300	29.89	0.36	693.01	48.70	5.46	12.40	0.00	13.88	0.00	12.29	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.9	0.0	0.
226	1.200	29.87	0.36	693.01	48.70	5.58	11.24	0.00	13.01	0.00	11.16	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.6	0.0	0.
227	1.100	29.84	0.36	697.42	49.76	3.65	50.21	0.00	52.29	0.00	50.52	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	19.4	0.0	0.
228	1.000	29.82	0.37	713.25	53.58	2.79	51.03	0.00	53.40	0.00	51.61	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	22.2	0.0	0.
229	0.900	29.80	0.37	713.25	53.58	2.79	46.92	0.00	49.58	0.00	47.80	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.0	0.0	0.
230	0.800	29.78	0.37	713.93	53.74	2.94	43.53	0.00	46.49	0.00	44.64	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	27.7	0.0	0.
231	0.700	29.76	0.37	714.02	53.76	3.15	40.13	0.00	43.38	0.00	41.43	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	30.5	0.0	0.
232	0.600	29.73	0.37	714.52	53.88	3.37	37.32	0.00	40.87	0.00	38.75	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.3	0.0	0.
233	0.500	29.71	0.37	716.79	54.43	3.44	37.42	0.00	41.27	0.00	38.93	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	36.0	0.0	0.

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

234	0.400	29.69	0.37	717.11	54.51	3.63	34.52	0.00	38.66	0.00	36.12	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	38.8	0.0	0.
235	0.300	29.67	0.37	717.23	54.54	3.83	32.00	0.00	36.44	0.00	33.68	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	41.6	0.0	0.
236	0.200	29.64	0.37	717.23	54.54	4.03	29.62	0.00	34.35	0.00	31.36	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	44.4	0.0	0.
237	0.100	29.62	0.37	717.23	54.54	4.22	27.42	0.00	32.45	0.00	29.19	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	47.1	0.0	0.
238	0.000	29.60	0.37	717.23	54.54	4.40	25.39	0.00	30.72	0.00	27.18	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.9	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
221	1.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
222	1.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	5.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
223	1.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
224	1.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	11.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
225	1.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	13.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
226	1.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	16.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
227	1.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	19.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
228	1.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	22.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
229	0.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	25.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
230	0.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	27.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
231	0.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	30.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
232	0.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	33.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
233	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	36.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
234	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	38.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
235	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	41.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
236	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	44.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
237	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	47.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
238	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	49.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT WEST DRAINAGE CANAL WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 21 WEST DRAINAGE CANAL BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
260	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	2.20	0.00	2.20	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
260	WSTLD	0.00063	30.00	0.22	437.30	23.50	7.10	1.33	0.00	1.33	0.00	1.74	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
260	0.30	0.20	0.00091	69.0	0.00203	0.57	0.57	0.15	3.00	45.00	300.00	0.45	30.00	0.002	0.094	0.002
261	0.20	0.10	0.00091	69.0	0.00203	0.57	1.14	0.15	3.00	45.00	300.00	0.45	60.00	0.004	0.160	0.004
262	0.10	0.00	0.00091	69.0	0.00203	0.57	1.71	0.15	3.00	45.00	300.00	0.45	90.00	0.006	0.233	0.006
TOT AVG					0.0020			0.15	3.00		135.00	900.00		0.45		

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT DECAT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR DECAT 1/da	BOD2 DECAT 1/da	BOD2 SETT DECAT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT DECAT 1/da	NH3-N DECAT 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da		
260	0.200	7.56	5.60	0.13	0.42	0.00	0.00	0.00	0.00	0.00	0.93	1.11	1.11	0.06	0.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
261	0.100	7.56	5.74	0.13	0.42	0.00	0.00	0.00	0.00	0.00	0.92	1.24	1.24	0.05	0.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
262	0.000	7.55	5.93	0.07	0.42	0.00	0.00	0.00	0.00	0.00	0.92	1.51	1.51	0.00	0.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE		4.81	0.08	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.50			0.03	0.11	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00		
* g/m ² /d		** mg/L/day																										

***** WATER QUALITY CONSTITUENT VALUES

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	
260	0.200	29.87	0.48	914.23	161.78	6.17	2.80	0.00	3.12	0.00	1.50	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.9	0.0	0.
261	0.100	29.73	0.89	1636.91	391.41	5.24	4.98	0.00	5.61	0.00	1.70	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.9	0.0	0.
262	0.000	29.60	1.56	2849.81	776.81	1.15	9.49	0.00	10.43	0.00	2.24	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
260	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
261	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	5.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
262	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20 DEG C RATE										0.000	0.000	0.000	0.000														

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT DRAINAGE DITCH 6 WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 23 DRAINAGE DITCH 6 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
284	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	2.20	0.00	2.20	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
284	WSTLD	0.00000	30.00	0.39	753.60	200.00	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

284	0.30	0.20	0.00029	1.5	0.00569	0.20	0.20	0.05	1.00	5.05	100.43	0.05	0.00	0.000	0.000	0.006
285	0.20	0.10	0.00029	1.5	0.00569	0.20	0.41	0.05	1.00	5.05	100.43	0.05	0.00	0.000	0.000	0.006
286	0.10	0.00	0.00029	1.5	0.00569	0.20	0.61	0.05	1.00	5.05	100.43	0.05	0.00	0.000	0.000	0.006
TOT						0.61				15.14	301.30					
AVG				0.0057				0.05	1.00			0.05				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECA 1/da	BOD1 SETT 1/da	ABOD1 DECA 1/da	BOD1 HYDR 1/da	BOD2 DECA 1/da	BOD2 SETT 1/da	ABOD2 DECA 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECA 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECA 1/da	NCM DECA 1/da	NCM SETT 1/da		
284	0.200	7.48	17.99	0.13	1.28	0.00	0.00	0.00	0.00	0.00	0.97	1.16	1.16	0.06	1.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
285	0.100	7.42	18.15	0.13	1.29	0.00	0.00	0.00	0.00	0.00	1.00	1.18	1.18	0.06	1.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
286	0.000	7.35	18.31	0.14	1.31	0.00	0.00	0.00	0.00	0.00	1.03	1.21	1.21	0.06	1.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20	DEG C RATE	14.83	0.08	0.33	0.00	0.00	0.00	0.00	0.00	0.50				0.03	0.33	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00		

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL	
284	0.200	30.51	0.26	524.38	10.12	6.12	2.96	0.00	3.27	0.00	1.80	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.9	0.0	0.
285	0.100	31.03	0.26	524.38	10.12	6.10	2.76	0.00	3.39	0.00	1.62	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.9	0.0	0.
286	0.000	31.54	0.26	524.38	10.12	6.04	2.60	0.00	3.54	0.00	1.48	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
284	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
285	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	5.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
286	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20	DEG C RATE									0.000	0.000	0.000	0.000										0.000	0.000	0.000		

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT TRIBUTARY 2
REACH NO. 25 DRAINAGE DITCH 7 - UPLAND

WATER QUALITY/HYDRAULIC MODEL FOR:
BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
295	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	2.20	0.00	2.20	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
295	WSTLD	0.00004	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
295	1.50	1.40	0.00032	11.0	0.00589	0.20	0.20	0.05	1.04	5.40	103.54	0.05	0.00	0.000	0.000	0.006
296	1.40	1.30	0.00032	11.0	0.00589	0.20	0.39	0.05	1.04	5.40	103.54	0.05	0.00	0.000	0.000	0.006
297	1.30	1.20	0.00032	11.0	0.00589	0.20	0.59	0.05	1.04	5.40	103.54	0.05	0.00	0.000	0.000	0.006
298	1.20	1.10	0.00032	11.0	0.00589	0.20	0.79	0.05	1.04	5.40	103.54	0.05	0.00	0.000	0.000	0.006
299	1.10	1.00	0.00032	11.0	0.00589	0.20	0.98	0.05	1.04	5.40	103.54	0.05	0.00	0.000	0.000	0.006
300	1.00	0.90	0.00032	11.0	0.00589	0.20	1.18	0.05	1.04	5.40	103.54	0.05	0.00	0.000	0.000	0.006
301	0.90	0.80	0.00032	11.0	0.00589	0.20	1.38	0.05	1.04	5.40	103.54	0.05	0.00	0.000	0.000	0.006
302	0.80	0.70	0.00032	11.0	0.00589	0.20	1.57	0.05	1.04	5.40	103.54	0.05	0.00	0.000	0.000	0.006
303	0.70	0.60	0.00032	11.0	0.00589	0.20	1.77	0.05	1.04	5.40	103.54	0.05	0.00	0.000	0.000	0.006
304	0.60	0.50	0.00032	11.0	0.00589	0.20	1.96	0.05	1.04	5.40	103.54	0.05	0.00	0.000	0.000	0.006
TOT						1.96				53.98	1035.38					
AVG					0.0059			0.05	1.04			0.05				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECATY	BOD1 SETT	ABOD1 DECATY	BOD1 HYDR	BOD2 DECATY	BOD2 SETT	ABOD2 DECATY	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECATY	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECATY	NCM DECATY	NCM SETT		
295	1.400	7.55	17.26	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.94	1.44	1.44	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
296	1.300	7.55	17.26	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.94	1.37	1.37	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
297	1.200	7.55	17.26	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.94	1.30	1.30	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
298	1.100	7.55	17.26	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.94	1.25	1.25	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
299	1.000	7.55	17.26	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.94	1.22	1.22	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300	0.900	7.55	17.26	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.94	1.18	1.18	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
301	0.800	7.55	17.26	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.94	1.16	1.16	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
302	0.700	7.55	17.26	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.94	1.14	1.14	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
303	0.600	7.55	17.26	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.94	1.13	1.13	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
304	0.500	7.46	17.25	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.94	1.17	1.17	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20	DEG C RATE	14.35	0.08	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.50			0.03	0.10	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00		
*	g/m ² /d		**	mg/L/day																								

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	
295	1.400	30.00	0.27	546.51	13.40	5.79	7.98	0.00	7.98	0.00	6.98	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
296	1.300	30.00	0.27	546.51	13.40	5.92	6.74	0.00	6.74	0.00	5.77	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
297	1.200	30.00	0.27	546.51	13.40	6.01	5.76	0.00	5.76	0.00	4.81	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
298	1.100	30.00	0.27	546.51	13.40	6.08	4.99	0.00	4.99	0.00	4.04	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
299	1.000	30.00	0.27	546.51	13.40	6.14	4.37	0.00	4.37	0.00	3.42	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
300	0.900	30.00	0.27	546.51	13.40	6.18	3.89	0.00	3.89	0.00	2.92	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
301	0.800	30.00	0.27	546.51	13.40	6.21	3.50	0.00	3.50	0.00	2.53	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
302	0.700	30.00	0.27	546.51	13.40	6.24	3.20	0.00	3.20	0.00	2.21	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
303	0.600	30.00	0.27	546.51	13.40	6.26	2.96	0.00	2.96	0.00	1.96	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

AVG 20 DEG C RATE 1.17 0.08 0.02 0.00 0.00 0.00 0.00 0.00 0.50 0.03 0.02 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL		
305	0.400	30.31	2.67	4818.22	1437.69	5.51	3.86	0.00	4.05	0.00	1.34	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.8	0.0	0.	
306	0.300	30.62	2.78	5024.09	1506.33	5.28	4.43	0.00	4.80	0.00	1.38	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.5	0.0	0.
307	0.200	30.92	2.85	5153.45	1549.46	4.99	5.19	0.00	5.75	0.00	1.44	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.3	0.0	0.
308	0.100	31.23	2.91	5248.47	1581.14	4.60	6.14	0.00	6.89	0.00	1.53	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.0	0.0	0.
309	0.000	31.54	2.95	5323.88	1606.28	4.04	7.31	0.00	8.25	0.00	1.63	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
305	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
306	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
307	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	5.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
308	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
309	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT CANAL 26 WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 29 CANAL 26 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
324	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	2.20	0.00	2.20	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST Km	ENDING DIST Km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
324	2.00	1.90	0.00028	0.0	0.00000	466.23	466.23	1.00	114.00	11400.00	11400.00	114.00	1140.00	0.000	0.056	0.000
325	1.90	1.80	0.00028	0.0	0.00000	466.23	932.47	1.00	114.00	11400.00	11400.00	114.00	2280.00	0.001	0.113	0.001
326	1.80	1.70	0.00028	0.0	0.00000	466.23	1398.70	1.00	114.00	11400.00	11400.00	114.00	3420.00	0.001	0.169	0.001
327	1.70	1.60	0.00028	0.0	0.00000	466.23	1864.94	1.00	114.00	11400.00	11400.00	114.00	4560.00	0.001	0.225	0.001
328	1.60	1.50	0.00028	0.0	0.00000	466.23	2331.17	1.00	114.00	11400.00	11400.00	114.00	5700.00	0.001	0.281	0.001
329	1.50	1.40	0.00028	0.0	0.00000	466.23	2797.41	1.00	114.00	11400.00	11400.00	114.00	6840.00	0.002	0.338	0.002
330	1.40	1.30	0.00028	0.0	0.00000	466.23	3263.64	1.00	114.00	11400.00	11400.00	114.00	7980.00	0.002	0.394	0.002
331	1.30	1.20	0.00028	0.0	0.00000	466.23	3729.88	1.00	114.00	11400.00	11400.00	114.00	9120.00	0.002	0.450	0.002

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

332	1.20	1.10	0.00028	0.0	0.00000	466.23	4196.11	1.00	114.00	11400.00	11400.00	114.00	10260.00	0.003	0.506	0.003
333	1.10	1.00	0.00028	0.0	0.00000	466.23	4662.35	1.00	114.00	11400.00	11400.00	114.00	11400.00	0.003	0.563	0.003
334	1.00	0.90	0.00028	0.0	0.00000	466.23	5128.58	1.00	114.00	11400.00	11400.00	114.00	12540.00	0.003	0.619	0.003
335	0.90	0.80	0.00028	0.0	0.00000	466.23	5594.82	1.00	114.00	11400.00	11400.00	114.00	13680.00	0.003	0.675	0.003
336	0.80	0.70	0.00028	0.0	0.00000	466.23	6061.05	1.00	114.00	11400.00	11400.00	114.00	14820.00	0.004	0.731	0.004
337	0.70	0.60	0.00028	0.0	0.00000	466.23	6527.29	1.00	114.00	11400.00	11400.00	114.00	15960.00	0.004	0.788	0.004
338	0.60	0.50	0.00028	0.0	0.00000	466.23	6993.52	1.00	114.00	11400.00	11400.00	114.00	17100.00	0.004	0.844	0.004
339	0.50	0.40	0.00028	0.0	0.00000	466.23	7459.76	1.00	114.00	11400.00	11400.00	114.00	18240.00	0.005	0.900	0.005
340	0.40	0.30	0.00028	0.0	0.00000	466.23	7925.99	1.00	114.00	11400.00	11400.00	114.00	19380.00	0.005	0.956	0.005
341	0.30	0.20	0.00028	0.0	0.00000	466.23	8392.23	1.00	114.00	11400.00	11400.00	114.00	20520.00	0.005	1.013	0.005
342	0.20	0.10	0.00028	0.0	0.00000	466.23	8858.46	1.00	114.00	11400.00	11400.00	114.00	21660.00	0.005	1.069	0.005
343	0.10	0.00	0.00028	0.0	0.00000	466.23	9324.70	1.00	114.00	11400.00	11400.00	114.00	22800.00	0.006	1.125	0.006
TOT						9324.70				228000.00	228000.00					
AVG					0.0000			1.00	114.00			114.00				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT DECAT 1/da	ABOD1 1/da	BOD1 HYDR DECAT 1/da	BOD2 DECAT 1/da	BOD2 SETT DECAT 1/da	ABOD2 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da		
324	1.900	7.42	0.84	0.13	0.06	0.00	0.00	0.00	0.00	0.00	0.94	1.09	1.09	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
325	1.800	7.41	0.84	0.13	0.06	0.00	0.00	0.00	0.00	0.00	0.95	1.10	1.10	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
326	1.700	7.40	0.84	0.13	0.06	0.00	0.00	0.00	0.00	0.00	0.95	1.11	1.11	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
327	1.600	7.39	0.85	0.13	0.06	0.00	0.00	0.00	0.00	0.00	0.96	1.12	1.12	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
328	1.500	7.38	0.85	0.13	0.06	0.00	0.00	0.00	0.00	0.00	0.96	1.13	1.13	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
329	1.400	7.37	0.85	0.13	0.06	0.00	0.00	0.00	0.00	0.00	0.97	1.14	1.14	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
330	1.300	7.36	0.85	0.13	0.06	0.00	0.00	0.00	0.00	0.00	0.97	1.15	1.15	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
331	1.200	7.35	0.85	0.13	0.06	0.00	0.00	0.00	0.00	0.00	0.98	1.16	1.16	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
332	1.100	7.34	0.85	0.13	0.06	0.00	0.00	0.00	0.00	0.00	0.98	1.18	1.18	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
333	1.000	7.33	0.85	0.13	0.06	0.00	0.00	0.00	0.00	0.00	0.99	1.19	1.19	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
334	0.900	7.32	0.85	0.13	0.06	0.00	0.00	0.00	0.00	0.00	0.99	1.21	1.21	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
335	0.800	7.31	0.85	0.13	0.06	0.00	0.00	0.00	0.00	0.00	0.99	1.23	1.23	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
336	0.700	7.30	0.86	0.13	0.06	0.00	0.00	0.00	0.00	0.00	1.00	1.25	1.25	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
337	0.600	7.29	0.86	0.13	0.07	0.00	0.00	0.00	0.00	0.00	1.00	1.28	1.28	0.06	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
338	0.500	7.28	0.86	0.13	0.07	0.00	0.00	0.00	0.00	0.00	1.01	1.30	1.30	0.06	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
339	0.400	7.27	0.86	0.13	0.07	0.00	0.00	0.00	0.00	0.00	1.01	1.33	1.33	0.06	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
340	0.300	7.26	0.86	0.13	0.07	0.00	0.00	0.00	0.00	0.00	1.02	1.36	1.36	0.06	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
341	0.200	7.25	0.86	0.13	0.07	0.00	0.00	0.00	0.00	0.00	1.02	1.40	1.40	0.06	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
342	0.100	7.24	0.86	0.14	0.07	0.00	0.00	0.00	0.00	0.00	1.03	1.44	1.44	0.06	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
343	0.000	7.23	0.86	0.14	0.07	0.00	0.00	0.00	0.00	0.00	1.03	1.48	1.48	0.06	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
AVG 20 DEG C RATE			0.70	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.50			0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00		
*	g/m ² /d		**		mg/L/day																							

***** WATER QUALITY CONSTITUENT VALUES

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL
324	1.900	30.08	3.19	5749.90	1749.29	5.67	2.39	0.00	2.45	0.00	1.06	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.5	0.0	0.
325	1.800	30.15	3.20	5765.29	1754.41	5.64	2.43	0.00	2.54	0.00	1.06	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.1	0.0	0.
326	1.700	30.23	3.20	5774.54	1757.50	5.61	2.48	0.00	2.65	0.00	1.07	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.6	0.0	0.
327	1.600	30.31	3.20	5781.17	1759.70	5.58	2.54	0.00	2.77	0.00	1.08	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.1	0.0	0.
328	1.500	30.39	3.21	5786.33	1761.42	5.54	2.61	0.00	2.90	0.00	1.09	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.7	0.0	0.
329	1.400	30.46	3.21	5790.55	1762.83	5.50	2.70	0.00	3.04	0.00	1.10	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

330	1.300	30.54	3.21	5794.13	1764.02	5.45	2.81	0.00	3.21	0.00	1.11	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.7	0.0	0.
331	1.200	30.62	3.21	5797.23	1765.06	5.40	2.93	0.00	3.39	0.00	1.13	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.2	0.0	0.
332	1.100	30.69	3.21	5799.97	1765.97	5.35	3.08	0.00	3.58	0.00	1.14	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.8	0.0	0.
333	1.000	30.77	3.22	5802.42	1766.78	5.29	3.24	0.00	3.81	0.00	1.16	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.3	0.0	0.
334	0.900	30.85	3.22	5804.64	1767.52	5.22	3.43	0.00	4.05	0.00	1.18	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.8	0.0	0.
335	0.800	30.92	3.22	5806.67	1768.20	5.15	3.65	0.00	4.32	0.00	1.20	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.4	0.0	0.
336	0.700	31.00	3.22	5808.53	1768.82	5.08	3.89	0.00	4.63	0.00	1.23	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.9	0.0	0.
337	0.600	31.08	3.22	5810.26	1769.40	5.00	4.17	0.00	4.96	0.00	1.25	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.4	0.0	0.
338	0.500	31.16	3.22	5811.87	1769.93	4.91	4.49	0.00	5.34	0.00	1.28	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.0	0.0	0.
339	0.400	31.23	3.22	5813.38	1770.43	4.83	4.85	0.00	5.75	0.00	1.32	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.5	0.0	0.
340	0.300	31.31	3.22	5814.79	1770.91	4.75	5.25	0.00	6.21	0.00	1.35	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.0	0.0	0.
341	0.200	31.39	3.22	5816.12	1771.35	4.66	5.70	0.00	6.72	0.00	1.39	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.5	0.0	0.
342	0.100	31.46	3.22	5817.39	1771.77	4.59	6.21	0.00	7.28	0.00	1.43	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.1	0.0	0.
343	0.000	31.54	3.23	5818.58	1772.17	4.53	6.78	0.00	7.91	0.00	1.48	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.6	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
324	1.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
325	1.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
326	1.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
327	1.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
328	1.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
329	1.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
330	1.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
331	1.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	4.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
332	1.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	4.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
333	1.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	5.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
334	0.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	5.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
335	0.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
336	0.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
337	0.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
338	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
339	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
340	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
341	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
342	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
343	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT TRIBUTARY 4 WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 31 TRIBUTARY 10 - UPLAND BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
346	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	2.20	0.00	2.20	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
346	WSTLD	0.00033	30.00	0.39	753.60	63.30	2.00	34.50	0.00	34.50	0.00	34.50	0.00	0.00	0.00	0.00	0.00	0.00
351	WSTLD	0.00054	30.00	0.39	753.60	63.30	2.00	2.30	0.00	2.30	0.00	2.30	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
346	1.90	1.80	0.00061	53.7	0.00736	0.16	0.16	0.07	1.26	8.31	125.98	0.08	0.00	0.000	0.000	0.007
347	1.80	1.70	0.00061	53.7	0.00736	0.16	0.31	0.07	1.26	8.31	125.98	0.08	0.00	0.000	0.000	0.007
348	1.70	1.60	0.00061	53.7	0.00736	0.16	0.47	0.07	1.26	8.31	125.98	0.08	0.00	0.000	0.000	0.007
349	1.60	1.50	0.00061	53.7	0.00736	0.16	0.63	0.07	1.26	8.31	125.98	0.08	0.00	0.000	0.000	0.007
350	1.50	1.40	0.00061	53.7	0.00736	0.16	0.79	0.07	1.26	8.31	125.98	0.08	0.00	0.000	0.000	0.007
351	1.40	1.30	0.00115	75.5	0.00913	0.13	0.91	0.08	1.52	12.64	152.44	0.13	0.00	0.000	0.000	0.009
352	1.30	1.20	0.00115	75.5	0.00913	0.13	1.04	0.08	1.52	12.64	152.44	0.13	0.00	0.000	0.000	0.009
353	1.20	1.10	0.00115	75.5	0.00913	0.13	1.17	0.08	1.52	12.64	152.44	0.13	0.00	0.000	0.000	0.009
354	1.10	1.00	0.00115	75.5	0.00913	0.13	1.29	0.08	1.52	12.64	152.44	0.13	0.00	0.000	0.000	0.009
355	1.00	0.90	0.00115	75.5	0.00913	0.13	1.42	0.08	1.52	12.64	152.44	0.13	0.00	0.000	0.000	0.009
356	0.90	0.80	0.00115	75.5	0.00913	0.13	1.55	0.08	1.52	12.64	152.44	0.13	0.00	0.000	0.000	0.009
TOT AVG					0.0082	1.55			0.08	1.40	117.41	1544.55			0.11	

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECAT	BOD1 SETT	ABOD1 DECAT	BOD1 HYDR	BOD2 DECAT	BOD2 SETT	ABOD2 DECAT	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECAT	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECAT	NCM DECAT	NCM SETT							
346	1.800	7.55	14.02	0.13	0.96	0.00	0.00	0.00	0.00	0.00	0.94	2.01	2.01	0.05	0.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
347	1.700	7.55	14.02	0.13	0.96	0.00	0.00	0.00	0.00	0.00	0.94	1.87	1.87	0.05	0.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
348	1.600	7.55	14.02	0.13	0.96	0.00	0.00	0.00	0.00	0.00	0.94	1.75	1.75	0.05	0.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
349	1.500	7.55	14.02	0.13	0.96	0.00	0.00	0.00	0.00	0.00	0.94	1.65	1.65	0.06	0.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
350	1.400	7.55	14.02	0.13	0.96	0.00	0.00	0.00	0.00	0.00	0.94	1.56	1.56	0.06	0.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
351	1.300	7.54	11.52	0.13	0.76	0.00	0.00	0.00	0.00	0.00	0.94	1.30	1.30	0.05	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
352	1.200	7.54	11.52	0.13	0.76	0.00	0.00	0.00	0.00	0.00	0.94	1.28	1.28	0.06	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
353	1.100	7.54	11.52	0.13	0.76	0.00	0.00	0.00	0.00	0.00	0.94	1.25	1.25	0.06	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
354	1.000	7.54	11.52	0.13	0.76	0.00	0.00	0.00	0.00	0.00	0.94	1.23	1.23	0.06	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
355	0.900	7.54	11.52	0.13	0.76	0.00	0.00	0.00	0.00	0.00	0.94	1.21	1.21	0.06	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
356	0.800	7.47	11.51	0.13	0.76	0.00	0.00	0.00	0.00	0.00	0.94	1.15	1.15	0.06	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
AVG 20	DEG C	RATE	10.52	0.08	0.06	0.00	0.00	0.00	0.00	0.00	0.50			0.03	0.06	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00							
*	g/m²/d		**	mg/L/day																													

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL	
346	1.800	30.00	0.33	645.91	37.35	4.75	16.94	0.00	17.04	0.00	16.49	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.0	0.
347	1.700	30.00	0.33	645.91	37.35	5.15	14.71	0.00	14.91	0.00	14.32	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.9	0.0	0.	
348	1.600	30.00	0.33	645.91	37.35	5.38	12.80	0.00	13.11	0.00	12.46	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.9	0.0	0.	
349	1.500	30.00	0.33	645.91	37.35	5.55	11.17	0.00	11.59	0.00	10.84	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.9	0.0	0.	

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

350	1.400	30.00	0.33	645.91	37.35	5.68	9.78	0.00	10.30	0.00	9.46	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.8	0.0	0.0
0.00																									
351	1.300	30.00	0.36	696.57	49.56	5.22	5.76	0.00	6.38	0.00	5.58	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.8	0.0	0.0
0.00																									
352	1.200	30.00	0.36	696.57	49.56	5.76	5.31	0.00	6.03	0.00	5.11	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.7	0.0	0.0
0.00																									
353	1.100	30.00	0.36	696.57	49.56	6.00	4.91	0.00	5.73	0.00	4.69	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.7	0.0	0.0
0.00																									
354	1.000	30.00	0.36	696.57	49.56	6.11	4.55	0.00	5.47	0.00	4.30	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.7	0.0	0.0
0.00																									
355	0.900	30.00	0.36	696.57	49.56	6.17	4.22	0.00	5.25	0.00	3.96	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.6	0.0	0.0
0.00																									
356	0.800	30.00	2.15	3904.84	1128.52	5.78	3.40	0.00	4.53	0.00	1.97	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.6	0.0	0.0
0.00																									

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
346	1.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
347	1.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
348	1.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
349	1.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
350	1.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	4.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
351	1.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	5.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
352	1.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
353	1.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
354	1.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
355	0.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
356	0.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT TRIBUTARY 4 WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 32 TRIBUTARY 4 - TIDAL BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
357	UPR RCH	0.00115	30.00	2.15	3904.84	1128.52	5.78	3.40	0.00	4.53	0.00	1.97	0.10	0.10	0.00	10.60	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
357	0.80	0.70	0.00115	75.5	0.00007	16.24	17.78	0.90	18.00	1620.00	1800.00	16.20	180.00	0.000	0.057	0.000
358	0.70	0.60	0.00115	75.5	0.00007	16.24	34.02	0.90	18.00	1620.00	1800.00	16.20	360.00	0.001	0.114	0.001
359	0.60	0.50	0.00115	75.5	0.00007	16.24	50.26	0.90	18.00	1620.00	1800.00	16.20	540.00	0.001	0.171	0.001
360	0.50	0.40	0.00115	75.5	0.00007	16.24	66.50	0.90	18.00	1620.00	1800.00	16.20	720.00	0.001	0.228	0.001
361	0.40	0.30	0.00115	75.5	0.00007	16.24	82.74	0.90	18.00	1620.00	1800.00	16.20	900.00	0.002	0.286	0.002
362	0.30	0.20	0.00115	75.5	0.00007	16.24	98.97	0.90	18.00	1620.00	1800.00	16.20	1080.00	0.002	0.343	0.002
363	0.20	0.10	0.00115	75.5	0.00007	16.24	115.21	0.90	18.00	1620.00	1800.00	16.20	1260.00	0.002	0.400	0.002
364	0.10	0.00	0.00115	75.5	0.00007	16.24	131.45	0.90	18.00	1620.00	1800.00	16.20	1440.00	0.003	0.457	0.002
TOT						129.90				12960.00	14400.00					

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

AVG 0.0001 0.90 18.00 16.20

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECA	BOD1 SETT	ABOD1 DECA	BOD1 HYDR	BOD2 DECA	BOD2 SETT	ABOD2 DECA	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECA	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECA	NCM DECA	NCM SETT
		mg/L	1/da	1/da	1/da	1/da	1/da	1/da	1/da	1/da	*	*	*	1/da	1/da	1/da	*	1/da	1/da	1/da	*	**	**	1/da	1/da	1/da
357	0.700	7.43	0.94	0.13	0.07	0.00	0.00	0.00	0.00	0.00	0.95	1.15	1.15	0.06	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
358	0.600	7.40	0.94	0.13	0.07	0.00	0.00	0.00	0.00	0.00	0.96	1.18	1.18	0.06	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
359	0.500	7.38	0.94	0.13	0.07	0.00	0.00	0.00	0.00	0.00	0.97	1.21	1.21	0.06	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
360	0.400	7.35	0.94	0.13	0.07	0.00	0.00	0.00	0.00	0.00	0.98	1.25	1.25	0.06	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
361	0.300	7.33	0.95	0.13	0.07	0.00	0.00	0.00	0.00	0.00	0.99	1.30	1.30	0.06	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
362	0.200	7.31	0.95	0.13	0.07	0.00	0.00	0.00	0.00	0.00	1.00	1.35	1.35	0.06	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
363	0.100	7.29	0.95	0.13	0.07	0.00	0.00	0.00	0.00	0.00	1.01	1.41	1.41	0.06	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
364	0.000	7.26	0.96	0.13	0.07	0.00	0.00	0.00	0.00	0.00	1.02	1.48	1.48	0.06	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20	DEG C RATE		0.78	0.08	0.01	0.00	0.00	0.00	0.00	0.00	0.50			0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00
*	g/m ² /d		**	mg/L/day																						

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL
357	0.700	30.16	2.60	4705.50	1397.80	5.52	3.25	0.00	4.39	0.00	1.51	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.7	0.0	0.
358	0.600	30.32	2.79	5039.38	1510.08	5.39	3.46	0.00	4.61	0.00	1.40	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.8	0.0	0.
359	0.500	30.48	2.91	5256.43	1583.08	5.27	3.80	0.00	4.96	0.00	1.36	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.9	0.0	0.
360	0.400	30.65	3.00	5419.10	1637.78	5.13	4.25	0.00	5.42	0.00	1.36	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.0	0.0	0.
361	0.300	30.81	3.07	5550.06	1681.83	4.98	4.80	0.00	5.97	0.00	1.38	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.0	0.0	0.
362	0.200	30.97	3.14	5660.15	1718.85	4.83	5.45	0.00	6.64	0.00	1.41	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.1	0.0	0.
363	0.100	31.13	3.19	5755.38	1750.88	4.69	6.23	0.00	7.43	0.00	1.45	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.2	0.0	0.
364	0.000	31.29	3.24	5839.48	1779.16	4.56	7.14	0.00	8.35	0.00	1.50	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.3	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
357	0.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
358	0.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
359	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
360	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	11.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
361	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	11.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
362	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	11.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
363	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	11.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
364	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	11.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20	DEG C RATE									0.000	0.000	0.000	0.000										0.000	0.000	0.000		

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

FINAL REPORT BAYOU LIBERTY
 REACH NO. 38 LIBERTY FROM RKM 15.0 TO TRIB 1

WATER QUALITY/HYDRAULIC MODEL FOR:
 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
433	HDWTR	0.00283	33.80	0.26	520.90	7.23	6.00	2.20	0.00	2.20	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
433	15.00	14.90	0.00283	0.0	0.02517	0.05	0.05	0.08	1.50	11.25	150.02	0.11	0.00	0.000	0.000	0.025
434	14.90	14.80	0.00283	0.0	0.02517	0.05	0.09	0.08	1.50	11.25	150.02	0.11	0.00	0.000	0.000	0.025
435	14.80	14.70	0.00283	0.0	0.02517	0.05	0.14	0.08	1.50	11.25	150.02	0.11	0.00	0.000	0.000	0.025
436	14.70	14.60	0.00283	0.0	0.02517	0.05	0.18	0.08	1.50	11.25	150.02	0.11	0.00	0.000	0.000	0.025
437	14.60	14.50	0.00283	0.0	0.02517	0.05	0.23	0.08	1.50	11.25	150.02	0.11	0.00	0.000	0.000	0.025
438	14.50	14.40	0.00283	0.0	0.02517	0.05	0.28	0.08	1.50	11.25	150.02	0.11	0.00	0.000	0.000	0.025
TOT AVG					0.0252	0.28		0.08	1.50	67.52	900.11	0.11				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR 1/da	BOD2 DECAT 1/da	BOD2 SETT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAT 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da	
433	14.900	7.64	16.22	0.12	0.83	0.00	0.00	0.00	0.00	0.00	3.60	3.81	3.81	0.05	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
434	14.800	7.64	16.22	0.12	0.83	0.00	0.00	0.00	0.00	0.00	3.60	3.88	3.88	0.05	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
435	14.700	7.64	16.22	0.12	0.83	0.00	0.00	0.00	0.00	0.00	3.60	3.95	3.95	0.05	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
436	14.600	7.64	16.22	0.12	0.83	0.00	0.00	0.00	0.00	0.00	3.60	4.02	4.02	0.05	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
437	14.500	7.64	16.22	0.12	0.83	0.00	0.00	0.00	0.00	0.00	3.60	4.08	4.08	0.05	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
438	14.400	7.64	16.22	0.12	0.83	0.00	0.00	0.00	0.00	0.00	3.60	4.15	4.15	0.05	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE	13.65	0.08	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00			0.03	0.11	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL
433	14.900	29.33	0.26	520.90	7.23	5.35	3.41	0.00	3.41	0.00	1.88	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0
434	14.800	29.33	0.26	520.90	7.23	4.94	4.57	0.00	4.57	0.00	2.72	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0
435	14.700	29.33	0.26	520.90	7.23	4.68	5.69	0.00	5.69	0.00	3.53	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0
436	14.600	29.33	0.26	520.90	7.23	4.50	6.75	0.00	6.75	0.00	4.31	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0
437	14.500	29.33	0.26	520.90	7.23	4.38	7.77	0.00	7.77	0.00	5.06	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0
438	14.400	29.33	0.26	520.90	7.23	4.28	8.75	0.00	8.75	0.00	5.78	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

***** PHYTOPLANKTON AND PERIPHYTON DATA

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
433	14.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
434	14.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
435	14.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
436	14.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
437	14.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
438	14.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20 DEG C RATE										0.000	0.000	0.000	0.000								0.000	0.000	0.000				

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT BAYOU LIBERTY WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 40 LIBERTY FROM RKM 14.4 TO DD22 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
463	UPR RCH	0.00283	29.33	0.26	520.90	7.23	4.28	8.75	0.00	8.75	0.00	5.78	0.10	0.10	0.00	0.00	0.00	0.00
463	TRIB	0.00029	29.33	0.26	523.18	7.78	6.45	2.13	0.00	2.13	0.00	0.98	0.10	0.10	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
463	14.40	14.30	0.00312	0.1	0.02600	0.04	0.32	0.08	1.54	11.99	154.41	0.12	0.00	0.000	0.000	0.026
464	14.30	14.20	0.00312	0.1	0.02600	0.04	0.36	0.08	1.54	11.99	154.41	0.12	0.00	0.000	0.000	0.026
465	14.20	14.10	0.00312	0.1	0.02600	0.04	0.41	0.08	1.54	11.99	154.41	0.12	0.00	0.000	0.000	0.026
466	14.10	14.00	0.00312	0.1	0.02600	0.04	0.45	0.08	1.54	11.99	154.41	0.12	0.00	0.000	0.000	0.026
467	14.00	13.90	0.00312	0.1	0.02600	0.04	0.50	0.08	1.54	11.99	154.41	0.12	0.00	0.000	0.000	0.026
468	13.90	13.80	0.00312	0.1	0.02600	0.04	0.54	0.08	1.54	11.99	154.41	0.12	0.00	0.000	0.000	0.026
469	13.80	13.70	0.00312	0.1	0.02600	0.04	0.59	0.08	1.54	11.99	154.41	0.12	0.00	0.000	0.000	0.026
TOT						0.31				83.94	1080.86					
AVG					0.0260			0.08	1.54			0.12				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR 1/da	BOD2 DECAT 1/da	BOD2 SETT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAT 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da	
463	14.300	7.64	15.85	0.12	0.80	0.00	0.00	0.00	0.00	0.00	4.50	5.05	5.05	0.05	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
464	14.200	7.64	15.85	0.12	0.80	0.00	0.00	0.00	0.00	0.00	4.50	5.09	5.09	0.05	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
465	14.100	7.64	15.85	0.12	0.80	0.00	0.00	0.00	0.00	0.00	4.50	5.13	5.13	0.05	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
466	14.000	7.64	15.85	0.12	0.80	0.00	0.00	0.00	0.00	0.00	4.50	5.17	5.17	0.05	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
467	13.900	7.64	15.85	0.12	0.80	0.00	0.00	0.00	0.00	0.00	4.50	5.21	5.21	0.05	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
468	13.800	7.64	15.85	0.12	0.80	0.00	0.00	0.00	0.00	0.00	4.50	5.24	5.24	0.05	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
469	13.700	7.64	15.85	0.12	0.80	0.00	0.00	0.00	0.00	0.00	4.50	5.28	5.28	0.05	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			13.33	0.08	0.09	0.00	0.00	0.00	0.00	0.00	2.50			0.03	0.09	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	
463	14.300	29.33	0.26	521.11	7.28	4.05	8.84	0.00	8.84	0.00	6.11	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
464	14.200	29.33	0.26	521.11	7.28	3.78	9.51	0.00	9.51	0.00	6.86	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
465	14.100	29.33	0.26	521.11	7.28	3.61	10.15	0.00	10.15	0.00	7.58	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
466	14.000	29.33	0.26	521.11	7.28	3.49	10.77	0.00	10.77	0.00	8.28	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
467	13.900	29.33	0.26	521.11	7.28	3.41	11.36	0.00	11.36	0.00	8.95	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
468	13.800	29.33	0.26	521.11	7.28	3.35	11.93	0.00	11.93	0.00	9.59	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
469	13.700	29.33	0.26	521.11	7.28	3.30	12.48	0.00	12.48	0.00	10.21	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
463	14.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
464	14.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
465	14.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
466	14.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
467	13.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
468	13.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
469	13.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE

0.000 0.000 0.000 0.000

0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT BAYOU LIBERTY
REACH NO. 42 LIBERTY FROM DD22 TO DD20

WATER QUALITY/HYDRAULIC MODEL FOR:
BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
473	UPR RCH	0.00312	29.33	0.26	521.11	7.28	3.30	12.48	0.00	12.48	0.00	10.21	0.10	0.10	0.00	0.00	0.00	0.00
473	TRIB	0.01238	29.33	0.54	1040.83	146.74	5.60	9.31	0.00	9.31	0.00	2.80	0.10	0.10	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
473	13.70	13.60	0.01549	78.1	0.01402	0.08	0.67	0.22	4.99	110.53	499.49	1.11	0.00	0.000	0.000	0.014
474	13.60	13.50	0.01549	78.1	0.01402	0.08	0.75	0.22	4.99	110.53	499.49	1.11	0.00	0.000	0.000	0.014
475	13.50	13.40	0.01549	78.1	0.01402	0.08	0.84	0.22	4.99	110.53	499.49	1.11	0.00	0.000	0.000	0.014

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

476	13.40	13.30	0.01549	78.1	0.01402	0.08	0.92	0.22	4.99	110.53	499.49	1.11	0.00	0.000	0.000	0.014
477	13.30	13.20	0.01549	78.1	0.01402	0.08	1.00	0.22	4.99	110.53	499.49	1.11	0.00	0.000	0.000	0.014
478	13.20	13.10	0.01549	78.1	0.01402	0.08	1.08	0.22	4.99	110.53	499.49	1.11	0.00	0.000	0.000	0.014
479	13.10	13.00	0.01549	78.1	0.01402	0.08	1.17	0.22	4.99	110.53	499.49	1.11	0.00	0.000	0.000	0.014
480	13.00	12.90	0.01549	78.1	0.01402	0.08	1.25	0.22	4.99	110.53	499.49	1.11	0.00	0.000	0.000	0.014
481	12.90	12.80	0.01549	78.1	0.01402	0.08	1.33	0.22	4.99	110.53	499.49	1.11	0.00	0.000	0.000	0.014
TOT						0.74				994.79	4495.42					
AVG				0.0140				0.22	4.99			1.11				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECAT	BOD1 SETT	ABOD1 DECAT	BOD1 HYDR	BOD2 DECAT	BOD2 SETT	ABOD2 DECAT	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECAT	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECAT	NCM DECAT	NCM SETT	
		mg/L	1/da	1/da	1/da	1/da	1/da	1/da	1/da	1/da	*	*	*	1/da	1/da	1/da	*	1/da	1/da	1/da	*	**	**	1/da	1/da	1/da	
473	13.600	7.63	4.64	0.12	0.28	0.00	0.00	0.00	0.00	0.00	4.86	5.51	5.51	0.05	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
474	13.500	7.63	4.64	0.12	0.28	0.00	0.00	0.00	0.00	0.00	4.86	5.55	5.55	0.05	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
475	13.400	7.63	4.64	0.12	0.28	0.00	0.00	0.00	0.00	0.00	4.86	5.58	5.58	0.05	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
476	13.300	7.63	4.64	0.12	0.28	0.00	0.00	0.00	0.00	0.00	4.86	5.61	5.61	0.04	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
477	13.200	7.63	4.64	0.12	0.28	0.00	0.00	0.00	0.00	0.00	4.86	5.64	5.64	0.04	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
478	13.100	7.63	4.64	0.12	0.28	0.00	0.00	0.00	0.00	0.00	4.86	5.67	5.67	0.04	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
479	13.000	7.63	4.64	0.12	0.28	0.00	0.00	0.00	0.00	0.00	4.86	5.70	5.70	0.04	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
480	12.900	7.63	4.64	0.12	0.28	0.00	0.00	0.00	0.00	0.00	4.86	5.72	5.72	0.04	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
481	12.800	7.63	4.64	0.12	0.28	0.00	0.00	0.00	0.00	0.00	4.86	5.73	5.73	0.03	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
AVG 20 DEG C RATE			3.91	0.08	0.03	0.00	0.00	0.00	0.00	0.00	2.70			0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	
*	g/m ² /d		**	mg/L/day																							

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	
473	13.600	29.33	0.49	936.24	118.67	4.25	10.49	0.00	10.67	0.00	5.15	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.6	0.0	0.
474	13.500	29.33	0.49	936.24	118.67	3.59	11.02	0.00	11.37	0.00	5.98	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.3	0.0	0.
475	13.400	29.33	0.49	936.24	118.67	3.10	11.53	0.00	12.06	0.00	6.79	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.9	0.0	0.
476	13.300	29.33	0.49	936.24	118.67	2.74	12.03	0.00	12.73	0.00	7.59	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.6	0.0	0.
477	13.200	29.33	0.49	936.24	118.67	2.46	12.50	0.00	13.38	0.00	8.36	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.2	0.0	0.
478	13.100	29.33	0.49	936.24	118.67	2.24	12.97	0.00	14.02	0.00	9.11	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.9	0.0	0.
479	13.000	29.33	0.49	936.24	118.67	2.08	13.42	0.00	14.64	0.00	9.85	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.5	0.0	0.
480	12.900	29.33	0.49	936.24	118.67	1.95	13.85	0.00	15.26	0.00	10.57	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.2	0.0	0.
481	12.800	29.33	0.48	921.07	115.10	1.88	13.91	0.00	15.49	0.00	11.12	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.8	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
473	13.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.6	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
474	13.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.3	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
475	13.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	4.9	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

476	13.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
477	13.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
478	13.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
479	13.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	11.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
480	12.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	13.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
481	12.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	

20 DEG C RATE 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT BAYOU LIBERTY WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 44 LIBERTY FROM DD20 TO BL03 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
509	UPR RCH	0.01549	29.33	0.48	921.07	115.10	1.88	13.91	0.00	15.49	0.00	11.12	0.10	0.10	0.00	14.80	0.00	0.00
509	TRIB	0.00378	29.33	0.32	626.52	45.77	6.33	4.82	0.00	6.40	0.00	3.20	0.10	0.10	0.00	14.80	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
509	12.80	12.70	0.01928	80.9	0.00462	0.25	1.58	0.47	8.84	417.25	884.00	4.17	88.40	0.001	0.247	0.005
510	12.70	12.60	0.01928	80.9	0.00462	0.25	1.83	0.47	8.84	417.25	884.00	4.17	176.80	0.001	0.247	0.005
TOT AVG					0.0046	0.50		0.47	8.84	834.50	1768.00	4.17				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT DECAT 1/da	ABOD1 1/da	BOD1 HYDR DECAT 1/da	BOD2 DECAT 1/da	BOD2 SETT DECAT 1/da	ABOD2 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT DECAT 1/da	NH3-N SRCE 1/da	NH3-N RATE 1/da	DENIT HYDR 1/da	ORG-P SETT 1/da	ORG-P SRCE 1/da	PO4 PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da	
509	12.700	7.63	1.84	0.12	0.13	0.00	0.00	0.00	0.00	0.00	4.50	5.30	5.30	0.03	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
510	12.600	7.63	1.84	0.10	0.13	0.00	0.00	0.00	0.00	0.00	4.50	5.31	5.31	0.02	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
AVG 20 DEG C RATE			1.55	0.08	0.05	0.00	0.00	0.00	0.00	0.00	2.50			0.03	0.05	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00
*	g/m²/d		**	mg/L/day																						

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL
509	12.700	29.33	0.45	875.47	104.37	1.94	12.77	0.00	14.35	0.00	10.65	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.8	0.0	0.0
510	12.600	29.33	0.45	875.47	104.37	1.68	12.99	0.00	14.57	0.00	11.04	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.8	0.0	0.0

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
509	12.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
510	12.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20 DEG C RATE										0.000	0.000	0.000	0.000									0.000	0.000	0.000			

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT REACH NO. 45 BAYOU LIBERTY LIBERTY FROM BL03 TO HWY 190
 WATER QUALITY/HYDRAULIC MODEL FOR: BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
511	UPR RCH	0.01928	29.33	0.45	875.47	104.37	1.68	12.99	0.00	14.57	0.00	11.04	0.10	0.10	0.00	14.80	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
511	12.60	12.50	0.01928	80.9	0.00462	0.25	2.08	0.47	8.84	417.25	884.00	4.17	265.20	0.002	0.247	0.005
512	12.50	12.40	0.01928	80.9	0.00462	0.25	2.33	0.47	8.84	417.25	884.00	4.17	353.60	0.002	0.247	0.005
513	12.40	12.30	0.01928	80.9	0.00462	0.25	2.58	0.47	8.84	417.25	884.00	4.17	442.00	0.003	0.247	0.005
514	12.30	12.20	0.01928	80.9	0.00462	0.25	2.83	0.47	8.84	417.25	884.00	4.17	530.40	0.004	0.255	0.005
515	12.20	12.10	0.01928	80.9	0.00462	0.25	3.08	0.47	8.84	417.25	884.00	4.17	618.80	0.004	0.274	0.005
516	12.10	12.00	0.01928	80.9	0.00462	0.25	3.34	0.47	8.84	417.25	884.00	4.17	707.20	0.005	0.297	0.006
517	12.00	11.90	0.01928	80.9	0.00462	0.25	3.59	0.47	8.84	417.25	884.00	4.17	795.60	0.005	0.322	0.006
518	11.90	11.80	0.01928	80.9	0.00462	0.25	3.84	0.47	8.84	417.25	884.00	4.17	884.00	0.006	0.348	0.007
519	11.80	11.70	0.01928	80.9	0.00462	0.25	4.09	0.47	8.84	417.25	884.00	4.17	972.40	0.007	0.376	0.007
520	11.70	11.60	0.01928	80.9	0.00462	0.25	4.34	0.47	8.84	417.25	884.00	4.17	1060.80	0.007	0.404	0.008
521	11.60	11.50	0.01928	80.9	0.00462	0.25	4.59	0.47	8.84	417.25	884.00	4.17	1149.20	0.008	0.433	0.008
522	11.50	11.40	0.01928	80.9	0.00462	0.25	4.84	0.47	8.84	417.25	884.00	4.17	1237.60	0.008	0.463	0.009
523	11.40	11.30	0.01928	80.9	0.00462	0.25	5.09	0.47	8.84	417.25	884.00	4.17	1326.00	0.009	0.492	0.009
524	11.30	11.20	0.01928	80.9	0.00462	0.25	5.34	0.47	8.84	417.25	884.00	4.17	1414.40	0.010	0.522	0.010
525	11.20	11.10	0.01928	80.9	0.00462	0.25	5.59	0.47	8.84	417.25	884.00	4.17	1502.80	0.010	0.553	0.010
526	11.10	11.00	0.01928	80.9	0.00462	0.25	5.84	0.47	8.84	417.25	884.00	4.17	1591.20	0.011	0.583	0.011
527	11.00	10.90	0.01928	80.9	0.00462	0.25	6.09	0.47	8.84	417.25	884.00	4.17	1679.60	0.011	0.614	0.011
528	10.90	10.80	0.01928	80.9	0.00462	0.25	6.34	0.47	8.84	417.25	884.00	4.17	1768.00	0.012	0.644	0.012
529	10.80	10.70	0.01928	80.9	0.00462	0.25	6.59	0.47	8.84	417.25	884.00	4.17	1856.40	0.013	0.675	0.013
530	10.70	10.60	0.01928	80.9	0.00462	0.25	6.84	0.47	8.84	417.25	884.00	4.17	1944.80	0.013	0.706	0.013
531	10.60	10.50	0.01928	80.9	0.00462	0.25	7.09	0.47	8.84	417.25	884.00	4.17	2033.20	0.014	0.737	0.014
532	10.50	10.40	0.01928	80.9	0.00462	0.25	7.34	0.47	8.84	417.25	884.00	4.17	2121.60	0.014	0.768	0.014
533	10.40	10.30	0.01928	80.9	0.00462	0.25	7.59	0.47	8.84	417.25	884.00	4.17	2210.00	0.015	0.799	0.015
534	10.30	10.20	0.01928	80.9	0.00462	0.25	7.84	0.47	8.84	417.25	884.00	4.17	2298.40	0.015	0.830	0.016
535	10.20	10.10	0.01928	80.9	0.00462	0.25	8.10	0.47	8.84	417.25	884.00	4.17	2386.80	0.016	0.862	0.016
TOT AVG					0.0046	6.26		0.47	8.84	10431.20	22100.00	4.17				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER 1/da	BOD1 1/da	BOD1 SETT 1/da	ABOD1 1/da	BOD1 HYDR 1/da	BOD2 1/da	BOD2 SETT 1/da	ABOD2 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N 1/da	ORG-N HYDR 1/da	NH3-N 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI 1/da	NCM DECAY 1/da	NCM SETT 1/da

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

527	10.900	29.46	0.46	878.54	105.42	2.52	14.29	0.00	15.87	0.00	6.35	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.8	0.0	0.
528	10.800	29.47	0.46	880.80	106.19	2.57	14.31	0.00	15.89	0.00	6.16	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.8	0.0	0.
529	10.700	29.47	0.46	884.52	107.47	2.62	14.32	0.00	15.90	0.00	5.97	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.8	0.0	0.
530	10.600	29.48	0.46	890.58	109.54	2.67	14.30	0.00	15.88	0.00	5.79	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.8	0.0	0.
531	10.500	29.49	0.47	900.26	112.85	2.72	14.25	0.00	15.83	0.00	5.61	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.8	0.0	0.
532	10.400	29.50	0.48	915.47	118.06	2.78	14.14	0.00	15.72	0.00	5.42	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.8	0.0	0.
533	10.300	29.50	0.49	939.05	126.12	2.85	13.93	0.00	15.51	0.00	5.21	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.8	0.0	0.
534	10.200	29.51	0.51	975.10	138.46	2.93	13.58	0.00	15.16	0.00	4.99	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.8	0.0	0.
535	10.100	29.52	0.54	1029.50	157.07	3.03	12.99	0.00	14.57	0.00	4.72	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.8	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
511	12.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
512	12.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
513	12.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
514	12.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
515	12.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
516	12.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
517	11.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
518	11.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
519	11.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
520	11.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
521	11.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
522	11.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
523	11.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
524	11.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
525	11.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
526	11.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
527	10.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
528	10.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
529	10.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
530	10.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
531	10.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
532	10.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
533	10.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
534	10.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
535	10.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT BAYOU LIBERTY WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 47 LIBERTY FROM HWY 190 TO BL04 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
559	UPR RCH	0.01928	29.52	0.54	1029.50	157.07	3.03	12.99	0.00	14.57	0.00	4.72	0.10	0.10	0.00	14.80	0.00	0.00
559	TRIB	0.00094	29.52	0.35	683.37	46.38	5.77	10.06	0.00	11.64	0.00	9.99	0.10	0.10	0.00	14.80	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
559	10.10	10.00	0.02021	80.4	0.00078	1.49	9.59	1.40	18.60	2604.00	1860.00	26.04	2572.80	0.003	0.368	0.003
TOT AVG					0.0008	1.49		1.40	18.60	2604.00	1860.00	26.04				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECA	BOD1 SETT	ABOD1 DECA	BOD1 HYDR	BOD2 DECA	BOD2 SETT	ABOD2 DECA	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECA	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECA	NCM DECA	NCM SETT		
559	10.000	7.60	0.60	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.73	1.51	1.51	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.50	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.40			0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00		

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	
559 0.00	10.000	29.52	0.57	1074.56	172.49	3.09	12.48	0.00	18.57	0.00	4.54	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	57.1	0.0	0.0

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
559	10.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	57.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20 DEG C RATE										0.000	0.000	0.000	0.000										0.000	0.000	0.000		

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT BAYOU LIBERTY WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 48 LIBERTY FROM BL04 TO DD18 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
560	UPR RCH	0.02021	29.52	0.57	1074.56	172.49	3.09	12.48	0.00	18.57	0.00	4.54	0.10	0.10	0.00	57.10	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
560	10.00	9.90	0.02021	80.4	0.00078	1.49	11.08	1.40	18.60	2604.00	1860.00	26.04	2758.80	0.003	0.394	0.003
561	9.90	9.80	0.02021	80.4	0.00078	1.49	12.57	1.40	18.60	2604.00	1860.00	26.04	2944.80	0.003	0.420	0.003
562	9.80	9.70	0.02021	80.4	0.00078	1.49	14.06	1.40	18.60	2604.00	1860.00	26.04	3130.80	0.003	0.447	0.003
563	9.70	9.60	0.02021	80.4	0.00078	1.49	15.55	1.40	18.60	2604.00	1860.00	26.04	3316.80	0.004	0.473	0.004
564	9.60	9.50	0.02021	80.4	0.00078	1.49	17.04	1.40	18.60	2604.00	1860.00	26.04	3502.80	0.004	0.499	0.004
565	9.50	9.40	0.02021	80.4	0.00078	1.49	18.53	1.40	18.60	2604.00	1860.00	26.04	3688.80	0.004	0.526	0.004
566	9.40	9.30	0.02021	80.4	0.00078	1.49	20.02	1.40	18.60	2604.00	1860.00	26.04	3874.80	0.004	0.552	0.004
567	9.30	9.20	0.02021	80.4	0.00078	1.49	21.52	1.40	18.60	2604.00	1860.00	26.04	4060.80	0.004	0.578	0.004
568	9.20	9.10	0.02021	80.4	0.00078	1.49	23.01	1.40	18.60	2604.00	1860.00	26.04	4246.80	0.005	0.605	0.005
569	9.10	9.00	0.02021	80.4	0.00078	1.49	24.50	1.40	18.60	2604.00	1860.00	26.04	4432.80	0.005	0.631	0.005
570	9.00	8.90	0.02021	80.4	0.00078	1.49	25.99	1.40	18.60	2604.00	1860.00	26.04	4618.80	0.005	0.658	0.005
571	8.90	8.80	0.02021	80.4	0.00078	1.49	27.48	1.40	18.60	2604.00	1860.00	26.04	4804.80	0.005	0.684	0.005
572	8.80	8.70	0.02021	80.4	0.00078	1.49	28.97	1.40	18.60	2604.00	1860.00	26.04	4990.80	0.005	0.711	0.005
573	8.70	8.60	0.02021	80.4	0.00078	1.49	30.46	1.40	18.60	2604.00	1860.00	26.04	5176.80	0.006	0.737	0.006
574	8.60	8.50	0.02021	80.4	0.00078	1.49	31.95	1.40	18.60	2604.00	1860.00	26.04	5362.80	0.006	0.763	0.006
575	8.50	8.40	0.02021	80.4	0.00078	1.49	33.44	1.40	18.60	2604.00	1860.00	26.04	5548.80	0.006	0.790	0.006
TOT							23.86			41664.00	29760.00					
AVG					0.0008			1.40	18.60			26.04				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECA	BOD1 SETT	ABOD1 DECA	BOD1 HYDR	BOD2 DECA	BOD2 SETT	ABOD2 DECA	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECA	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECA	NCM DECA	NCM SETT	
560	9.900	7.60	0.60	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.60	1.35	1.35	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
561	9.800	7.60	0.60	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.60	1.33	1.33	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
562	9.700	7.59	0.60	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.60	1.31	1.31	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
563	9.600	7.59	0.60	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.60	1.29	1.29	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
564	9.500	7.59	0.60	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.60	1.27	1.27	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
565	9.400	7.59	0.60	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.60	1.26	1.26	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
566	9.300	7.59	0.60	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.60	1.25	1.25	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
567	9.200	7.59	0.60	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.60	1.24	1.24	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
568	9.100	7.58	0.60	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.60	1.23	1.23	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
569	9.000	7.58	0.60	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.60	1.22	1.22	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
570	8.900	7.58	0.60	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.60	1.22	1.22	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
571	8.800	7.58	0.60	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.60	1.21	1.21	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
572	8.700	7.57	0.60	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.60	1.21	1.21	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
573	8.600	7.57	0.60	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.60	1.20	1.20	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
574	8.500	7.57	0.60	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.60	1.20	1.20	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
575	8.400	7.56	0.60	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.60	1.20	1.20	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
AVG 20	DEG C	RATE	0.50	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.33			0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	
*	g/m ² /d		**	mg/L/day																							

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	
560	9.900	29.52	0.59	1116.93	186.91	3.16	11.99	0.00	17.73	0.00	4.23	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	53.7	0.0	0.
561	9.800	29.52	0.62	1164.65	203.16	3.24	11.59	0.00	16.97	0.00	3.94	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50.4	0.0	0.
562	9.700	29.52	0.65	1218.03	221.33	3.33	11.25	0.00	16.26	0.00	3.69	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	47.0	0.0	0.
563	9.600	29.52	0.68	1277.38	241.54	3.41	10.96	0.00	15.62	0.00	3.47	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	43.6	0.0	0.

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

564	9.500	29.52	0.72	1342.99	263.87	3.48	10.71	0.00	15.01	0.00	3.27	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	40.3	0.0	0.0
565	9.400	29.52	0.76	1415.17	288.45	3.55	10.50	0.00	14.44	0.00	3.09	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	36.9	0.0	0.0
566	9.300	29.52	0.80	1494.21	315.36	3.62	10.32	0.00	13.90	0.00	2.93	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.5	0.0	0.0
567	9.200	29.52	0.85	1580.42	344.71	3.67	10.17	0.00	13.39	0.00	2.78	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	30.1	0.0	0.0
568	9.100	29.52	0.90	1674.10	376.60	3.72	10.04	0.00	12.90	0.00	2.65	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	26.8	0.0	0.0
569	9.000	29.52	0.96	1775.54	411.13	3.77	9.92	0.00	12.42	0.00	2.53	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	23.4	0.0	0.0
570	8.900	29.52	1.02	1885.03	448.41	3.81	9.83	0.00	11.97	0.00	2.42	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.0	0.0	0.0
571	8.800	29.52	1.09	2002.88	488.53	3.85	9.74	0.00	11.52	0.00	2.33	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.7	0.0	0.0
572	8.700	29.52	1.16	2129.38	531.59	3.88	9.67	0.00	11.09	0.00	2.24	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.3	0.0	0.0
573	8.600	29.52	1.23	2264.81	577.70	3.91	9.61	0.00	10.67	0.00	2.16	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.9	0.0	0.0
574	8.500	29.52	1.32	2409.48	626.95	3.94	9.55	0.00	10.25	0.00	2.09	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.6	0.0	0.0
575	8.400	29.52	1.40	2563.68	679.45	3.97	9.50	0.00	9.85	0.00	2.02	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.0

***** PHYTOPLANKTON AND PERIPHYTON DATA

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
560	9.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	53.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
561	9.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	50.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
562	9.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	47.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
563	9.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	43.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
564	9.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	40.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
565	9.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	36.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
566	9.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	33.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
567	9.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	30.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
568	9.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	26.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
569	9.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	23.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
570	8.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	20.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
571	8.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	16.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
572	8.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	13.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
573	8.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
574	8.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
575	8.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT BAYOU LIBERTY WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 50 LIBERTY FROM DD18 TO DD19 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
579	UPR RCH	0.02021	29.52	1.40	2563.68	679.45	3.97	9.50	0.00	9.85	0.00	2.02	0.10	0.10	0.00	3.20	0.00	0.00
579	TRIB	0.00035	29.52	0.29	567.10	18.36	5.81	8.99	0.00	9.33	0.00	8.20	0.10	0.10	0.00	3.20	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
579	8.40	8.30	0.02057	79.3	0.00079	1.47	34.91	1.40	18.60	2604.00	1860.00	26.04	5734.80	0.006	1.225	0.006
580	8.30	8.20	0.02057	79.3	0.00079	1.47	36.37	1.40	18.60	2604.00	1860.00	26.04	5920.80	0.006	1.264	0.006
581	8.20	8.10	0.02057	79.3	0.00079	1.47	37.84	1.40	18.60	2604.00	1860.00	26.04	6106.80	0.007	1.304	0.007
582	8.10	8.00	0.02057	79.3	0.00079	1.47	39.31	1.40	18.60	2604.00	1860.00	26.04	6292.80	0.007	1.344	0.007
583	8.00	7.90	0.02057	79.3	0.00079	1.47	40.77	1.40	18.60	2604.00	1860.00	26.04	6478.80	0.007	1.384	0.007
584	7.90	7.80	0.02057	79.3	0.00079	1.47	42.24	1.40	18.60	2604.00	1860.00	26.04	6664.80	0.007	1.424	0.007
TOT						8.79				15624.00	11160.00					
AVG				0.0008				1.40	18.60			26.04				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECAT	BOD1 SETT	ABOD1 DECAT	BOD1 HYDR	BOD2 DECAT	BOD2 SETT	ABOD2 DECAT	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECAT	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECAT	NCM DECAT	NCM SETT	
579	8.300	7.52	0.60	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.19	0.78	0.78	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
580	8.200	7.48	0.60	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.19	0.79	0.79	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
581	8.100	7.44	0.61	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.19	0.80	0.80	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
582	8.000	7.40	0.61	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.20	0.80	0.80	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
583	7.900	7.36	0.61	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.20	0.81	0.81	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
584	7.800	7.32	0.61	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.20	0.82	0.82	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
AVG 20	DEG C	RATE	0.50	0.08	0.01	0.00	0.00	0.00	0.00	0.10				0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	
*	g/m ² /d		**	mg/L/day																							

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO	BOD1	BOD2	EBOD1	EBOD2	ORG-N	NH3-N	NO3-N	TOT-N	EORG-N	ETOT-N	ORG-P	PO4-P	TOT-P	EORG-P	ETOT-P	CHL A	PERIP	COLI
579	8.300	29.82	1.48	2694.45	723.97	3.99	9.47	0.00	9.81	0.00	1.97	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.
580	8.200	30.12	1.54	2810.77	763.55	3.98	9.45	0.00	9.79	0.00	1.92	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.
581	8.100	30.42	1.61	2930.65	804.34	3.95	9.42	0.00	9.76	0.00	1.87	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.
582	8.000	30.71	1.68	3054.08	846.34	3.90	9.40	0.00	9.74	0.00	1.82	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.
583	7.900	31.01	1.75	3181.05	889.54	3.83	9.39	0.00	9.73	0.00	1.76	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.
584	7.800	31.31	1.82	3311.57	933.95	3.74	9.38	0.00	9.72	0.00	1.71	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT P/R 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO ug/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
579	8.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
580	8.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
581	8.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
582	8.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
583	7.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

644	7.400	31.31	1.99	3606.64	1033.82	3.63	9.21	0.00	9.55	0.00	1.57	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.
645	7.300	31.31	2.03	3689.65	1061.56	3.62	9.20	0.00	9.54	0.00	1.55	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.
646	7.200	31.31	2.08	3771.03	1088.75	3.62	9.20	0.00	9.54	0.00	1.53	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.
647	7.100	31.31	2.12	3850.89	1115.44	3.63	9.20	0.00	9.54	0.00	1.52	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.
648	7.000	31.31	2.17	3929.31	1141.64	3.64	9.21	0.00	9.55	0.00	1.52	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.
649	6.900	31.31	2.21	4006.37	1167.39	3.65	9.22	0.00	9.56	0.00	1.53	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
643	7.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
644	7.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
645	7.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
646	7.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
647	7.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
648	7.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
649	6.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT BAYOU LIBERTY WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 55 LIBERTY FROM BL05 TO RKM 6.3 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
650	UPR RCH	0.03475	31.31	2.21	4006.37	1167.39	3.65	9.22	0.00	9.56	0.00	1.53	0.10	0.10	0.00	3.20	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
650	6.90	6.80	0.03475	86.2	0.00036	3.24	78.77	2.28	42.67	9728.76	4267.00	97.29	10931.80	0.003	1.876	0.003
651	6.80	6.70	0.03475	86.2	0.00036	3.24	82.01	2.28	42.67	9728.76	4267.00	97.29	11358.50	0.003	1.950	0.003
652	6.70	6.60	0.03475	86.2	0.00036	3.24	85.25	2.28	42.67	9728.76	4267.00	97.29	11785.20	0.003	2.023	0.003
653	6.60	6.50	0.03475	86.2	0.00036	3.24	88.49	2.28	42.67	9728.76	4267.00	97.29	12211.90	0.004	2.096	0.004
654	6.50	6.40	0.03475	86.2	0.00036	3.24	91.73	2.28	42.67	9728.76	4267.00	97.29	12638.60	0.004	2.170	0.004
655	6.40	6.30	0.03475	86.2	0.00036	3.24	94.97	2.28	42.67	9728.76	4267.00	97.29	13065.30	0.004	2.243	0.004
TOT						19.44				58372.55	25602.00					
AVG				0.0004				2.28	42.67			97.29				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DEGR	BOD1 SETT	ABOD1 DEGR	BOD1 HYDR	BOD2 DEGR	BOD2 SETT	ABOD2 DEGR	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N SRCE	NH3-N RATE	DENIT HYDR	ORG-P SETT	ORG-P SRCE	PO4 PROD	PHYTO PROD	PERIP PROD	COLI DEGR	NCM DEGR	NCM SETT
----------	-------------	----------	------------	-----------	-----------	------------	-----------	-----------	-----------	------------	----------	----------	----------	------------	------------	------------	------------	------------	------------	------------	----------	------------	------------	-----------	----------	----------

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

	mg/L	1/da	1/da	1/da	1/da	1/da	1/da	1/da	1/da	1/da	*	*	*	1/da	1/da	1/da	*	1/da	1/da	1/da	*	**	**	1/da	1/da	1/da	
650	6.800	7.30	0.44	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.20	0.45	0.45	0.05	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
651	6.700	7.30	0.44	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.20	0.45	0.45	0.05	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
652	6.600	7.30	0.44	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.20	0.45	0.45	0.05	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
653	6.500	7.30	0.44	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.20	0.45	0.45	0.05	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
654	6.400	7.30	0.44	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.20	0.45	0.45	0.05	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
655	6.300	7.29	0.44	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.20	0.45	0.45	0.05	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.35	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.10				0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00
* g/m ² /d			** mg/L/day																								

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	
650	6.800	31.31	2.25	4075.15	1190.37	3.67	9.24	0.00	9.58	0.00	1.54	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
651	6.700	31.31	2.28	4137.17	1211.10	3.68	9.26	0.00	9.61	0.00	1.55	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
652	6.600	31.31	2.32	4198.02	1231.43	3.70	9.30	0.00	9.65	0.00	1.57	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
653	6.500	31.31	2.35	4257.75	1251.39	3.70	9.36	0.00	9.70	0.00	1.59	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
654	6.400	31.31	2.38	4316.44	1271.00	3.71	9.42	0.00	9.76	0.00	1.62	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
655	6.300	31.31	2.42	4374.11	1290.27	3.72	9.50	0.00	9.84	0.00	1.65	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
650	6.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
651	6.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
652	6.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
653	6.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
654	6.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
655	6.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20 DEG C RATE										0.000	0.000	0.000	0.000										0.000	0.000	0.000		

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT BAYOU LIBERTY WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 56 LIBERTY FROM RKM 6.3 TO RKM 6.0 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
656	UPR RCH	0.03475	31.31	2.42	4374.11	1290.27	3.72	9.50	0.00	9.84	0.00	1.65	0.10	0.10	0.00	3.20	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
656	6.30	6.20	0.03475	86.2	0.00052	2.25	97.21	1.70	39.69	6747.30	3969.00	67.47	13462.20	0.006	2.610	0.006
657	6.20	6.10	0.03475	86.2	0.00052	2.25	99.46	1.70	39.69	6747.30	3969.00	67.47	13859.10	0.006	2.687	0.006
658	6.10	6.00	0.03475	86.2	0.00052	2.25	101.71	1.70	39.69	6747.30	3969.00	67.47	14256.00	0.006	2.764	0.006
TOT						6.74				20241.90	11907.00					
AVG					0.0005			1.70	39.69			67.47				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE mg/L	BOD1 DECAT 1/da	BOD1 SETT DECAT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR DECAT 1/da	BOD2 DECAT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT DECAT 1/da	NH3-N DECAT 1/da	NH3-N SRCE * 1/da	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO **	PERIP **	COLI 1/da	NCM DECAT 1/da	NCM SETT 1/da		
656	6.200	7.29	0.58	0.13	0.04	0.00	0.00	0.00	0.00	0.08	0.71	0.71	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
657	6.100	7.29	0.58	0.13	0.04	0.00	0.00	0.00	0.00	0.08	0.72	0.72	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
658	6.000	7.29	0.58	0.13	0.04	0.00	0.00	0.00	0.00	0.08	0.72	0.72	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20	DEG C	RATE	0.47	0.08	0.01	0.00	0.00	0.00	0.00	0.04			0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00	0.00

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL mg/L	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL			
656	6.200	31.31	2.45	4437.93	1311.60	3.72	9.60	0.00	9.94	0.00	1.69	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.	
657	6.100	31.31	2.49	4509.58	1335.54	3.72	9.70	0.00	10.04	0.00	1.74	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.
658	6.000	31.31	2.53	4580.56	1359.26	3.71	9.78	0.00	10.12	0.00	1.78	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
656	6.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
657	6.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
658	6.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20	DEG C	RATE								0.000	0.000	0.000	0.000										0.000	0.000	0.000		

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT BAYOU LIBERTY
 REACH NO. 57 LIBERTY FROM RKM 6.0 TO TRIB 9

WATER QUALITY/HYDRAULIC MODEL FOR:
 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
659	UPR RCH	0.03475	31.31	2.53	4580.56	1359.26	3.71	9.78	0.00	10.12	0.00	1.78	0.10	0.10	0.00	3.20	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
659	6.00	5.90	0.03475	86.2	0.00035	3.29	105.00	2.08	47.55	9890.40	4755.00	98.90	14731.50	0.004	2.305	0.004
660	5.90	5.80	0.03475	86.2	0.00035	3.29	108.30	2.08	47.55	9890.40	4755.00	98.90	15207.00	0.004	2.380	0.004
661	5.80	5.70	0.03475	86.2	0.00035	3.29	111.59	2.08	47.55	9890.40	4755.00	98.90	15682.50	0.004	2.454	0.004
662	5.70	5.60	0.03475	86.2	0.00035	3.29	114.88	2.08	47.55	9890.40	4755.00	98.90	16158.00	0.005	2.529	0.005
663	5.60	5.50	0.03475	86.2	0.00035	3.29	118.18	2.08	47.55	9890.40	4755.00	98.90	16633.50	0.005	2.604	0.005
664	5.50	5.40	0.03475	86.2	0.00035	3.29	121.47	2.08	47.55	9890.40	4755.00	98.90	17109.00	0.005	2.678	0.005
665	5.40	5.30	0.03475	86.2	0.00035	3.29	124.77	2.08	47.55	9890.40	4755.00	98.90	17584.50	0.005	2.753	0.005
666	5.30	5.20	0.03475	86.2	0.00035	3.29	128.06	2.08	47.55	9890.40	4755.00	98.90	18060.00	0.005	2.827	0.005
TOT AVG					0.0004	26.35			47.55	79123.20	38040.00	98.90				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECAY	BOD1 SETT	ABOD1 DECAY	BOD1 HYDR	BOD2 DECAY	BOD2 SETT	ABOD2 DECAY	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECAY	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECAY	NCM DECAY	NCM SETT	
		mg/L	1/da	1/da	1/da	1/da	1/da	1/da	1/da	1/da	*	*	*	1/da	1/da	1/da	*	1/da	1/da	1/da	*	**	**	1/da	1/da	1/da	
659	5.900	7.28	0.48	0.14	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.65	0.65	0.05	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
660	5.800	7.27	0.48	0.14	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.65	0.65	0.05	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
661	5.700	7.25	0.48	0.14	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.66	0.66	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
662	5.600	7.24	0.48	0.14	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.66	0.66	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
663	5.500	7.23	0.48	0.14	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.67	0.67	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
664	5.400	7.22	0.48	0.14	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.68	0.68	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
665	5.300	7.21	0.48	0.14	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.69	0.69	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
666	5.200	7.20	0.48	0.14	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.69	0.69	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
AVG 20 DEG C RATE			0.39	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	
* g/m ² /d				** mg/L/day																							

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL
659 0.00	5.900	31.40	2.57	4644.73	1380.70	3.69	9.85	0.00	10.19	0.00	1.83	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.
660 0.00	5.800	31.48	2.60	4703.09	1400.20	3.67	9.91	0.00	10.26	0.00	1.88	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.
661 0.00	5.700	31.56	2.63	4760.51	1419.39	3.65	9.99	0.00	10.33	0.00	1.93	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.
662 0.00	5.600	31.65	2.66	4817.01	1438.27	3.64	10.06	0.00	10.41	0.00	1.99	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.
663 0.00	5.500	31.74	2.70	4872.65	1456.86	3.63	10.15	0.00	10.49	0.00	2.06	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.
664 0.00	5.400	31.82	2.73	4927.45	1475.17	3.62	10.24	0.00	10.58	0.00	2.13	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.
665 0.00	5.300	31.90	2.76	4981.46	1493.22	3.62	10.34	0.00	10.68	0.00	2.21	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.
666 0.00	5.200	31.99	2.79	5034.71	1511.01	3.63	10.45	0.00	10.79	0.00	2.29	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
659	5.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
660	5.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
661	5.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
662	5.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
663	5.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
664	5.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
665	5.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
666	5.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20 DEG C RATE										0.000	0.000	0.000	0.000											0.000	0.000	0.000	

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT BAYOU LIBERTY WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 60 LIBERTY FROM TRIB 9 TO TRIB 6 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
672	UPR RCH	0.03475	31.99	2.79	5034.71	1511.01	3.63	10.45	0.00	10.79	0.00	2.29	0.10	0.10	0.00	3.20	0.00	0.00
672	TRIB	0.00029	31.99	2.81	5079.17	1525.87	3.70	10.22	0.00	10.56	0.00	2.34	0.10	0.10	0.00	3.20	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s	
672	5.20	5.10	0.03504	85.5	0.00035	3.27	131.33	2.08	47.55	9890.40	4755.00	98.90	19015.50	0.005	2.977	0.005	
673	5.10	5.00	0.03504	85.5	0.00035	3.27	134.59	2.08	47.55	9890.40	4755.00	98.90	19491.00	0.006	3.052	0.006	
674	5.00	4.90	0.03504	85.5	0.00035	3.27	137.86	2.08	47.55	9890.40	4755.00	98.90	19966.50	0.006	3.126	0.006	
675	4.90	4.80	0.03504	85.5	0.00035	3.27	141.13	2.08	47.55	9890.40	4755.00	98.90	20442.00	0.006	3.201	0.006	
676	4.80	4.70	0.03504	85.5	0.00035	3.27	144.39	2.08	47.55	9890.40	4755.00	98.90	20917.50	0.006	3.276	0.006	
677	4.70	4.60	0.03504	85.5	0.00035	3.27	147.66	2.08	47.55	9890.40	4755.00	98.90	21393.00	0.006	3.350	0.006	
678	4.60	4.50	0.03504	85.5	0.00035	3.27	150.93	2.08	47.55	9890.40	4755.00	98.90	21868.50	0.006	3.425	0.006	
679	4.50	4.40	0.03504	85.5	0.00035	3.27	154.19	2.08	47.55	9890.40	4755.00	98.90	22344.00	0.006	3.500	0.006	
TOT						26.13					79123.20	38040.00					
AVG				0.0004				2.08		47.55		98.90					

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR 1/da	BOD2 DECAT 1/da	BOD2 SETT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da		
672	5.100	7.19	0.54	0.14	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.70	0.70	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
673	5.000	7.19	0.54	0.14	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.71	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
674	4.900	7.19	0.54	0.14	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.71	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
675	4.800	7.19	0.54	0.14	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.71	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
676	4.700	7.19	0.54	0.14	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.71	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
677	4.600	7.19	0.54	0.14	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.71	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
678	4.500	7.19	0.54	0.14	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.71	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
679	4.400	7.19	0.54	0.14	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.70	0.70	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
AVG 20 DEG C RATE			0.44	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

696	4.40	4.30	0.03536	84.8	0.00032	3.61	157.80	2.09	52.73	11020.57	5273.00	110.21	23591.30	0.006	3.330	0.006
697	4.30	4.20	0.03536	84.8	0.00032	3.61	161.41	2.09	52.73	11020.57	5273.00	110.21	24118.61	0.006	3.404	0.006
TOT																
AVG					0.0003				2.09	52.73			22041.14	10546.00		110.21

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECA 1/da	BOD1 SETT 1/da	ABOD1 DECA 1/da	BOD1 HYDR 1/da	BOD2 DECA 1/da	BOD2 SETT 1/da	ABOD2 DECA 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECA 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECA 1/da	NCM DECA 1/da	NCM SETT 1/da		
696	4.300	7.19	0.53	0.14	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.69	0.69	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
697	4.200	7.19	0.53	0.14	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.68	0.68	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20	DEG C	RATE	0.43	0.08	0.01	0.00	0.00	0.00	0.00	0.00	0.00			0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00		

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL		
696	4.300	31.99	3.03	5476.37	1658.59	3.79	10.38	0.00	10.72	0.00	2.78	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.
697	4.200	31.99	3.06	5521.42	1673.64	3.81	10.27	0.00	10.61	0.00	2.80	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
696	4.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
697	4.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
20	DEG C	RATE								0.000	0.000	0.000	0.000										0.000	0.000	0.000		

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT BAYOU LIBERTY
 REACH NO. 66 LIBERTY FROM TRIB 10 TO BL07

WATER QUALITY/HYDRAULIC MODEL FOR:
 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
705	UPR RCH	0.03536	31.99	3.06	5521.42	1673.64	3.81	10.27	0.00	10.61	0.00	2.80	0.10	0.10	0.00	3.20	0.00	0.00
705	TRIB	0.00031	31.99	3.08	5552.90	1684.17	3.89	9.88	0.00	10.23	0.00	2.76	0.10	0.10	0.00	3.20	0.00	0.00

***** HYDRAULIC PARAMETER VALUES

ELEM NO.	BEGIN DIST	ENDING DIST	FLOW	PCT EFF	ADVCTV VELO	TRAVEL TIME	CUM TIME	DEPTH	WIDTH	VOLUME	SURFACE AREA	X-SECT AREA	TIDAL PRISM	TIDAL VELO	DISPRSN	MEAN VELO
----------	------------	-------------	------	---------	-------------	-------------	----------	-------	-------	--------	--------------	-------------	-------------	------------	---------	-----------

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

	km	km	m ³ /s	m/s	days	days	m	m	m ³	m ²	m ²	m ³	m/s	m ² /s	m/s	
705	4.20	4.10	0.03567	84.1	0.00032	3.62	165.03	2.14	52.12	11153.68	5212.00	111.54	24899.80	0.006	3.542	0.006
706	4.10	4.00	0.03567	84.1	0.00032	3.62	168.65	2.14	52.12	11153.68	5212.00	111.54	25421.00	0.006	3.616	0.006
707	4.00	3.90	0.03567	84.1	0.00032	3.62	172.27	2.14	52.12	11153.68	5212.00	111.54	25942.20	0.007	3.690	0.007
708	3.90	3.80	0.03567	84.1	0.00032	3.62	175.89	2.14	52.12	11153.68	5212.00	111.54	26463.40	0.007	3.765	0.007
709	3.80	3.70	0.03567	84.1	0.00032	3.62	179.51	2.14	52.12	11153.68	5212.00	111.54	26984.60	0.007	3.839	0.007
710	3.70	3.60	0.03567	84.1	0.00032	3.62	183.12	2.14	52.12	11153.68	5212.00	111.54	27505.80	0.007	3.913	0.007
711	3.60	3.50	0.03567	84.1	0.00032	3.62	186.74	2.14	52.12	11153.68	5212.00	111.54	28027.00	0.007	3.987	0.007
712	3.50	3.40	0.03567	84.1	0.00032	3.62	190.36	2.14	52.12	11153.68	5212.00	111.54	28548.20	0.007	4.062	0.007
713	3.40	3.30	0.03567	84.1	0.00032	3.62	193.98	2.14	52.12	11153.68	5212.00	111.54	29069.40	0.007	4.136	0.007
TOT						32.57				100383.12	46908.00					
AVG					0.0003			2.14	52.12			111.54				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECA	BOD1 SETT	ABOD1 DECA	BOD1 HYDR	BOD2 DECA	BOD2 SETT	ABOD2 DECA	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECA	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECA	NCM DECA	NCM SETT		
705	4.100	7.18	0.53	0.14	0.03	0.00	0.00	0.00	0.00	0.00	0.45	0.72	0.72	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
706	4.000	7.18	0.53	0.14	0.03	0.00	0.00	0.00	0.00	0.00	0.45	0.71	0.71	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
707	3.900	7.18	0.53	0.14	0.03	0.00	0.00	0.00	0.00	0.00	0.45	0.71	0.71	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
708	3.800	7.18	0.53	0.14	0.03	0.00	0.00	0.00	0.00	0.00	0.45	0.71	0.71	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
709	3.700	7.18	0.53	0.14	0.03	0.00	0.00	0.00	0.00	0.00	0.45	0.70	0.70	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
710	3.600	7.18	0.53	0.14	0.03	0.00	0.00	0.00	0.00	0.00	0.45	0.70	0.70	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
711	3.500	7.18	0.53	0.14	0.03	0.00	0.00	0.00	0.00	0.00	0.45	0.69	0.69	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
712	3.400	7.18	0.53	0.14	0.03	0.00	0.00	0.00	0.00	0.00	0.45	0.69	0.69	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
713	3.300	7.18	0.53	0.14	0.03	0.00	0.00	0.00	0.00	0.00	0.45	0.68	0.68	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20	DEG C	RATE	0.43	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.21			0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00		
*	g/m ² /d		**	mg/L/day																								

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO	BOD1	BOD2	EBOD1	EBOD2	ORG-N	NH3-N	NO3-N	TOT-N	EORG-N	ETOT-N	ORG-P	PO4-P	TOT-P	EORG-P	ETOT-P	CHL A	PERIP	COLI	
705	4.100	31.99	3.08	5565.23	1688.28	3.84	10.15	0.00	11.23	0.00	2.80	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.1	0.0	0.
706	4.000	31.99	3.11	5608.28	1702.67	3.87	10.03	0.00	11.85	0.00	2.80	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17.0	0.0	0.
707	3.900	31.99	3.13	5650.83	1716.88	3.91	9.90	0.00	12.45	0.00	2.80	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	23.9	0.0	0.	
708	3.800	31.99	3.15	5692.89	1730.94	3.95	9.75	0.00	13.04	0.00	2.80	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	30.8	0.0	0.	
709	3.700	31.99	3.18	5734.48	1744.84	3.99	9.59	0.00	13.61	0.00	2.79	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	37.6	0.0	0.	
710	3.600	31.99	3.20	5775.62	1758.58	4.04	9.42	0.00	14.17	0.00	2.78	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	44.5	0.0	0.	
711	3.500	31.99	3.22	5816.33	1772.18	4.09	9.22	0.00	14.72	0.00	2.76	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	51.4	0.0	0.	
712	3.400	31.99	3.25	5856.60	1785.64	4.14	9.01	0.00	15.24	0.00	2.75	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	58.3	0.0	0.	
713	3.300	31.99	3.27	5896.45	1798.96	4.19	8.79	0.00	15.75	0.00	2.73	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	65.2	0.0	0.	

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE	SECCHI DEPTH	PHYT N	PHYT LIT	PHYT N	PHYT P	PHYT N&P	PHYT TOT	PHYT GROW	PHYT RESP	PHYT DEATH	PHYT SETT	PHYT P/R	PHYTO	PERI N	PERI LIT	PERI N	PERI P	PERI N&P	PERI SPC	PERI TOT	PERI GROW	PERI RESP	PERI DEATH	PERI P/R	PERIP
----------	-------------	------------	--------------	--------	----------	--------	--------	----------	----------	-----------	-----------	------------	-----------	----------	-------	--------	----------	--------	--------	----------	----------	----------	-----------	-----------	------------	----------	-------

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

	frac	m	PREF	LIM	LIM	LIM	LIM	LIM	1/da	1/da	1/da	1/da	RATIO	µg/L	PREF	LIM	1/da	1/da	1/da	RATIO	g/m²						
705	4.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
706	4.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	17.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
707	3.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	23.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
708	3.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	30.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
709	3.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	37.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
710	3.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	44.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
711	3.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	51.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
712	3.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	58.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
713	3.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	65.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
20 DEG C RATE									0.000	0.000	0.000	0.000											0.000	0.000	0.000		

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT BAYOU LIBERTY WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 67 LIBERTY FROM BL07 TO TRIB 8 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
714	UPR RCH	0.03567	31.99	3.27	5896.45	1798.96	4.19	8.79	0.00	15.75	0.00	2.73	0.10	0.10	0.00	65.20	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
714	3.30	3.20	0.03567	84.1	0.00032	3.62	197.60	2.14	52.12	11153.68	5212.00	111.54	29590.60	0.007	4.210	0.007
TOT AVG					0.0003	3.62		2.14	52.12	11153.68	5212.00	111.54				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECAT	BOD1 SETT	ABOD1 DECAT	BOD1 HYDR	BOD2 DECAT	BOD2 SETT	ABOD2 DECAT	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECAT	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECAT	NCM DECAT	NCM SETT				
714	3.200	7.18	0.53	0.14	0.03	0.00	0.00	0.00	0.00	0.00	0.47	0.47	0.47	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
AVG 20 DEG C RATE			0.43	0.08	0.02	0.00	0.00	0.00	0.00	0.00	0.22			0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00				
*	g/m²/d		**	mg/L/day																										

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL		
714	3.200	31.99	3.29	5935.91	1812.14	4.25	8.55	0.00	15.51	0.00	2.70	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	65.2	0.0	0.
0.00																										

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
714	3.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	65.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20 DEG C RATE										0.000	0.000	0.000	0.000									0.000	0.000	0.000			

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT REACH NO. 70 BAYOU LIBERTY LIBERTY FROM TRIB 8 TO M1
 WATER QUALITY/HYDRAULIC MODEL FOR: BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
721	UPR RCH	0.03567	31.99	3.29	5935.91	1812.14	4.25	8.55	0.00	15.51	0.00	2.70	0.10	0.10	0.00	65.20	0.00	0.00
721	TRIB	0.00029	31.99	3.30	5949.94	1816.85	4.37	8.17	0.00	15.13	0.00	2.61	0.10	0.10	0.00	65.20	0.00	0.00
723	WSTLD	0.00013	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
721	3.20	3.10	0.03596	83.5	0.00032	3.59	201.19	2.14	52.12	11153.68	5212.00	111.54	30211.80	0.008	4.299	0.008
722	3.10	3.00	0.03596	83.5	0.00032	3.59	204.78	2.14	52.12	11153.68	5212.00	111.54	30733.00	0.008	4.373	0.008
723	3.00	2.90	0.03609	83.5	0.00032	3.58	208.36	2.14	52.12	11153.68	5212.00	111.54	31254.20	0.008	4.447	0.008
724	2.90	2.80	0.03609	83.5	0.00032	3.58	211.94	2.14	52.12	11153.68	5212.00	111.54	31775.39	0.008	4.522	0.008
725	2.80	2.70	0.03609	83.5	0.00032	3.58	215.51	2.14	52.12	11153.68	5212.00	111.54	32296.59	0.008	4.596	0.008
726	2.70	2.60	0.03609	83.5	0.00032	3.58	219.09	2.14	52.12	11153.68	5212.00	111.54	32817.79	0.008	4.670	0.008
TOT AVG				0.0003		21.49		2.14	52.12	66922.09	31272.00	111.54				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR 1/da	BOD2 DECAT 1/da	BOD2 SETT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAT 1/da	NH3-N SRCE 1/da	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da			
721	3.100	7.18	0.53	0.14	0.03	0.00	0.00	0.00	0.00	0.00	0.43	0.43	0.43	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
722	3.000	7.17	0.53	0.14	0.03	0.00	0.00	0.00	0.00	0.00	0.43	0.43	0.43	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
723	2.900	7.17	0.53	0.14	0.03	0.00	0.00	0.00	0.00	0.00	0.43	0.43	0.43	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
724	2.800	7.17	0.53	0.14	0.03	0.00	0.00	0.00	0.00	0.00	0.43	0.43	0.43	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
725	2.700	7.17	0.53	0.14	0.03	0.00	0.00	0.00	0.00	0.00	0.43	0.43	0.43	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
726	2.600	7.17	0.53	0.14	0.03	0.00	0.00	0.00	0.00	0.00	0.43	0.43	0.43	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
AVG 20 DEG C RATE			0.43	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.20			0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00			
* g/m²/d			** mg/L/day																										

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL
----------	-------------	------------	----------	------	----	---------	-----------	-----------	------------	------------	------------	------------	------------	------------	-------------	-------------	------------	------------	------------	-------------	-------------	------------	------------	--------------

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

721	3.100	31.99	3.31	5974.90	1825.17	4.31	8.35	0.00	14.27	0.00	2.65	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	55.5	0.0	0.
722	3.000	31.99	3.33	6013.78	1838.16	4.37	8.18	0.00	13.07	0.00	2.59	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	45.7	0.0	0.
723	2.900	31.99	3.36	6052.29	1851.03	4.43	8.04	0.00	11.89	0.00	2.54	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	36.0	0.0	0.
724	2.800	31.99	3.38	6090.58	1863.82	4.48	7.93	0.00	10.74	0.00	2.48	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	26.3	0.0	0.
725	2.700	31.99	3.40	6128.51	1876.49	4.54	7.84	0.00	9.61	0.00	2.43	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.5	0.0	0.
726	2.600	31.99	3.42	6166.10	1889.05	4.60	7.78	0.00	8.51	0.00	2.38	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.8	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
721	3.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	55.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
722	3.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	45.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
723	2.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	36.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
724	2.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	26.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
725	2.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	16.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
726	2.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT BAYOU LIBERTY WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 72 LIBERTY FROM M1 TO M2 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
729	UPR RCH	0.03609	31.99	3.42	6166.10	1889.05	4.60	7.78	0.00	8.51	0.00	2.38	0.10	0.10	0.00	6.80	0.00	0.00
729	TRIB	0.00028	31.99	3.43	6191.63	1897.59	4.49	7.21	0.00	7.93	0.00	2.25	0.10	0.10	0.00	6.80	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
729	2.60	2.50	0.03638	82.9	0.00030	3.85	222.94	2.14	56.54	12099.56	5654.00	121.00	34023.19	0.008	4.464	0.008
TOT AVG					0.0003	3.85		2.14	56.54	12099.56	5654.00	121.00				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECA 1/da	BOD1 SETT 1/da	ABOD1 DECA 1/da	BOD1 HYDR 1/da	BOD2 DECA 1/da	BOD2 SETT 1/da	ABOD2 DECA 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECA 1/da	NH3-N SRCE 1/da	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECA 1/da	NCM DECA 1/da	NCM SETT 1/da	
729	2.500	7.17	0.53	0.14	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

AVG 20 DEG C RATE 0.43 0.08 0.02 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.03 0.02 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	
729	2.500	31.99	3.44	6202.97	1901.37	4.65	7.74	0.00	8.47	0.00	2.33	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.8	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
729	2.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT BAYOU LIBERTY
REACH NO. 74 LIBERTY FROM M2 TO B PAQUET

WATER QUALITY/HYDRAULIC MODEL FOR:
BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
748	UPR RCH	0.03638	31.99	3.44	6202.97	1901.37	4.65	7.74	0.00	8.47	0.00	2.33	0.10	0.10	0.00	6.80	0.00	0.00
748	TRIB	0.00032	31.99	3.46	6235.22	1912.15	4.66	7.43	0.00	8.15	0.00	2.23	0.10	0.10	0.00	6.80	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
748	2.50	2.40	0.03670	82.3	0.00028	4.10	227.03	2.13	60.96	12984.48	6096.00	129.84	40392.79	0.009	4.920	0.009
749	2.40	2.30	0.03670	82.3	0.00028	4.10	231.13	2.13	60.96	12984.48	6096.00	129.84	41002.39	0.009	4.994	0.009
750	2.30	2.20	0.03670	82.3	0.00028	4.10	235.22	2.13	60.96	12984.48	6096.00	129.84	41612.00	0.009	5.069	0.009
751	2.20	2.10	0.03670	82.3	0.00028	4.10	239.32	2.13	60.96	12984.48	6096.00	129.84	42221.60	0.009	5.143	0.009
752	2.10	2.00	0.03670	82.3	0.00028	4.10	243.42	2.13	60.96	12984.48	6096.00	129.84	42831.20	0.009	5.218	0.009
753	2.00	1.90	0.03670	82.3	0.00028	4.10	247.51	2.13	60.96	12984.48	6096.00	129.84	43440.80	0.009	5.292	0.009
754	1.90	1.80	0.03670	82.3	0.00028	4.10	251.61	2.13	60.96	12984.48	6096.00	129.84	44050.40	0.010	5.366	0.010
755	1.80	1.70	0.03670	82.3	0.00028	4.10	255.70	2.13	60.96	12984.48	6096.00	129.84	44660.00	0.010	5.441	0.010
756	1.70	1.60	0.03670	82.3	0.00028	4.10	259.80	2.13	60.96	12984.48	6096.00	129.84	45269.61	0.010	5.515	0.010
757	1.60	1.50	0.03670	82.3	0.00028	4.10	263.89	2.13	60.96	12984.48	6096.00	129.84	45879.21	0.010	5.589	0.010
758	1.50	1.40	0.03670	82.3	0.00028	4.10	267.99	2.13	60.96	12984.48	6096.00	129.84	46488.81	0.010	5.664	0.010
759	1.40	1.30	0.03670	82.3	0.00028	4.10	272.08	2.13	60.96	12984.48	6096.00	129.84	47098.41	0.010	5.738	0.010
760	1.30	1.20	0.03670	82.3	0.00028	4.10	276.18	2.13	60.96	12984.48	6096.00	129.84	47708.01	0.010	5.813	0.010
761	1.20	1.10	0.03670	82.3	0.00028	4.10	280.27	2.13	60.96	12984.48	6096.00	129.84	48317.61	0.010	5.887	0.010
TOT						57.34				181782.75	85344.00					
AVG				0.0003				2.13	60.96			129.84				

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR 1/da	BOD2 DECAT 1/da	BOD2 SETT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAT 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da	
748	2.400	7.18	0.53	0.14	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
749	2.300	7.20	0.53	0.14	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
750	2.200	7.21	0.53	0.14	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
751	2.100	7.22	0.53	0.14	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
752	2.000	7.23	0.52	0.14	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
753	1.900	7.25	0.52	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
754	1.800	7.26	0.52	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
755	1.700	7.27	0.52	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
756	1.600	7.29	0.52	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
757	1.500	7.30	0.52	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
758	1.400	7.31	0.52	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
759	1.300	7.33	0.52	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
760	1.200	7.34	0.52	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
761	1.100	7.35	0.52	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20	DEG C	RATE	0.43	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00
*	g/m ² /d		**	mg/L/day																							

***** WATER QUALITY CONSTITUENT VALUES

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL
748	2.400	31.88	3.46	6236.65	1912.63	4.71	7.65	0.00	8.38	0.00	2.27	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.8	0.0	0.
749	2.300	31.77	3.48	6267.97	1923.09	4.76	7.63	0.00	8.35	0.00	2.22	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.8	0.0	0.
750	2.200	31.66	3.49	6299.00	1933.46	4.81	7.61	0.00	8.34	0.00	2.18	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.8	0.0	0.
751	2.100	31.55	3.51	6329.75	1943.73	4.86	7.60	0.00	8.33	0.00	2.15	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.8	0.0	0.
752	2.000	31.44	3.53	6360.23	1953.92	4.91	7.61	0.00	8.34	0.00	2.12	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.8	0.0	0.
753	1.900	31.33	3.55	6390.44	1964.01	4.95	7.62	0.00	8.35	0.00	2.09	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.8	0.0	0.
754	1.800	31.22	3.56	6420.38	1974.02	5.00	7.65	0.00	8.37	0.00	2.07	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.8	0.0	0.
755	1.700	31.10	3.58	6450.08	1983.94	5.04	7.68	0.00	8.41	0.00	2.05	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.8	0.0	0.
756	1.600	30.99	3.59	6479.52	1993.78	5.08	7.72	0.00	8.45	0.00	2.04	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.8	0.0	0.
757	1.500	30.88	3.61	6508.72	2003.53	5.12	7.77	0.00	8.50	0.00	2.03	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.8	0.0	0.
758	1.400	30.77	3.63	6537.68	2013.21	5.17	7.83	0.00	8.56	0.00	2.02	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.8	0.0	0.
759	1.300	30.66	3.64	6566.40	2022.81	5.21	7.90	0.00	8.62	0.00	2.02	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.8	0.0	0.
760	1.200	30.55	3.66	6594.90	2032.33	5.25	7.97	0.00	8.70	0.00	2.02	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.8	0.0	0.
761	1.100	30.44	3.68	6623.17	2041.78	5.29	8.06	0.00	8.78	0.00	2.03	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.8	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
----------	-------------	-----------------	----------------	-------------	--------------	------------	------------	--------------	--------------	----------------	----------------	-----------------	----------------	----------------	------------	-------------	--------------	------------	------------	--------------	--------------	--------------	----------------	----------------	-----------------	----------------	------------------------

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

748	2.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
749	2.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
750	2.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
751	2.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
752	2.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
753	1.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
754	1.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
755	1.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
756	1.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
757	1.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
758	1.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
759	1.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
760	1.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
761	1.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT BAYOU LIBERTY WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 90 LIBERTY FROM PAQUET TO BONFOUCA BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
888	UPR RCH	0.03670	30.44	3.68	6623.17	2041.78	5.29	8.06	0.00	8.78	0.00	2.03	0.10	0.10	0.00	6.80	0.00	0.00
888	TRIB	0.00633	30.44	3.68	6633.12	2045.05	5.24	9.04	0.00	9.77	0.00	2.26	0.10	0.10	0.00	6.80	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
888	1.10	1.00	0.04302	81.6	0.00033	3.49	283.77	2.13	60.96	12984.48	6096.00	129.84	59525.01	0.013	7.253	0.013
889	1.00	0.90	0.04302	81.6	0.00033	3.49	287.26	2.13	60.96	12984.48	6096.00	129.84	60134.61	0.013	7.327	0.013
890	0.90	0.80	0.04302	81.6	0.00033	3.49	290.75	2.13	60.96	12984.48	6096.00	129.84	60744.21	0.013	7.402	0.013
891	0.80	0.70	0.04302	81.6	0.00033	3.49	294.25	2.13	60.96	12984.48	6096.00	129.84	61353.82	0.013	7.476	0.013
892	0.70	0.60	0.04302	81.6	0.00033	3.49	297.74	2.13	60.96	12984.48	6096.00	129.84	61963.42	0.013	7.550	0.013
893	0.60	0.50	0.04302	81.6	0.00033	3.49	301.23	2.13	60.96	12984.48	6096.00	129.84	62573.02	0.014	7.625	0.014
894	0.50	0.40	0.04302	81.6	0.00033	3.49	304.73	2.13	60.96	12984.48	6096.00	129.84	63182.62	0.014	7.699	0.014
895	0.40	0.30	0.04302	81.6	0.00033	3.49	308.22	2.13	60.96	12984.48	6096.00	129.84	63792.22	0.014	7.774	0.014
896	0.30	0.20	0.04302	81.6	0.00033	3.49	311.71	2.13	60.96	12984.48	6096.00	129.84	64401.82	0.014	7.848	0.014
897	0.20	0.10	0.04302	81.6	0.00033	3.49	315.21	2.13	60.96	12984.48	6096.00	129.84	65011.43	0.014	7.922	0.014
898	0.10	0.00	0.04302	81.6	0.00033	3.49	318.70	2.13	60.96	12984.48	6096.00	129.84	65621.02	0.014	7.997	0.014
TOT AVG					0.0003	38.43		2.13	60.96	142829.30	67056.00	129.84				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR 1/da	BOD2 DECAT 1/da	BOD2 SETT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N NH3-N SETT 1/da	ORG-N NH3-N DECAT 1/da	SRCE RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO **	PERIP **	COLI PROD 1/da	NCM DECAT 1/da	NCM SETT 1/da
888	1.000	7.35	0.52	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
889	0.900	7.36	0.52	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
890	0.800	7.36	0.52	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
891	0.700	7.36	0.51	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
892	0.600	7.36	0.51	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

***** REACH INPUTS

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
439	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	2.20	0.00	2.20	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
439	WSTLD	0.00000	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00	0.00
442	WSTLD	0.00000	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
439	2.40	2.30	0.00028	0.4	0.00567	0.20	0.20	0.05	1.00	5.01	100.10	0.05	0.00	0.000	0.000	0.006
440	2.30	2.20	0.00028	0.4	0.00567	0.20	0.41	0.05	1.00	5.01	100.10	0.05	0.00	0.000	0.000	0.006
441	2.20	2.10	0.00028	0.4	0.00567	0.20	0.61	0.05	1.00	5.01	100.10	0.05	0.00	0.000	0.000	0.006
442	2.10	2.00	0.00029	1.0	0.00568	0.20	0.82	0.05	1.00	5.03	100.27	0.05	0.00	0.000	0.000	0.006
443	2.00	1.90	0.00029	1.0	0.00568	0.20	1.02	0.05	1.00	5.03	100.27	0.05	0.00	0.000	0.000	0.006
444	1.90	1.80	0.00029	1.0	0.00568	0.20	1.22	0.05	1.00	5.03	100.27	0.05	0.00	0.000	0.000	0.006
445	1.80	1.70	0.00029	1.0	0.00568	0.20	1.43	0.05	1.00	5.03	100.27	0.05	0.00	0.000	0.000	0.006
446	1.70	1.60	0.00029	1.0	0.00568	0.20	1.63	0.05	1.00	5.03	100.27	0.05	0.00	0.000	0.000	0.006
447	1.60	1.50	0.00029	1.0	0.00568	0.20	1.83	0.05	1.00	5.03	100.27	0.05	0.00	0.000	0.000	0.006
448	1.50	1.40	0.00029	1.0	0.00568	0.20	2.04	0.05	1.00	5.03	100.27	0.05	0.00	0.000	0.000	0.006
449	1.40	1.30	0.00029	1.0	0.00568	0.20	2.24	0.05	1.00	5.03	100.27	0.05	0.00	0.000	0.000	0.006
450	1.30	1.20	0.00029	1.0	0.00568	0.20	2.45	0.05	1.00	5.03	100.27	0.05	0.00	0.000	0.000	0.006
451	1.20	1.10	0.00029	1.0	0.00568	0.20	2.65	0.05	1.00	5.03	100.27	0.05	0.00	0.000	0.000	0.006
452	1.10	1.00	0.00029	1.0	0.00568	0.20	2.85	0.05	1.00	5.03	100.27	0.05	0.00	0.000	0.000	0.006
453	1.00	0.90	0.00029	1.0	0.00568	0.20	3.06	0.05	1.00	5.03	100.27	0.05	0.00	0.000	0.000	0.006
454	0.90	0.80	0.00029	1.0	0.00568	0.20	3.26	0.05	1.00	5.03	100.27	0.05	0.00	0.000	0.000	0.006
455	0.80	0.70	0.00029	1.0	0.00568	0.20	3.46	0.05	1.00	5.03	100.27	0.05	0.00	0.000	0.000	0.006
456	0.70	0.60	0.00029	1.0	0.00568	0.20	3.67	0.05	1.00	5.03	100.27	0.05	0.00	0.000	0.000	0.006
457	0.60	0.50	0.00029	1.0	0.00568	0.20	3.87	0.05	1.00	5.03	100.27	0.05	0.00	0.000	0.000	0.006
458	0.50	0.40	0.00029	1.0	0.00568	0.20	4.08	0.05	1.00	5.03	100.27	0.05	0.00	0.000	0.000	0.006
459	0.40	0.30	0.00029	1.0	0.00568	0.20	4.28	0.05	1.00	5.03	100.27	0.05	0.00	0.000	0.000	0.006
460	0.30	0.20	0.00029	1.0	0.00568	0.20	4.48	0.05	1.00	5.03	100.27	0.05	0.00	0.000	0.000	0.006
461	0.20	0.10	0.00029	1.0	0.00568	0.20	4.69	0.05	1.00	5.03	100.27	0.05	0.00	0.000	0.000	0.006
462	0.10	0.00	0.00029	1.0	0.00568	0.20	4.89	0.05	1.00	5.03	100.27	0.05	0.00	0.000	0.000	0.006
TOT AVG					0.0057	4.89				120.68	2406.05					
								0.05	1.00			0.05				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECAT	BOD1 SETT	ABOD1 DECAT	BOD1 HYDR	BOD2 DECAT	BOD2 SETT	ABOD2 DECAT	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECAT	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECAT	NCM DECAT	NCM SETT	
439	2.300	7.55	17.89	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.94	1.09	1.09	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
440	2.200	7.55	17.88	0.13	1.26	0.00	0.00	0.00	0.00	0.00	0.94	1.08	1.08	0.06	1.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
441	2.100	7.56	17.87	0.13	1.26	0.00	0.00	0.00	0.00	0.00	0.93	1.08	1.08	0.06	1.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
442	2.000	7.56	17.83	0.13	1.26	0.00	0.00	0.00	0.00	0.00	0.93	1.09	1.09	0.06	1.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
443	1.900	7.57	17.82	0.13	1.26	0.00	0.00	0.00	0.00	0.00	0.93	1.08	1.08	0.06	1.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
444	1.800	7.57	17.81	0.13	1.26	0.00	0.00	0.00	0.00	0.00	0.93	1.08	1.08	0.06	1.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
445	1.700	7.57	17.80	0.13	1.26	0.00	0.00	0.00	0.00	0.00	0.93	1.07	1.07	0.06	1.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
446	1.600	7.58	17.80	0.13	1.26	0.00	0.00	0.00	0.00	0.00	0.93	1.07	1.07	0.06	1.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
447	1.500	7.58	17.79	0.13	1.26	0.00	0.00	0.00	0.00	0.00	0.92	1.06	1.06	0.06	1.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
448	1.400	7.58	17.78	0.13	1.26	0.00	0.00	0.00	0.00	0.00	0.92	1.06	1.06	0.06	1.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
449	1.300	7.59	17.77	0.12	1.25	0.00	0.00	0.00	0.00	0.00	0.92	1.06	1.06	0.06	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
450	1.200	7.59	17.76	0.12	1.25	0.00	0.00	0.00	0.00	0.00	0.92	1.06	1.06	0.06	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
451	1.100	7.60	17.75	0.12	1.25	0.00	0.00	0.00	0.00	0.00	0.92	1.05	1.05	0.06	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
452	1.000	7.60	17.74	0.12	1.25	0.00	0.00	0.00	0.00	0.00	0.92	1.05	1.05	0.06	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
453	0.900	7.60	17.74	0.12	1.25	0.00	0.00	0.00	0.00	0.00	0.91	1.05	1.05	0.06	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

***** PHYTOPLANKTON AND PERIPHYTON DATA

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N	PERI LIT	PERI N	PERI P	PERI N&P	PERI SPC	PERI TOT	PERI GROW	PERI RESP	PERI DEATH	PERI P/R	PERIP g/m²
																LIM	LIM	LIM	LIM	LIM	LIM	LIM	LIM	LIM	LIM	LIM	
439	2.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
440	2.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
441	2.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
442	2.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
443	1.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
444	1.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
445	1.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
446	1.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
447	1.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
448	1.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
449	1.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
450	1.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
451	1.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
452	1.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
453	0.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
454	0.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
455	0.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
456	0.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
457	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
458	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
459	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
460	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
461	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
462	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT DRAINAGE DITCH 22 WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 41 DD22 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
470	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	2.20	0.00	2.20	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
470	WSTLD	0.01209	30.00	0.55	1053.00	150.00	4.97	10.17	0.00	10.17	0.00	3.01	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
470	0.30	0.20	0.01238	97.7	0.02046	0.06	0.06	0.19	3.11	60.49	310.55	0.60	0.00	0.000	0.000	0.020
471	0.20	0.10	0.01238	97.7	0.02046	0.06	0.11	0.19	3.11	60.49	310.55	0.60	0.00	0.000	0.000	0.020
472	0.10	0.00	0.01238	97.7	0.02046	0.06	0.17	0.19	3.11	60.49	310.55	0.60	0.00	0.000	0.000	0.020
TOT						0.17				181.48	931.66					
AVG					0.0205			0.19	3.11			0.60				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECA 1/da	BOD1 SETT 1/da	ABOD1 DECA 1/da	BOD1 HYDR 1/da	BOD2 DECA 1/da	BOD2 SETT 1/da	ABOD2 DECA 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECA 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECA 1/da	NCM DECA 1/da	NCM SETT 1/da		
470	0.200	7.56	5.88	0.13	0.32	0.00	0.00	0.00	0.00	0.00	0.93	1.54	1.54	0.05	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
471	0.100	7.59	5.86	0.12	0.32	0.00	0.00	0.00	0.00	0.00	0.91	1.51	1.51	0.05	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
472	0.000	7.62	5.84	0.12	0.32	0.00	0.00	0.00	0.00	0.00	0.90	1.48	1.48	0.05	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20	DEG C	RATE	4.91	0.08	0.09	0.00	0.00	0.00	0.00	0.00	0.50			0.03	0.09	0.00	0.00	0.00	0.00	0.00	0.00				0.00	0.00	0.00	
*	g/m ² /d		**		mg/L/day																							

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A ug/L	PERIP g/m ²	COLI #/100mL	
470	0.200	29.78	0.54	1040.83	146.74	5.24	9.75	0.00	9.75	0.00	2.91	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
471	0.100	29.55	0.54	1040.83	146.74	5.44	9.53	0.00	9.53	0.00	2.85	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
472	0.000	29.33	0.54	1040.83	146.74	5.60	9.31	0.00	9.31	0.00	2.80	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO ug/L	PERI N PREF	PERI LIT LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
470	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0
471	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0
472	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0
20	DEG C	RATE							0.000	0.000	0.000	0.000									0.000	0.000	0.000		

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT DRAINAGE DITCH 20 REACH NO. 43 DD20 WATER QUALITY/HYDRAULIC MODEL FOR: BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A ug/L	COLI #/100mL	NCM
482	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	2.20	0.00	2.20	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
482	WSTLD	0.00019	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00	0.00
494	WSTLD	0.00018	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00	0.00
495	WSTLD	0.00004	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00	0.00
498	WSTLD	0.00309	30.00	0.32	619.50	47.00	7.40	6.20	0.00	6.20	0.00	2.80	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
482	2.70	2.60	0.00047	40.2	0.00674	0.17	0.17	0.06	1.17	7.02	116.64	0.07	0.00	0.000	0.000	0.007

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

483	2.60	2.50	0.00047	40.2	0.00674	0.17	0.34	0.06	1.17	7.02	116.64	0.07	0.00	0.000	0.000	0.007
484	2.50	2.40	0.00047	40.2	0.00674	0.17	0.51	0.06	1.17	7.02	116.64	0.07	0.00	0.000	0.000	0.007
485	2.40	2.30	0.00047	40.2	0.00674	0.17	0.69	0.06	1.17	7.02	116.64	0.07	0.00	0.000	0.000	0.007
486	2.30	2.20	0.00047	40.2	0.00674	0.17	0.86	0.06	1.17	7.02	116.64	0.07	0.00	0.000	0.000	0.007
487	2.20	2.10	0.00047	40.2	0.00674	0.17	1.03	0.06	1.17	7.02	116.64	0.07	0.00	0.000	0.000	0.007
488	2.10	2.00	0.00047	40.2	0.00674	0.17	1.20	0.06	1.17	7.02	116.64	0.07	0.00	0.000	0.000	0.007
489	2.00	1.90	0.00047	40.2	0.00674	0.17	1.37	0.06	1.17	7.02	116.64	0.07	0.00	0.000	0.000	0.007
490	1.90	1.80	0.00047	40.2	0.00674	0.17	1.54	0.06	1.17	7.02	116.64	0.07	0.00	0.000	0.000	0.007
491	1.80	1.70	0.00047	40.2	0.00674	0.17	1.72	0.06	1.17	7.02	116.64	0.07	0.00	0.000	0.000	0.007
492	1.70	1.60	0.00047	40.2	0.00674	0.17	1.89	0.06	1.17	7.02	116.64	0.07	0.00	0.000	0.000	0.007
493	1.60	1.50	0.00047	40.2	0.00674	0.17	2.06	0.06	1.17	7.02	116.64	0.07	0.00	0.000	0.000	0.007
494	1.50	1.40	0.00065	56.3	0.00751	0.15	2.21	0.07	1.28	8.64	128.20	0.09	0.00	0.000	0.000	0.008
495	1.40	1.30	0.00069	58.9	0.00766	0.15	2.37	0.07	1.31	8.99	130.57	0.09	0.00	0.000	0.000	0.008
496	1.30	1.20	0.00069	58.9	0.00766	0.15	2.52	0.07	1.31	8.99	130.57	0.09	0.00	0.000	0.000	0.008
497	1.20	1.10	0.00069	58.9	0.00766	0.15	2.67	0.07	1.31	8.99	130.57	0.09	0.00	0.000	0.000	0.008
498	1.10	1.00	0.00378	92.5	0.01367	0.08	2.75	0.13	2.18	27.67	217.62	0.28	0.00	0.000	0.000	0.014
499	1.00	0.90	0.00378	92.5	0.01367	0.08	2.84	0.13	2.18	27.67	217.62	0.28	0.00	0.000	0.000	0.014
500	0.90	0.80	0.00378	92.5	0.01367	0.08	2.92	0.13	2.18	27.67	217.62	0.28	0.00	0.000	0.000	0.014
501	0.80	0.70	0.00378	92.5	0.01367	0.08	3.01	0.13	2.18	27.67	217.62	0.28	0.00	0.000	0.000	0.014
502	0.70	0.60	0.00378	92.5	0.01367	0.08	3.09	0.13	2.18	27.67	217.62	0.28	0.00	0.000	0.000	0.014
503	0.60	0.50	0.00378	92.5	0.01367	0.08	3.18	0.13	2.18	27.67	217.62	0.28	0.00	0.000	0.000	0.014
504	0.50	0.40	0.00378	92.5	0.01367	0.08	3.26	0.13	2.18	27.67	217.62	0.28	0.00	0.000	0.000	0.014
505	0.40	0.30	0.00378	92.5	0.01367	0.08	3.34	0.13	2.18	27.67	217.62	0.28	0.00	0.000	0.000	0.014
506	0.30	0.20	0.00378	92.5	0.01367	0.08	3.43	0.13	2.18	27.67	217.62	0.28	0.00	0.000	0.000	0.014
507	0.20	0.10	0.00378	92.5	0.01367	0.08	3.51	0.13	2.18	27.67	217.62	0.28	0.00	0.000	0.000	0.014
508	0.10	0.00	0.00378	92.5	0.01367	0.08	3.60	0.13	2.18	27.67	217.62	0.28	0.00	0.000	0.000	0.014
TOT						3.60				424.12	4313.40					
AVG				0.0087			0.09	1.60				0.16				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR 1/da	BOD2 DECAT 1/da	BOD2 SETT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAT 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da								
482	2.600	7.55	15.20	0.13	1.05	0.00	0.00	0.00	0.00	0.00	0.94	2.49	2.49	0.05	1.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
483	2.500	7.55	15.19	0.13	1.05	0.00	0.00	0.00	0.00	0.00	0.94	2.24	2.24	0.05	1.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
484	2.400	7.56	15.18	0.13	1.05	0.00	0.00	0.00	0.00	0.00	0.93	2.04	2.04	0.05	1.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
485	2.300	7.56	15.18	0.13	1.05	0.00	0.00	0.00	0.00	0.00	0.93	1.87	1.87	0.05	1.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
486	2.200	7.56	15.17	0.13	1.05	0.00	0.00	0.00	0.00	0.00	0.93	1.73	1.73	0.05	1.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
487	2.100	7.56	15.16	0.13	1.05	0.00	0.00	0.00	0.00	0.00	0.93	1.61	1.61	0.05	1.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
488	2.000	7.57	15.16	0.13	1.05	0.00	0.00	0.00	0.00	0.00	0.93	1.52	1.52	0.06	1.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
489	1.900	7.57	15.15	0.13	1.05	0.00	0.00	0.00	0.00	0.00	0.93	1.43	1.43	0.06	1.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
490	1.800	7.57	15.15	0.13	1.05	0.00	0.00	0.00	0.00	0.00	0.93	1.37	1.37	0.06	1.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
491	1.700	7.58	15.14	0.13	1.05	0.00	0.00	0.00	0.00	0.00	0.92	1.31	1.31	0.06	1.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
492	1.600	7.58	15.13	0.13	1.05	0.00	0.00	0.00	0.00	0.00	0.92	1.26	1.26	0.06	1.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
493	1.500	7.59	15.12	0.12	1.05	0.00	0.00	0.00	0.00	0.00	0.92	1.22	1.22	0.06	1.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
494	1.400	7.59	13.69	0.12	0.93	0.00	0.00	0.00	0.00	0.00	0.92	2.13	2.13	0.05	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
495	1.300	7.59	13.43	0.12	0.91	0.00	0.00	0.00	0.00	0.00	0.92	2.14	2.14	0.05	0.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
496	1.200	7.59	13.42	0.12	0.91	0.00	0.00	0.00	0.00	0.00	0.92	1.98	1.98	0.05	0.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
497	1.100	7.60	13.42	0.12	0.91	0.00	0.00	0.00	0.00	0.00	0.92	1.85	1.85	0.05	0.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
498	1.000	7.60	8.07	0.12	0.49	0.00	0.00	0.00	0.00	0.00	0.91	1.38	1.38	0.06	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
499	0.900	7.60	8.07	0.12	0.49	0.00	0.00	0.00	0.00	0.00	0.91	1.36	1.36	0.06	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
500	0.800	7.61	8.06	0.12	0.49	0.00	0.00	0.00	0.00	0.00	0.91	1.34	1.34	0.06	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
501	0.700	7.61	8.06	0.12	0.49	0.00	0.00	0.00	0.00	0.00	0.91	1.32	1.32	0.05	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
502	0.600	7.61	8.06	0.12	0.49	0.00	0.00	0.00	0.00	0.00	0.91	1.30	1.30	0.05	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
503	0.500	7.62	8.05	0.12	0.49	0.00	0.00	0.00	0.00	0.00	0.91	1.28	1.28	0.05	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
504	0.400	7.62	8.05	0.12	0.49	0.00	0.00	0.00	0.00	0.00	0.91	1.26	1.26	0.05	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
505	0.300	7.62	8.05	0.12	0.49	0.00	0.00	0.00	0.00	0.00	0.90	1.25	1.25	0.05	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
506	0.200	7.63	8.04	0.12	0.49	0.00	0.00	0.00	0.00	0.00	0.90	1.23	1.23	0.05	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
507	0.100	7.63	8.04	0.12	0.49	0.00	0.00	0.00	0.00	0.00	0.90	1.22	1.22	0.05	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
508	0.000	7.63	8.04	0.12	0.49	0.00	0.00	0.00	0.00	0.00	0.90	1.20	1.20	0.05	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
AVG 20 DEG C RATE			10.04	0.08	0.02	0.00	0.00	0.00	0.00	0.00	0.50			0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00								
*	g/m ² /d		**		mg/L/day																													

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL	
482	2.600	29.98	0.31	614.40	29.76	4.50	24.45	0.00	24.51	0.00	23.94	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.5	0.0	0.
483	2.500	29.95	0.31	614.40	29.76	4.76	20.64	0.00	20.75	0.00	20.25	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.1	0.0	0.
484	2.400	29.93	0.31	614.40	29.76	5.02	17.46	0.00	17.64	0.00	17.15	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.6	0.0	0.
485	2.300	29.90	0.31	614.40	29.76	5.25	14.83	0.00	15.06	0.00	14.55	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.2	0.0	0.
486	2.200	29.88	0.31	614.40	29.76	5.44	12.64	0.00	12.93	0.00	12.36	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.7	0.0	0.
487	2.100	29.85	0.31	614.40	29.76	5.61	10.81	0.00	11.17	0.00	10.52	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.3	0.0	0.
488	2.000	29.83	0.31	614.40	29.76	5.74	9.30	0.00	9.71	0.00	8.98	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.8	0.0	0.
489	1.900	29.80	0.31	614.40	29.76	5.86	8.04	0.00	8.51	0.00	7.68	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.4	0.0	0.
490	1.800	29.78	0.31	614.40	29.76	5.96	6.99	0.00	7.52	0.00	6.59	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.9	0.0	0.
491	1.700	29.75	0.31	614.40	29.76	6.04	6.12	0.00	6.70	0.00	5.67	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.5	0.0	0.
492	1.600	29.73	0.31	614.40	29.76	6.11	5.39	0.00	6.04	0.00	4.90	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.0	0.0	0.
493	1.500	29.70	0.31	614.40	29.76	6.16	4.79	0.00	5.49	0.00	4.25	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.6	0.0	0.
494	1.400	29.68	0.33	652.02	38.82	5.03	19.26	0.00	20.02	0.00	18.98	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.1	0.0	0.
495	1.300	29.65	0.34	658.02	40.27	4.97	19.41	0.00	20.23	0.00	19.24	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.7	0.0	0.
496	1.200	29.63	0.34	658.02	40.27	5.14	16.99	0.00	17.87	0.00	16.88	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.2	0.0	0.
497	1.100	29.60	0.34	658.02	40.27	5.31	14.91	0.00	15.84	0.00	14.83	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.0	0.
498	1.000	29.58	0.32	626.52	45.77	6.65	7.44	0.00	8.44	0.00	4.79	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.3	0.0	0.
499	0.900	29.55	0.32	626.52	45.77	6.44	7.12	0.00	8.17	0.00	4.59	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.9	0.0	0.
500	0.800	29.53	0.32	626.52	45.77	6.33	6.80	0.00	7.92	0.00	4.41	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.4	0.0	0.
501	0.700	29.50	0.32	626.52	45.77	6.28	6.51	0.00	7.68	0.00	4.23	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.0	0.0	0.
502	0.600	29.48	0.32	626.52	45.77	6.25	6.23	0.00	7.46	0.00	4.06	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.5	0.0	0.
503	0.500	29.45	0.32	626.52	45.77	6.25	5.96	0.00	7.25	0.00	3.90	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.1	0.0	0.
504	0.400	29.43	0.32	626.52	45.77	6.26	5.71	0.00	7.06	0.00	3.75	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.6	0.0	0.
505	0.300	29.40	0.32	626.52	45.77	6.28	5.47	0.00	6.88	0.00	3.60	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.2	0.0	0.
506	0.200	29.38	0.32	626.52	45.77	6.29	5.24	0.00	6.71	0.00	3.46	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.7	0.0	0.
507	0.100	29.35	0.32	626.52	45.77	6.31	5.03	0.00	6.55	0.00	3.33	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.3	0.0	0.
508	0.000	29.33	0.32	626.52	45.77	6.33	4.82	0.00	6.40	0.00	3.20	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.8	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
----------	-------------	-----------------	----------------	-------------	--------------	------------	------------	--------------	--------------	----------------	----------------	-----------------	----------------	----------------	------------	-------------	--------------	------------	------------	--------------	--------------	--------------	----------------	----------------	-----------------	----------------	------------

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

482	2.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
483	2.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
484	2.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
485	2.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
486	2.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
487	2.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
488	2.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
489	1.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	4.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
490	1.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	4.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
491	1.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	5.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
492	1.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
493	1.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
494	1.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
495	1.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
496	1.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
497	1.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
498	1.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
499	0.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
500	0.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
501	0.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	11.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
502	0.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	11.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
503	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	12.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
504	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	12.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
505	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	13.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
506	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	13.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
507	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
508	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT HIGHWAY 190 WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 46 HWY 190 (DRAINAGE DITCH 14) BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
536	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	2.20	0.00	2.20	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
536	WSTLD	0.00013	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00	0.00
544	WSTLD	0.00035	30.00	0.39	753.60	63.30	2.00	39.10	0.00	39.10	0.00	39.10	0.00	0.00	0.00	0.00	0.00	0.00
546	WSTLD	0.00000	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00	0.00
548	WSTLD	0.00006	30.00	0.39	753.60	63.30	2.00	56.93	0.00	56.93	0.00	56.93	0.00	0.00	0.00	0.00	0.00	0.00
550	WSTLD	0.00001	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00	0.00
551	WSTLD	0.00001	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00	0.00
552	WSTLD	0.00000	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00	0.00
553	WSTLD	0.00001	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00	0.00
555	WSTLD	0.00002	30.00	0.39	753.60	63.30	2.00	57.39	0.00	57.39	0.00	57.39	0.00	0.00	0.00	0.00	0.00	0.00
556	WSTLD	0.00000	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00	0.00
557	WSTLD	0.00006	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
536	2.30	2.20	0.00041	31.0	0.00642	0.18	0.18	0.06	1.12	6.38	111.74	0.06	0.00	0.000	0.000	0.006
537	2.20	2.10	0.00041	31.0	0.00642	0.18	0.36	0.06	1.12	6.38	111.74	0.06	0.00	0.000	0.000	0.006
538	2.10	2.00	0.00041	31.0	0.00642	0.18	0.54	0.06	1.12	6.38	111.74	0.06	0.00	0.000	0.000	0.006
539	2.00	1.90	0.00041	31.0	0.00642	0.18	0.72	0.06	1.12	6.38	111.74	0.06	0.00	0.000	0.000	0.006
540	1.90	1.80	0.00041	31.0	0.00642	0.18	0.90	0.06	1.12	6.38	111.74	0.06	0.00	0.000	0.000	0.006

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

541	1.80	1.70	0.00041	31.0	0.00642	0.18	1.08	0.06	1.12	6.38	111.74	0.06	0.00	0.000	0.000	0.006
542	1.70	1.60	0.00041	31.0	0.00642	0.18	1.26	0.06	1.12	6.38	111.74	0.06	0.00	0.000	0.000	0.006
543	1.60	1.50	0.00041	31.0	0.00642	0.18	1.44	0.06	1.12	6.38	111.74	0.06	0.00	0.000	0.000	0.006
544	1.50	1.40	0.00076	62.5	0.00790	0.15	1.59	0.07	1.34	9.55	134.20	0.10	0.00	0.000	0.000	0.008
545	1.40	1.30	0.00076	62.5	0.00790	0.15	1.73	0.07	1.34	9.55	134.20	0.10	0.00	0.000	0.000	0.008
546	1.30	1.20	0.00076	62.6	0.00791	0.15	1.88	0.07	1.34	9.57	134.29	0.10	0.00	0.000	0.000	0.008
547	1.20	1.10	0.00076	62.6	0.00791	0.15	2.03	0.07	1.34	9.57	134.29	0.10	0.00	0.000	0.000	0.008
548	1.10	1.00	0.00082	65.3	0.00812	0.14	2.17	0.07	1.37	10.06	137.40	0.10	0.00	0.000	0.000	0.008
549	1.00	0.90	0.00082	65.3	0.00812	0.14	2.31	0.07	1.37	10.06	137.40	0.10	0.00	0.000	0.000	0.008
550	0.90	0.80	0.00083	65.9	0.00816	0.14	2.45	0.07	1.38	10.17	138.06	0.10	0.00	0.000	0.000	0.008
551	0.80	0.70	0.00084	66.1	0.00818	0.14	2.60	0.07	1.38	10.22	138.36	0.10	0.00	0.000	0.000	0.008
552	0.70	0.60	0.00084	66.2	0.00819	0.14	2.74	0.07	1.38	10.23	138.45	0.10	0.00	0.000	0.000	0.008
553	0.60	0.50	0.00085	66.6	0.00822	0.14	2.88	0.07	1.39	10.31	138.92	0.10	0.00	0.000	0.000	0.008
554	0.50	0.40	0.00085	66.6	0.00822	0.14	3.02	0.07	1.39	10.31	138.92	0.10	0.00	0.000	0.000	0.008
555	0.40	0.30	0.00087	67.5	0.00830	0.14	3.16	0.07	1.40	10.51	140.13	0.11	0.00	0.000	0.000	0.008
556	0.30	0.20	0.00088	67.7	0.00832	0.14	3.30	0.08	1.40	10.54	140.34	0.11	0.00	0.000	0.000	0.008
557	0.20	0.10	0.00094	69.8	0.00851	0.14	3.43	0.08	1.43	11.02	143.22	0.11	0.00	0.000	0.000	0.009
558	0.10	0.00	0.00094	69.8	0.00851	0.14	3.57	0.08	1.43	11.02	143.22	0.11	0.00	0.000	0.000	0.009
TOT						3.57				203.73	2965.32					
AVG			0.0075					0.07	1.29				0.09			

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECA	BOD1 SETT	ABOD1 DECA	BOD1 HYDR	BOD2 DECA	BOD2 SETT	ABOD2 DECA	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECA	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECA	NCM DECA	NCM SETT		
536	2.200	7.55	15.90	0.13	1.11	0.00	0.00	0.00	0.00	0.00	0.94	2.15	2.15	0.05	1.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
537	2.100	7.55	15.90	0.13	1.11	0.00	0.00	0.00	0.00	0.00	0.94	1.95	1.95	0.05	1.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
538	2.000	7.55	15.89	0.13	1.11	0.00	0.00	0.00	0.00	0.00	0.93	1.78	1.78	0.05	1.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
539	1.900	7.56	15.89	0.13	1.11	0.00	0.00	0.00	0.00	0.00	0.93	1.65	1.65	0.05	1.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
540	1.800	7.56	15.88	0.13	1.11	0.00	0.00	0.00	0.00	0.00	0.93	1.54	1.54	0.06	1.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
541	1.700	7.56	15.88	0.13	1.11	0.00	0.00	0.00	0.00	0.00	0.93	1.45	1.45	0.06	1.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
542	1.600	7.57	15.87	0.13	1.11	0.00	0.00	0.00	0.00	0.00	0.93	1.37	1.37	0.06	1.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
543	1.500	7.57	15.87	0.13	1.11	0.00	0.00	0.00	0.00	0.00	0.93	1.31	1.31	0.06	1.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
544	1.400	7.57	13.09	0.13	0.89	0.00	0.00	0.00	0.00	0.00	0.93	2.10	2.10	0.05	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
545	1.300	7.57	13.08	0.13	0.89	0.00	0.00	0.00	0.00	0.00	0.93	1.96	1.96	0.05	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
546	1.200	7.57	13.07	0.13	0.88	0.00	0.00	0.00	0.00	0.00	0.93	1.85	1.85	0.05	0.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
547	1.100	7.58	13.06	0.13	0.88	0.00	0.00	0.00	0.00	0.00	0.92	1.74	1.74	0.05	0.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
548	1.000	7.58	12.75	0.13	0.86	0.00	0.00	0.00	0.00	0.00	0.92	1.83	1.83	0.05	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
549	0.900	7.58	12.75	0.12	0.86	0.00	0.00	0.00	0.00	0.00	0.92	1.73	1.73	0.05	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
550	0.800	7.59	12.68	0.12	0.85	0.00	0.00	0.00	0.00	0.00	0.92	1.69	1.69	0.05	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
551	0.700	7.59	12.65	0.12	0.85	0.00	0.00	0.00	0.00	0.00	0.92	1.63	1.63	0.05	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
552	0.600	7.59	12.64	0.12	0.85	0.00	0.00	0.00	0.00	0.00	0.92	1.56	1.56	0.05	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
553	0.500	7.59	12.59	0.12	0.85	0.00	0.00	0.00	0.00	0.00	0.92	1.53	1.53	0.05	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
554	0.400	7.60	12.58	0.12	0.85	0.00	0.00	0.00	0.00	0.00	0.92	1.46	1.46	0.05	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
555	0.300	7.60	12.47	0.12	0.84	0.00	0.00	0.00	0.00	0.00	0.91	1.48	1.48	0.05	0.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
556	0.200	7.60	12.44	0.12	0.84	0.00	0.00	0.00	0.00	0.00	0.91	1.44	1.44	0.05	0.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
557	0.100	7.60	12.18	0.12	0.81	0.00	0.00	0.00	0.00	0.00	0.91	1.61	1.61	0.05	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
558	0.000	7.61	12.18	0.12	0.81	0.00	0.00	0.00	0.00	0.00	0.91	1.54	1.54	0.05	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
AVG 20 DEG C RATE			11.52	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.50			0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00		
*	g/m ² /d			**	mg/L/day																							

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A ug/L	PERIP g/m ²	COLI #/100mL
536	2.200	29.98	0.30	592.98	24.60	4.92	19.06	0.00	19.13	0.00	18.39	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.6	0.0	0.
537	2.100	29.96	0.30	592.98	24.60	5.15	15.93	0.00	16.07	0.00	15.36	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.3	0.0	0.

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

538	2.000	29.94	0.30	592.98	24.60	5.37	13.38	0.00	13.58	0.00	12.85	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.9	0.0	0.0
0.00																								
539	1.900	29.92	0.30	592.98	24.60	5.55	11.28	0.00	11.56	0.00	10.77	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.6	0.0	0.0
0.00																								
540	1.800	29.90	0.30	592.98	24.60	5.70	9.57	0.00	9.92	0.00	9.06	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.0
0.00																								
541	1.700	29.87	0.30	592.98	24.60	5.83	8.17	0.00	8.59	0.00	7.64	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.9	0.0	0.0
0.00																								
542	1.600	29.85	0.30	592.98	24.60	5.93	7.03	0.00	7.51	0.00	6.47	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.5	0.0	0.0
0.00																								
543	1.500	29.83	0.30	592.98	24.60	6.02	6.09	0.00	6.64	0.00	5.50	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.1	0.0	0.0
0.00																								
544	1.400	29.81	0.34	666.38	42.28	4.76	18.64	0.00	19.26	0.00	18.42	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.8	0.0	0.0
0.00																								
545	1.300	29.79	0.34	666.38	42.28	5.07	16.43	0.00	17.12	0.00	16.28	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.4	0.0	0.0
0.00																								
546	1.200	29.77	0.34	666.57	42.33	5.28	14.62	0.00	15.37	0.00	14.50	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.1	0.0	0.0
0.00																								
547	1.100	29.75	0.34	666.57	42.33	5.45	12.93	0.00	13.76	0.00	12.84	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.7	0.0	0.0
0.00																								
548	1.000	29.73	0.34	672.97	43.87	5.34	14.36	0.00	15.25	0.00	14.30	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.4	0.0	0.0
0.00																								
549	0.900	29.71	0.34	672.97	43.87	5.48	12.77	0.00	13.73	0.00	12.74	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.0	0.0	0.0
0.00																								
550	0.800	29.69	0.35	674.24	44.18	5.54	12.17	0.00	13.21	0.00	12.15	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.7	0.0	0.0
0.00																								
551	0.700	29.67	0.35	674.82	44.32	5.63	11.24	0.00	12.34	0.00	11.22	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.3	0.0	0.0
0.00																								
552	0.600	29.65	0.35	674.98	44.36	5.72	10.16	0.00	11.33	0.00	10.13	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.9	0.0	0.0
0.00																								
553	0.500	29.62	0.35	675.87	44.57	5.77	9.70	0.00	10.94	0.00	9.66	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.6	0.0	0.0
0.00																								
554	0.400	29.60	0.35	675.87	44.57	5.86	8.71	0.00	10.02	0.00	8.65	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.2	0.0	0.0
0.00																								
555	0.300	29.58	0.35	678.09	45.11	5.83	9.08	0.00	10.46	0.00	9.01	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.9	0.0	0.0
0.00																								
556	0.200	29.56	0.35	678.46	45.19	5.89	8.44	0.00	9.89	0.00	8.35	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.5	0.0	0.0
0.00																								
557	0.100	29.54	0.35	683.37	46.38	5.69	11.16	0.00	12.67	0.00	11.09	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.2	0.0	0.0
0.00																								
558	0.000	29.52	0.35	683.37	46.38	5.77	10.06	0.00	11.64	0.00	9.99	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.8	0.0	0.0
0.00																								

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT	PHYT	PHYT	PHYT	PHYT	PHYT	PHYT	PHYT	PHYT	PHYT	PHYT	PHYTO µg/L	PERI	PERI	PERI	PERI	PERI	PERI	PERI	PERI	PERI	PERI	PERIP g/m²	
				N LIT	N LIT	P LIM	N&P LIM	TOT LIM	GROW 1/da	RESP 1/da	DEATH 1/da	SETT 1/da	P/R RATIO	N LIT		LIT LIM	N LIM	P LIM	N&P LIM	SPC LIM	TOT LIM	GROW 1/da	RESP 1/da	DEATH 1/da	P/R RATIO		
536	2.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
537	2.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
538	2.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
539	1.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
540	1.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
541	1.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
542	1.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	4.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
543	1.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	5.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
544	1.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	5.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
545	1.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
546	1.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
547	1.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
548	1.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	8.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
549	0.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
550	0.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.7	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
551	0.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
552	0.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
553	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00																			

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

***** PHYTOPLANKTON AND PERIPHYTON DATA

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
576	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.1	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
577	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.1	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
578	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20 DEG C RATE									0.000	0.000	0.000	0.000									0.000	0.000	0.000		

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT DRAINAGE DITCH 19 WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 51 DD19 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
585	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	2.20	0.00	2.20	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
585	WSTLD	0.00038	30.00	0.39	753.60	63.30	2.00	46.00	0.00	46.00	0.00	46.00	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
585	1.40	1.30	0.00066	57.4	0.00757	0.15	0.15	0.07	1.29	8.78	129.13	0.09	0.00	0.000	0.000	0.008
586	1.30	1.20	0.00066	57.4	0.00757	0.15	0.31	0.07	1.29	8.78	129.13	0.09	0.00	0.000	0.000	0.008
587	1.20	1.10	0.00066	57.4	0.00757	0.15	0.46	0.07	1.29	8.78	129.13	0.09	0.00	0.000	0.000	0.008
588	1.10	1.00	0.00066	57.4	0.00757	0.15	0.61	0.07	1.29	8.78	129.13	0.09	0.00	0.000	0.000	0.008
589	1.00	0.90	0.00066	57.4	0.00757	0.15	0.76	0.07	1.29	8.78	129.13	0.09	0.00	0.000	0.000	0.008
590	0.90	0.80	0.00066	57.4	0.00757	0.15	0.92	0.07	1.29	8.78	129.13	0.09	0.00	0.000	0.000	0.008
591	0.80	0.70	0.00066	57.4	0.00757	0.15	1.07	0.07	1.29	8.78	129.13	0.09	0.00	0.000	0.000	0.008
592	0.70	0.60	0.00066	57.4	0.00757	0.15	1.22	0.07	1.29	8.78	129.13	0.09	0.00	0.000	0.000	0.008
593	0.60	0.50	0.00066	57.4	0.00757	0.15	1.38	0.07	1.29	8.78	129.13	0.09	0.00	0.000	0.000	0.008
594	0.50	0.40	0.00066	57.4	0.00757	0.15	1.53	0.07	1.29	8.78	129.13	0.09	0.00	0.000	0.000	0.008
595	0.40	0.30	0.00066	57.4	0.00757	0.15	1.68	0.07	1.29	8.78	129.13	0.09	0.00	0.000	0.000	0.008
596	0.30	0.20	0.00066	57.4	0.00757	0.15	1.84	0.07	1.29	8.78	129.13	0.09	0.00	0.000	0.000	0.008
597	0.20	0.10	0.00066	57.4	0.00757	0.15	1.99	0.07	1.29	8.78	129.13	0.09	0.00	0.000	0.000	0.008
598	0.10	0.00	0.00066	57.4	0.00757	0.15	2.14	0.07	1.29	8.78	129.13	0.09	0.00	0.000	0.000	0.008
TOT						2.14				122.87	1807.88					
AVG					0.0076			0.07	1.29			0.09				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT 1/da	ABOD1 1/da	BOD1 HYDR 1/da	BOD2 DECAT 1/da	BOD2 SETT 1/da	ABOD2 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAT 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da
585	1.300	7.53	13.69	0.13	0.93	0.00	0.00	0.00	0.00	0.00	0.94	2.45	2.45	0.05	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
586	1.200	7.52	13.71	0.13	0.94	0.00	0.00	0.00	0.00	0.00	0.95	2.26	2.26	0.05	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
587	1.100	7.51	13.73	0.13	0.94	0.00	0.00	0.00	0.00	0.00	0.96	2.10	2.10	0.05	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
588	1.000	7.50	13.75	0.13	0.94	0.00	0.00	0.00	0.00	0.00	0.96	1.96	1.96	0.06	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
589	0.900	7.48	13.78	0.13	0.94	0.00	0.00	0.00	0.00	0.00	0.97	1.84	1.84	0.06	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
590	0.800	7.47	13.80	0.13	0.95	0.00	0.00	0.00	0.00	0.00	0.97	1.74	1.74	0.06	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
591	0.700	7.46	13.82	0.13	0.95	0.00	0.00	0.00	0.00	0.00	0.98	1.65	1.65	0.06	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

598 0.000 0.00 Inf 1.00 0.00 0.00 0.00 0.00 0.00 0.000 0.000 0.000 0.000 0.0 3.2 0.50 0.00 0.00 0.00 0.00 0.00 0.00 0.000 0.000 0.000 0.0 0.0

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT DRAINAGE DITCH 4
REACH NO. 53 DD04

WATER QUALITY/HYDRAULIC MODEL FOR:
BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
601	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	2.20	0.00	2.20	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
601	WSTLD	0.00004	30.00	0.39	753.60	63.30	2.00	145.48	0.00	145.48	0.00	145.48	0.00	0.00	0.00	0.00	0.00	0.00
602	WSTLD	0.00001	30.00	0.39	753.60	63.30	2.00	20.70	0.00	20.70	0.00	20.70	0.00	0.00	0.00	0.00	0.00	0.00
611	WSTLD	0.00000	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00	0.00
614	WSTLD	0.00001	30.00	0.39	753.60	63.30	2.00	57.50	0.00	57.50	0.00	57.50	0.00	0.00	0.00	0.00	0.00	0.00
615	WSTLD	0.00002	30.00	0.39	753.60	63.30	2.00	21.85	0.00	21.85	0.00	21.85	0.00	0.00	0.00	0.00	0.00	0.00
616	WSTLD	0.00069	30.00	0.39	753.60	63.30	2.00	36.57	0.00	36.57	0.00	36.57	0.00	0.00	0.00	0.00	0.00	0.00
617	WSTLD	0.00000	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00	0.00
619	WSTLD	0.00009	30.00	0.39	753.60	63.30	2.00	11.50	0.00	11.50	0.00	11.50	0.00	0.00	0.00	0.00	0.00	0.00
620	WSTLD	0.00018	30.00	0.39	753.60	63.30	2.00	16.10	0.00	16.10	0.00	16.10	0.00	0.00	0.00	0.00	0.00	0.00
621	WSTLD	0.00002	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00	0.00
625	WSTLD	0.00000	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00	0.00
633	WSTLD	0.01218	30.00	0.30	582.30	52.50	7.10	4.68	0.00	4.68	0.00	3.01	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
601	4.20	4.10	0.00032	11.7	0.00591	0.20	0.20	0.05	1.04	5.43	103.79	0.05	0.00	0.000	0.000	0.006
602	4.10	4.00	0.00033	13.1	0.00594	0.19	0.39	0.05	1.04	5.49	104.29	0.05	0.00	0.000	0.000	0.006
603	4.00	3.90	0.00033	13.1	0.00594	0.19	0.59	0.05	1.04	5.49	104.29	0.05	0.00	0.000	0.000	0.006
604	3.90	3.80	0.00033	13.1	0.00594	0.19	0.78	0.05	1.04	5.49	104.29	0.05	0.00	0.000	0.000	0.006
605	3.80	3.70	0.00033	13.1	0.00594	0.19	0.98	0.05	1.04	5.49	104.29	0.05	0.00	0.000	0.000	0.006
606	3.70	3.60	0.00033	13.1	0.00594	0.19	1.17	0.05	1.04	5.49	104.29	0.05	0.00	0.000	0.000	0.006
607	3.60	3.50	0.00033	13.1	0.00594	0.19	1.37	0.05	1.04	5.49	104.29	0.05	0.00	0.000	0.000	0.006
608	3.50	3.40	0.00033	13.1	0.00594	0.19	1.56	0.05	1.04	5.49	104.29	0.05	0.00	0.000	0.000	0.006
609	3.40	3.30	0.00033	13.1	0.00594	0.19	1.75	0.05	1.04	5.49	104.29	0.05	0.00	0.000	0.000	0.006
610	3.30	3.20	0.00033	13.1	0.00594	0.19	1.95	0.05	1.04	5.49	104.29	0.05	0.00	0.000	0.000	0.006
611	3.20	3.10	0.00033	13.6	0.00595	0.19	2.14	0.05	1.04	5.50	104.46	0.06	0.00	0.000	0.000	0.006
612	3.10	3.00	0.00033	13.6	0.00595	0.19	2.34	0.05	1.04	5.50	104.46	0.06	0.00	0.000	0.000	0.006
613	3.00	2.90	0.00033	13.6	0.00595	0.19	2.53	0.05	1.04	5.50	104.46	0.06	0.00	0.000	0.000	0.006
614	2.90	2.80	0.00034	15.8	0.00600	0.19	2.73	0.05	1.05	5.60	105.28	0.06	0.00	0.000	0.000	0.006
615	2.80	2.70	0.00035	19.6	0.00610	0.19	2.92	0.05	1.07	5.77	106.73	0.06	0.00	0.000	0.000	0.006
616	2.70	2.60	0.00104	72.9	0.00883	0.13	3.05	0.08	1.48	11.83	147.91	0.12	0.00	0.000	0.000	0.009
617	2.60	2.50	0.00104	72.9	0.00883	0.13	3.18	0.08	1.48	11.84	147.94	0.12	0.00	0.000	0.000	0.009
618	2.50	2.40	0.00104	72.9	0.00883	0.13	3.31	0.08	1.48	11.84	147.94	0.12	0.00	0.000	0.000	0.009
619	2.40	2.30	0.00113	75.0	0.00907	0.13	3.44	0.08	1.52	12.48	151.54	0.12	0.00	0.000	0.000	0.009
620	2.30	2.20	0.00131	78.5	0.00954	0.12	3.56	0.09	1.58	13.77	158.46	0.14	0.00	0.000	0.000	0.010
621	2.20	2.10	0.00134	78.8	0.00960	0.12	3.68	0.09	1.59	13.93	159.31	0.14	0.00	0.000	0.000	0.010
622	2.10	2.00	0.00134	78.8	0.00960	0.12	3.80	0.09	1.59	13.93	159.31	0.14	0.00	0.000	0.000	0.010
623	2.00	1.90	0.00134	78.8	0.00960	0.12	3.92	0.09	1.59	13.93	159.31	0.14	0.00	0.000	0.000	0.010
624	1.90	1.80	0.00134	78.8	0.00960	0.12	4.04	0.09	1.59	13.93	159.31	0.14	0.00	0.000	0.000	0.010
625	1.80	1.70	0.00134	78.9	0.00961	0.12	4.16	0.09	1.59	13.96	159.46	0.14	0.00	0.000	0.000	0.010
626	1.70	1.60	0.00134	78.9	0.00961	0.12	4.28	0.09	1.59	13.96	159.46	0.14	0.00	0.000	0.000	0.010
627	1.60	1.50	0.00134	78.9	0.00961	0.12	4.40	0.09	1.59	13.96	159.46	0.14	0.00	0.000	0.000	0.010
628	1.50	1.40	0.00134	78.9	0.00961	0.12	4.52	0.09	1.59	13.96	159.46	0.14	0.00	0.000	0.000	0.010
629	1.40	1.30	0.00134	78.9	0.00961	0.12	4.64	0.09	1.59	13.96	159.46	0.14	0.00	0.000	0.000	0.010
630	1.30	1.20	0.00134	78.9	0.00961	0.12	4.76	0.09	1.59	13.96	159.46	0.14	0.00	0.000	0.000	0.010
631	1.20	1.10	0.00134	78.9	0.00961	0.12	4.88	0.09	1.59	13.96	159.46	0.14	0.00	0.000	0.000	0.010

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	
601 0.00	4.100	30.03	0.28	548.19	13.81	5.31	15.48	0.00	15.49	0.00	14.56	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.1	0.0	0.
602 0.00	4.000	30.06	0.28	551.47	14.60	5.41	12.78	0.00	12.80	0.00	11.96	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.2	0.0	0.
603 0.00	3.900	30.09	0.28	551.47	14.60	5.58	10.57	0.00	10.59	0.00	9.78	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.2	0.0	0.
604 0.00	3.800	30.12	0.28	551.47	14.60	5.73	8.81	0.00	8.85	0.00	8.04	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.3	0.0	0.
605 0.00	3.700	30.16	0.28	551.47	14.60	5.84	7.42	0.00	7.46	0.00	6.63	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.4	0.0	0.
606 0.00	3.600	30.19	0.28	551.47	14.60	5.93	6.31	0.00	6.36	0.00	5.51	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.5	0.0	0.
607 0.00	3.500	30.22	0.28	551.47	14.60	6.01	5.43	0.00	5.49	0.00	4.60	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.5	0.0	0.
608 0.00	3.400	30.25	0.28	551.47	14.60	6.06	4.73	0.00	4.80	0.00	3.88	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.6	0.0	0.
609 0.00	3.300	30.28	0.28	551.47	14.60	6.11	4.18	0.00	4.25	0.00	3.30	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.7	0.0	0.
610 0.00	3.200	30.31	0.28	551.47	14.60	6.14	3.74	0.00	3.82	0.00	2.83	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.0	0.
611 0.00	3.100	30.34	0.28	552.52	14.85	6.14	3.66	0.00	3.74	0.00	2.73	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.0	0.
612 0.00	3.000	30.37	0.28	552.52	14.85	6.16	3.32	0.00	3.42	0.00	2.38	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.9	0.0	0.
613 0.00	2.900	30.41	0.28	552.52	14.85	6.18	3.06	0.00	3.16	0.00	2.09	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	0.0	0.
614 0.00	2.800	30.44	0.28	557.72	16.10	6.10	3.97	0.00	4.08	0.00	3.02	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.1	0.0	0.
615 0.00	2.700	30.47	0.29	566.46	18.21	6.04	4.21	0.00	4.33	0.00	3.30	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.1	0.0	0.
616 0.00	2.600	30.50	0.35	690.53	48.10	4.11	23.02	0.00	23.15	0.00	22.87	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.2	0.0	0.
617 0.00	2.500	30.53	0.35	690.58	48.11	4.51	20.69	0.00	20.83	0.00	20.65	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.3	0.0	0.
618 0.00	2.400	30.56	0.35	690.58	48.11	4.76	18.59	0.00	18.73	0.00	18.63	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.4	0.0	0.
619 0.00	2.300	30.59	0.36	695.43	49.28	4.89	16.30	0.00	16.46	0.00	16.40	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.4	0.0	0.
620 0.00	2.200	30.62	0.36	703.47	51.22	4.92	14.84	0.00	15.00	0.00	14.97	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.5	0.0	0.
621 0.00	2.100	30.65	0.36	704.36	51.43	5.09	14.42	0.00	14.59	0.00	14.59	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.6	0.0	0.
622 0.00	2.000	30.69	0.36	704.36	51.43	5.24	13.17	0.00	13.35	0.00	13.36	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.7	0.0	0.
623 0.00	1.900	30.72	0.36	704.36	51.43	5.36	12.04	0.00	12.23	0.00	12.25	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.8	0.0	0.
624 0.00	1.800	30.75	0.36	704.36	51.43	5.45	11.02	0.00	11.22	0.00	11.23	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.8	0.0	0.
625 0.00	1.700	30.78	0.36	704.51	51.47	5.52	10.26	0.00	10.47	0.00	10.47	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.9	0.0	0.
626 0.00	1.600	30.81	0.36	704.51	51.47	5.59	9.41	0.00	9.62	0.00	9.60	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.0	0.0	0.
627 0.00	1.500	30.84	0.36	704.51	51.47	5.66	8.63	0.00	8.85	0.00	8.81	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.1	0.0	0.
628 0.00	1.400	30.87	0.36	704.51	51.47	5.71	7.93	0.00	8.16	0.00	8.09	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.1	0.0	0.
629 0.00	1.300	30.90	0.36	704.51	51.47	5.77	7.30	0.00	7.53	0.00	7.43	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.2	0.0	0.
630 0.00	1.200	30.94	0.36	704.51	51.47	5.81	6.72	0.00	6.96	0.00	6.83	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.3	0.0	0.
631 0.00	1.100	30.97	0.36	704.51	51.47	5.85	6.20	0.00	6.45	0.00	6.28	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.4	0.0	0.

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

	frac	m	PREF	LIM	LIM	LIM	LIM	LIM	LIM	1/da	1/da	1/da	1/da	RATIO	µg/L	PREF	LIM	LIM	LIM	LIM	LIM	LIM	LIM	1/da	1/da	1/da	RATIO	g/m²
667	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
668	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
20 DEG C RATE										0.000	0.000	0.000	0.000									0.000	0.000	0.000				

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT REACH NO. 59 TRIBUTARY 9 TRIBUTARY 9 - TIDAL WATER QUALITY/HYDRAULIC MODEL FOR: BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
669	UPR RCH	0.00029	30.00	2.53	4579.50	1359.34	4.92	6.50	0.00	6.50	0.00	1.93	0.10	0.10	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
669	0.30	0.20	0.00029	2.7	0.00002	50.95	51.35	0.80	16.00	1280.00	1600.00	12.80	160.00	0.000	0.058	0.000
670	0.20	0.10	0.00029	2.7	0.00002	50.95	102.30	0.80	16.00	1280.00	1600.00	12.80	320.00	0.001	0.117	0.001
671	0.10	0.00	0.00029	2.7	0.00002	50.95	153.24	0.80	16.00	1280.00	1600.00	12.80	480.00	0.001	0.175	0.001
TOT AVG					0.0000	152.84		0.80	16.00	3840.00	4800.00	12.80				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECATY 1/da	BOD1 SETT DECATY 1/da	ABOD1 DECATY 1/da	BOD1 HYDR DECATY 1/da	BOD2 DECATY 1/da	BOD2 SETT DECATY 1/da	ABOD2 DECATY 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT DECATY 1/da	NH3-N DECATY 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECATY 1/da	NCM DECATY 1/da	NCM SETT 1/da	
669	0.200	7.36	1.06	0.13	0.08	0.00	0.00	0.00	0.00	0.00	0.98	1.42	1.42	0.06	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
670	0.100	7.28	1.08	0.13	0.08	0.00	0.00	0.00	0.00	0.00	1.02	1.56	1.56	0.06	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
671	0.000	7.19	1.09	0.14	0.08	0.00	0.00	0.00	0.00	0.00	1.06	1.74	1.74	0.06	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.88	0.08	0.02	0.00	0.00	0.00	0.00	0.00	0.50			0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00				0.00	0.00	0.00

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL	
669	0.200	30.66	2.71	4895.77	1464.75	4.54	6.86	0.00	6.97	0.00	1.95	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.
670	0.100	31.33	2.77	5009.32	1502.59	4.12	8.29	0.00	8.51	0.00	2.12	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.
671	0.000	31.99	2.81	5079.17	1525.87	3.70	10.22	0.00	10.56	0.00	2.34	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

***** PHYTOPLANKTON AND PERIPHYTON DATA

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
669	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
670	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
671	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20 DEG C RATE										0.000	0.000	0.000	0.000								0.000	0.000	0.000				

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT TRIBUTARY 6 WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 61 DRAINAGE DITCH 11 - UPLAND BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
680	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	2.20	0.00	2.20	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
680	WSTLD	0.00004	30.00	0.39	753.60	63.30	2.00	32.20	0.00	32.20	0.00	32.20	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
680	1.60	1.50	0.00032	11.0	0.00589	0.20	0.20	0.05	1.04	5.40	103.54	0.05	0.00	0.000	0.000	0.006
681	1.50	1.40	0.00032	11.0	0.00589	0.20	0.39	0.05	1.04	5.40	103.54	0.05	0.00	0.000	0.000	0.006
682	1.40	1.30	0.00032	11.0	0.00589	0.20	0.59	0.05	1.04	5.40	103.54	0.05	0.00	0.000	0.000	0.006
683	1.30	1.20	0.00032	11.0	0.00589	0.20	0.79	0.05	1.04	5.40	103.54	0.05	0.00	0.000	0.000	0.006
684	1.20	1.10	0.00032	11.0	0.00589	0.20	0.98	0.05	1.04	5.40	103.54	0.05	0.00	0.000	0.000	0.006
685	1.10	1.00	0.00032	11.0	0.00589	0.20	1.18	0.05	1.04	5.40	103.54	0.05	0.00	0.000	0.000	0.006
686	1.00	0.90	0.00032	11.0	0.00589	0.20	1.38	0.05	1.04	5.40	103.54	0.05	0.00	0.000	0.000	0.006
687	0.90	0.80	0.00032	11.0	0.00589	0.20	1.57	0.05	1.04	5.40	103.54	0.05	0.00	0.000	0.000	0.006
688	0.80	0.70	0.00032	11.0	0.00589	0.20	1.77	0.05	1.04	5.40	103.54	0.05	0.00	0.000	0.000	0.006
689	0.70	0.60	0.00032	11.0	0.00589	0.20	1.96	0.05	1.04	5.40	103.54	0.05	0.00	0.000	0.000	0.006
TOT AVG					0.0059	1.96		0.05	1.04	53.98	1035.38	0.05				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR 1/da	BOD2 DECAT 1/da	BOD2 SETT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAT 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da	
680	1.500	7.55	17.26	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.94	1.24	1.24	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
681	1.400	7.55	17.26	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.94	1.21	1.21	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
682	1.300	7.55	17.26	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.94	1.18	1.18	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
683	1.200	7.55	17.26	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.94	1.15	1.15	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
684	1.100	7.55	17.26	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.94	1.14	1.14	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
685	1.000	7.55	17.26	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.94	1.12	1.12	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
686	0.900	7.55	17.26	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.94	1.11	1.11	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
687	0.800	7.55	17.26	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.94	1.10	1.10	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
688	0.700	7.55	17.26	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.94	1.09	1.09	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
689	0.600	7.46	17.24	0.13	1.22	0.00	0.00	0.00	0.00	0.00	0.94	1.19	1.19	0.06	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

AVG 20 DEG C RATE 14.35 0.08 0.10 0.00 0.00 0.00 0.00 0.00 0.00 0.50 0.03 0.10 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	
680	1.500	30.00	0.27	546.51	13.40	5.99	4.78	0.00	4.78	0.00	3.74	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
681	1.400	30.00	0.27	546.51	13.40	6.13	4.21	0.00	4.21	0.00	3.18	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
682	1.300	30.00	0.27	546.51	13.40	6.19	3.76	0.00	3.76	0.00	2.73	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
683	1.200	30.00	0.27	546.51	13.40	6.22	3.40	0.00	3.40	0.00	2.38	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
684	1.100	30.00	0.27	546.51	13.40	6.25	3.12	0.00	3.12	0.00	2.09	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
685	1.000	30.00	0.27	546.51	13.40	6.27	2.89	0.00	2.89	0.00	1.86	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
686	0.900	30.00	0.27	546.51	13.40	6.28	2.71	0.00	2.71	0.00	1.68	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
687	0.800	30.00	0.27	546.51	13.40	6.30	2.57	0.00	2.57	0.00	1.53	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
688	0.700	30.00	0.27	546.51	13.40	6.31	2.46	0.00	2.46	0.00	1.41	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
689	0.600	30.00	2.40	4344.16	1280.75	5.70	3.97	0.00	3.97	0.00	1.60	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
680	1.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
681	1.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
682	1.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
683	1.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
684	1.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
685	1.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
686	0.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
687	0.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
688	0.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
689	0.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT TRIBUTARY 6 WATER QUALITY/HYDRAULIC MODEL FOR: BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET
 REACH NO. 62 TRIBUTARY 6 - TIDAL

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
690	UPR RCH	0.00032	30.00	2.40	4344.16	1280.75	5.70	3.97	0.00	3.97	0.00	1.60	0.10	0.10	0.00	0.00	0.00	0.00

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
690	0.60	0.50	0.00032	11.0	0.00004	26.21	28.17	0.60	12.00	720.00	1200.00	7.20	120.00	0.000	0.061	0.000
691	0.50	0.40	0.00032	11.0	0.00004	26.21	54.38	0.60	12.00	720.00	1200.00	7.20	240.00	0.001	0.122	0.001
692	0.40	0.30	0.00032	11.0	0.00004	26.21	80.58	0.60	12.00	720.00	1200.00	7.20	360.00	0.001	0.184	0.001
693	0.30	0.20	0.00032	11.0	0.00004	26.21	106.79	0.60	12.00	720.00	1200.00	7.20	480.00	0.002	0.245	0.002
694	0.20	0.10	0.00032	11.0	0.00004	26.21	132.99	0.60	12.00	720.00	1200.00	7.20	600.00	0.002	0.306	0.002
695	0.10	0.00	0.00032	11.0	0.00004	26.21	159.20	0.60	12.00	720.00	1200.00	7.20	720.00	0.003	0.367	0.003
TOT AVG					0.0000	157.23				4320.00	7200.00	7.20				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECA	BOD1 SETT	ABOD1 DECA	BOD1 HYDR	BOD2 DECA	BOD2 SETT	ABOD2 DECA	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECA	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECA	NCM DECA	NCM SETT		
690	0.500	7.40	1.41	0.13	0.11	0.00	0.00	0.00	0.00	0.00	0.96	1.23	1.23	0.06	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
691	0.400	7.36	1.42	0.13	0.11	0.00	0.00	0.00	0.00	0.00	0.98	1.30	1.30	0.06	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
692	0.300	7.31	1.43	0.13	0.11	0.00	0.00	0.00	0.00	0.00	1.00	1.38	1.38	0.06	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
693	0.200	7.27	1.43	0.13	0.11	0.00	0.00	0.00	0.00	0.00	1.02	1.48	1.48	0.06	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
694	0.100	7.23	1.44	0.14	0.11	0.00	0.00	0.00	0.00	0.00	1.04	1.60	1.60	0.06	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
695	0.000	7.19	1.45	0.14	0.11	0.00	0.00	0.00	0.00	0.00	1.06	1.74	1.74	0.06	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
AVG 20	DEG C	RATE	1.17	0.08	0.01	0.00	0.00	0.00	0.00	0.00	0.50			0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00	
*	g/m ² /d			**	mg/L/day																							

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL
690	0.500	30.33	2.71	4893.76	1464.16	5.42	4.27	0.00	4.32	0.00	1.65	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.5	0.0	0.
691	0.400	30.66	2.82	5103.28	1534.08	5.19	4.97	0.00	5.08	0.00	1.80	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.1	0.0	0.
692	0.300	30.99	2.90	5234.92	1578.01	4.92	5.91	0.00	6.08	0.00	1.98	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.6	0.0	0.
693	0.200	31.33	2.95	5331.62	1610.29	4.60	7.07	0.00	7.30	0.00	2.20	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.1	0.0	0.
694	0.100	31.66	3.00	5408.36	1635.89	4.24	8.50	0.00	8.78	0.00	2.46	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.7	0.0	0.
695	0.000	31.99	3.03	5472.14	1657.18	3.82	10.22	0.00	10.56	0.00	2.75	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
690	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
691	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.1	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
692	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.6	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
693	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.1	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
694	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	2.7	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

701	0.300	30.00	0.27	539.72	11.76	6.15	4.20	0.00	4.20	0.00	3.20	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
702	0.200	30.00	2.68	4838.68	1445.90	4.94	7.40	0.00	7.40	0.00	2.52	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
698	0.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
699	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
700	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
701	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	
702	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0	

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT TRIBUTARY 10 WATER QUALITY/HYDRAULIC MODEL FOR: BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
703	UPR RCH	0.00031	30.00	2.68	4838.68	1445.90	4.94	7.40	0.00	7.40	0.00	2.52	0.10	0.10	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
703	0.20	0.10	0.00031	8.1	0.00004	31.76	32.76	0.65	13.00	845.00	1300.00	8.45	130.00	0.000	0.060	0.000
704	0.10	0.00	0.00031	8.1	0.00004	31.76	64.52	0.65	13.00	845.00	1300.00	8.45	260.00	0.001	0.121	0.001
TOT AVG					0.0000	63.53		0.65	13.00	1690.00	2600.00	8.45				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE 1/da	BOD1 DECA 1/da	BOD1 SETT 1/da	ABOD1 DECA 1/da	BOD1 HYDR 1/da	BOD2 DECA 1/da	BOD2 SETT 1/da	ABOD2 DECA 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECA 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECA 1/da	NCM DECA 1/da	NCM SETT 1/da	
703	0.100	7.31	1.32	0.13	0.10	0.00	0.00	0.00	0.00	0.00	1.00	1.52	1.52	0.06	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
704	0.000	7.18	1.34	0.14	0.10	0.00	0.00	0.00	0.00	0.00	1.06	1.72	1.72	0.06	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			1.08	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.50			0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00

***** WATER QUALITY CONSTITUENT VALUES *****

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

ELEM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO	BOD1	BOD2	EBOD1	EBOD2	ORG-N	NH3-N	NO3-N	TOT-N	EORG-N	ETOT-N	ORG-P	PO4-P	TOT-P	EORG-P	ETOT-P	CHL A	PERIP	COLI	
703	0.100	30.99	2.97	5358.75	1619.40	4.43	7.96	0.00	8.13	0.00	2.49	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.6	0.0	0.
704	0.000	31.99	3.08	5552.90	1684.17	3.89	9.88	0.00	10.23	0.00	2.76	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.2	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
703	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	1.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
704	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20 DEG C RATE										0.000	0.000	0.000	0.000									0.000	0.000	0.000			

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT REACH NO. 68 TRIBUTARY 8 - UPLAND WATER QUALITY/HYDRAULIC MODEL FOR: BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO	BOD1	BOD2	EBOD1	EBOD2	ORG-N	NH3-N	NO3-N	PO4-P	CHL A	COLI	NCM
715	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	2.20	0.00	2.20	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
715	WSTLD	0.00001	30.00	0.39	753.60	63.30	2.00	25.30	0.00	25.30	0.00	25.30	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
715	0.60	0.50	0.00029	3.0	0.00572	0.20	0.20	0.05	1.01	5.10	100.89	0.05	0.00	0.000	0.000	0.006
716	0.50	0.40	0.00029	3.0	0.00572	0.20	0.40	0.05	1.01	5.10	100.89	0.05	0.00	0.000	0.000	0.006
717	0.40	0.30	0.00029	3.0	0.00572	0.20	0.61	0.05	1.01	5.10	100.89	0.05	0.00	0.000	0.000	0.006
718	0.30	0.20	0.00029	3.0	0.00572	0.20	0.81	0.05	1.01	5.10	100.89	0.05	0.00	0.000	0.000	0.006
719	0.20	0.10	0.00029	3.0	0.00572	0.20	1.01	0.05	1.01	5.10	100.89	0.05	0.00	0.000	0.000	0.006
TOT AVG					0.0057	1.01		0.05	1.01	25.50	504.46	0.05				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT 1/da	ABOD1 1/da	BOD1 HYDR 1/da	BOD2 DECAT 1/da	BOD2 SETT 1/da	ABOD2 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAT 1/da	NH3-N SRCE 1/da	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da	
715	0.500	7.55	17.75	0.13	1.25	0.00	0.00	0.00	0.00	0.00	0.94	1.11	1.11	0.06	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
716	0.400	7.55	17.75	0.13	1.25	0.00	0.00	0.00	0.00	0.00	0.94	1.10	1.10	0.06	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
717	0.300	7.55	17.75	0.13	1.25	0.00	0.00	0.00	0.00	0.00	0.94	1.10	1.10	0.06	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
718	0.200	7.55	17.75	0.13	1.25	0.00	0.00	0.00	0.00	0.00	0.94	1.09	1.09	0.06	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
719	0.100	7.44	17.73	0.13	1.25	0.00	0.00	0.00	0.00	0.00	0.94	1.39	1.39	0.05	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE		14.76	0.08	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.50			0.03	0.20	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO	BOD1	BOD2	EBOD1	EBOD2	ORG-N	NH3-N	NO3-N	TOT-N	EORG-N	ETOT-N	ORG-P	PO4-P	TOT-P	EORG-P	ETOT-P	CHL A	PERIP	COLI	
						mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	g/m ²	#/100mL	
715	0.500	30.00	0.26	527.84	8.90	6.20	2.72	0.00	2.72	0.00	1.57	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
716	0.400	30.00	0.26	527.84	8.90	6.27	2.58	0.00	2.58	0.00	1.45	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
717	0.300	30.00	0.26	527.84	8.90	6.30	2.48	0.00	2.48	0.00	1.35	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
718	0.200	30.00	0.26	527.84	8.90	6.31	2.40	0.00	2.40	0.00	1.28	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
719	0.100	30.00	2.82	5101.66	1533.99	5.09	7.05	0.00	7.05	0.00	2.35	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
715	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
716	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
717	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
718	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
719	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE

0.000 0.000 0.000 0.000

0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT TRIBUTARY 8
 REACH NO. 69 TRIBUTARY 8 - TIDAL

WATER QUALITY/HYDRAULIC MODEL FOR:
 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO	BOD1	BOD2	EBOD1	EBOD2	ORG-N	NH3-N	NO3-N	PO4-P	CHL A	COLI	NCM
							mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	#/100mL	
720	UPR RCH	0.00029	30.00	2.82	5101.66	1533.99	5.09	7.05	0.00	7.05	0.00	2.35	0.10	0.10	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
720	0.10	0.00	0.00029	3.0	0.00006	19.84	20.85	0.50	10.00	500.00	1000.00	5.00	100.00	0.001	0.063	0.001
TOT AVG					0.0001	19.84		0.50	10.00	500.00	1000.00	5.00				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECATY 1/da	BOD1 SETT 1/da	ABOD1 DECATY 1/da	BOD1 HYDR 1/da	BOD2 DECATY 1/da	BOD2 SETT 1/da	ABOD2 DECATY 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECATY 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECATY 1/da	NCM DECATY 1/da	NCM SETT 1/da		
720	0.000	7.18	1.74	0.14	0.13	0.00	0.00	0.00	0.00	0.00	1.06	1.61	1.61	0.06	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			1.40	0.08	0.10	0.00	0.00	0.00	0.00	0.00	0.50			0.03	0.10	0.00	0.00	0.00	0.00	0.00	0.00				0.00	0.00	0.00	
* g/m ² /d			** mg/L/day																									

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL		
720	0.000	31.99	3.30	5949.94	1816.85	4.37	8.17	0.00	15.13	0.00	2.61	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	65.2	0.0	0.	
0.00																										

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
720	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	65.2	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20 DEG C RATE									0.000	0.000	0.000	0.000								0.000	0.000	0.000			

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT MARINA 1
 REACH NO. 71 MARINA 1 - TIDAL
 WATER QUALITY/HYDRAULIC MODEL FOR:
 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
727	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	2.20	0.00	2.20	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
728	WSTLD	0.00000	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
727	0.20	0.10	0.00028	0.0	0.00001	157.05	157.05	1.20	32.00	3840.00	3200.00	38.40	320.00	0.000	0.054	0.000
728	0.10	0.00	0.00028	0.3	0.00001	156.60	313.65	1.20	32.00	3840.00	3200.00	38.40	640.00	0.000	0.109	0.000
TOT						313.65				7680.00	6400.00					
AVG						0.0000		1.20	32.00			38.40				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECATY 1/da	BOD1 SETT 1/da	ABOD1 DECATY 1/da	BOD1 HYDR 1/da	BOD2 DECATY 1/da	BOD2 SETT 1/da	ABOD2 DECATY 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECATY 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECATY 1/da	NCM DECATY 1/da	NCM SETT 1/da
----------	-------------	---------------	-----------------	------------------	----------------	-------------------	----------------	------------------	----------------	-------------------	------------	------------	------------	-----------------	-----------------	-------------------	--------------	-----------------	-----------------	-----------------	------------	---------------	---------------	------------------	-----------------	---------------

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

727	0.100	7.29	0.71	0.13	0.05	0.00	0.00	0.00	0.00	0.00	1.00	1.40	1.40	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
728	0.000	7.17	0.72	0.14	0.06	0.00	0.00	0.00	0.00	0.00	1.06	1.54	1.54	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
AVG 20 DEG C RATE		0.58	0.08	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.50			0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
*	g/m ² /d		**	mg/L/day																											

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL			
727	0.100	30.99	3.41	6140.97	1880.71	4.43	6.16	0.00	6.52	0.00	2.08	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.4	0.0	0.
728	0.000	31.99	3.43	6191.63	1897.59	4.49	7.21	0.00	7.93	0.00	2.25	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.8	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
727	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
728	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20 DEG C RATE										0.000	0.000	0.000	0.000										0.000	0.000	0.000		

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT MARINA 2 WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 73 MARINA02 - TIDAL BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
730	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	2.20	0.00	2.20	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
746	WSTLD	0.00004	30.00	0.39	753.60	63.30	2.00	128.80	0.00	128.80	0.00	128.80	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
730	1.80	1.70	0.00028	0.0	0.00001	157.05	157.05	1.20	32.00	3840.00	3200.00	38.40	320.00	0.000	0.054	0.000
731	1.70	1.60	0.00028	0.0	0.00001	157.05	314.10	1.20	32.00	3840.00	3200.00	38.40	640.00	0.000	0.109	0.000
732	1.60	1.50	0.00028	0.0	0.00001	157.05	471.14	1.20	32.00	3840.00	3200.00	38.40	960.00	0.001	0.164	0.001
733	1.50	1.40	0.00028	0.0	0.00001	157.05	628.19	1.20	32.00	3840.00	3200.00	38.40	1280.00	0.001	0.218	0.001
734	1.40	1.30	0.00028	0.0	0.00001	157.05	785.24	1.20	32.00	3840.00	3200.00	38.40	1600.00	0.001	0.273	0.001
735	1.30	1.20	0.00028	0.0	0.00001	157.05	942.29	1.20	32.00	3840.00	3200.00	38.40	1920.00	0.001	0.327	0.001
736	1.20	1.10	0.00028	0.0	0.00001	157.05	1099.33	1.20	32.00	3840.00	3200.00	38.40	2240.00	0.002	0.382	0.002
737	1.10	1.00	0.00028	0.0	0.00001	157.05	1256.38	1.20	32.00	3840.00	3200.00	38.40	2560.00	0.002	0.437	0.002
738	1.00	0.90	0.00028	0.0	0.00001	157.05	1413.43	1.20	32.00	3840.00	3200.00	38.40	2880.00	0.002	0.491	0.002
739	0.90	0.80	0.00028	0.0	0.00001	157.05	1570.47	1.20	32.00	3840.00	3200.00	38.40	3200.00	0.002	0.546	0.002
740	0.80	0.70	0.00028	0.0	0.00001	157.05	1727.52	1.20	32.00	3840.00	3200.00	38.40	3520.00	0.003	0.600	0.003
741	0.70	0.60	0.00028	0.0	0.00001	157.05	1884.57	1.20	32.00	3840.00	3200.00	38.40	3840.00	0.003	0.655	0.003

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

742	0.60	0.50	0.00028	0.0	0.00001	157.05	2041.62	1.20	32.00	3840.00	3200.00	38.40	4160.00	0.003	0.709	0.003
743	0.50	0.40	0.00028	0.0	0.00001	157.05	2198.67	1.20	32.00	3840.00	3200.00	38.40	4480.00	0.003	0.764	0.003
744	0.40	0.30	0.00028	0.0	0.00001	157.05	2355.71	1.20	32.00	3840.00	3200.00	38.40	4800.00	0.004	0.819	0.004
745	0.30	0.20	0.00028	0.0	0.00001	157.05	2512.76	1.20	32.00	3840.00	3200.00	38.40	5120.00	0.004	0.873	0.004
746	0.20	0.10	0.00032	11.7	0.00001	138.63	2651.39	1.20	32.00	3840.00	3200.00	38.40	5440.00	0.004	0.928	0.004
747	0.10	0.00	0.00032	11.7	0.00001	138.63	2790.02	1.20	32.00	3840.00	3200.00	38.40	5760.00	0.004	0.982	0.004
TOT						2790.02				69120.01	57600.00					
AVG					0.0000			1.20	32.00			38.40				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECAT	BOD1 SETT	ABOD1 DECAT	BOD1 HYDR	BOD2 DECAT	BOD2 SETT	ABOD2 DECAT	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECAT	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECAT	NCM DECAT	NCM SETT
		mg/L	1/da	1/da	1/da	1/da	1/da	1/da	1/da	1/da	*	*	*	1/da	1/da	1/da	*	1/da	1/da	1/da	*	**	**	1/da	1/da	1/da
730	1.700	7.41	0.70	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.95	1.11	1.11	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
731	1.600	7.39	0.70	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.95	1.12	1.12	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
732	1.500	7.38	0.70	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.96	1.13	1.13	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
733	1.400	7.36	0.71	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.97	1.14	1.14	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
734	1.300	7.35	0.71	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.97	1.16	1.16	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
735	1.200	7.33	0.71	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.98	1.17	1.17	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
736	1.100	7.32	0.71	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.99	1.19	1.19	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
737	1.000	7.31	0.71	0.13	0.05	0.00	0.00	0.00	0.00	0.00	0.99	1.21	1.21	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
738	0.900	7.29	0.71	0.13	0.05	0.00	0.00	0.00	0.00	0.00	1.00	1.23	1.23	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
739	0.800	7.28	0.71	0.13	0.05	0.00	0.00	0.00	0.00	0.00	1.01	1.25	1.25	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
740	0.700	7.26	0.72	0.13	0.05	0.00	0.00	0.00	0.00	0.00	1.01	1.28	1.28	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
741	0.600	7.25	0.72	0.13	0.05	0.00	0.00	0.00	0.00	0.00	1.02	1.31	1.31	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
742	0.500	7.24	0.72	0.14	0.05	0.00	0.00	0.00	0.00	0.00	1.03	1.34	1.34	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
743	0.400	7.22	0.72	0.14	0.05	0.00	0.00	0.00	0.00	0.00	1.03	1.37	1.37	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
744	0.300	7.21	0.72	0.14	0.05	0.00	0.00	0.00	0.00	0.00	1.04	1.41	1.41	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
745	0.200	7.20	0.72	0.14	0.06	0.00	0.00	0.00	0.00	0.00	1.05	1.46	1.46	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
746	0.100	7.18	0.72	0.14	0.06	0.00	0.00	0.00	0.00	0.00	1.06	1.51	1.51	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
747	0.000	7.17	0.72	0.14	0.06	0.00	0.00	0.00	0.00	0.00	1.06	1.56	1.56	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.58	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.50			0.03	0.00	0.00	0.00	0.00	0.00	0.00				0.00	0.00	0.00
*	g/m ² /d		**		mg/L/day																					

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL
730	1.700	30.11	3.34	6018.96	1840.05	5.50	2.53	0.00	2.57	0.00	1.18	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.4	0.0	0.
731	1.600	30.22	3.36	6068.51	1856.57	5.46	2.59	0.00	2.67	0.00	1.20	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.8	0.0	0.
732	1.500	30.33	3.38	6098.50	1866.57	5.41	2.66	0.00	2.78	0.00	1.23	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.1	0.0	0.
733	1.400	30.44	3.39	6120.03	1873.75	5.36	2.76	0.00	2.92	0.00	1.26	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.5	0.0	0.
734	1.300	30.55	3.40	6136.84	1879.35	5.30	2.87	0.00	3.07	0.00	1.29	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.9	0.0	0.
735	1.200	30.66	3.41	6150.63	1883.95	5.23	3.00	0.00	3.24	0.00	1.33	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.3	0.0	0.
736	1.100	30.77	3.42	6162.33	1887.85	5.16	3.16	0.00	3.44	0.00	1.37	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.6	0.0	0.
737	1.000	30.88	3.42	6172.49	1891.24	5.09	3.34	0.00	3.66	0.00	1.42	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.0	0.0	0.
738	0.900	30.99	3.43	6181.47	1894.23	5.01	3.55	0.00	3.91	0.00	1.47	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.4	0.0	0.
739	0.800	31.11	3.43	6189.52	1896.91	4.93	3.80	0.00	4.20	0.00	1.53	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.8	0.0	0.

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

740	0.700	31.22	3.44	6196.81	1899.34	4.85	4.08	0.00	4.52	0.00	1.60	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.2	0.0	0.
741	0.600	31.33	3.44	6203.48	1901.57	4.77	4.40	0.00	4.88	0.00	1.67	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.5	0.0	0.
742	0.500	31.44	3.44	6209.62	1903.61	4.69	4.76	0.00	5.28	0.00	1.74	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.9	0.0	0.
743	0.400	31.55	3.45	6215.31	1905.51	4.63	5.17	0.00	5.74	0.00	1.83	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.3	0.0	0.
744	0.300	31.66	3.45	6220.62	1907.28	4.59	5.64	0.00	6.25	0.00	1.92	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.7	0.0	0.
745	0.200	31.77	3.45	6225.58	1908.93	4.57	6.17	0.00	6.82	0.00	2.02	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.0	0.0	0.
746	0.100	31.88	3.46	6230.25	1910.49	4.59	6.77	0.00	7.45	0.00	2.13	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.4	0.0	0.
747	0.000	31.99	3.46	6235.22	1912.15	4.66	7.43	0.00	8.15	0.00	2.23	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.8	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYTO											PERI										
				N LIT	N LIT	N LIT	P LIM	N&P LIM	TOT LIM	GROW 1/da	RESP 1/da	DEATH 1/da	SETT 1/da	P/R RATIO	PHYTO µg/L	N LIT	N LIT	N LIT	P LIM	N&P LIM	SPC LIM	TOT LIM	GROW 1/da	RESP 1/da	DEATH 1/da
730	1.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
731	1.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
732	1.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
733	1.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
734	1.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
735	1.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
736	1.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
737	1.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
738	0.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
739	0.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
740	0.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
741	0.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
742	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
743	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
744	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
745	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
746	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
747	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

20 DEG C RATE 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT BAYOU PAQUET WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 75 HWY 190 (DD13-PAQUET HEADWATERS) BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
762	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	2.20	0.00	2.20	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
762	WSTLD	0.00002	30.00	0.39	753.60	63.30	2.00	27.60	0.00	27.60	0.00	27.60	0.00	0.00	0.00	0.00	0.00	0.00
763	WSTLD	0.00001	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00	0.00
767	WSTLD	0.00010	30.00	0.39	753.60	63.30	2.00	69.00	0.00	69.00	0.00	69.00	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST	ENDING DIST	FLOW	PCT EFF	ADVCTV VELO	TRAVEL TIME	CUM TIME	DEPTH	WIDTH	VOLUME	SURFACE AREA	X-SECT AREA	TIDAL PRISM	TIDAL VELO	DISPRSN	MEAN VELO
----------	------------	-------------	------	---------	-------------	-------------	----------	-------	-------	--------	--------------	-------------	-------------	------------	---------	-----------

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

	km	km	m ³ /s	m/s	days	days	m	m	m ³	m ²	m ²	m ³	m/s	m ² /s	m/s	
762	8.60	8.50	0.00030	7.2	0.00581	0.20	0.20	0.05	1.02	5.25	102.24	0.05	0.00	0.000	0.000	0.006
763	8.50	8.40	0.00031	9.5	0.00586	0.20	0.40	0.05	1.03	5.34	103.02	0.05	0.00	0.000	0.000	0.006
764	8.40	8.30	0.00031	9.5	0.00586	0.20	0.59	0.05	1.03	5.34	103.02	0.05	0.00	0.000	0.000	0.006
765	8.30	8.20	0.00031	9.5	0.00586	0.20	0.79	0.05	1.03	5.34	103.02	0.05	0.00	0.000	0.000	0.006
766	8.20	8.10	0.00031	9.5	0.00586	0.20	0.99	0.05	1.03	5.34	103.02	0.05	0.00	0.000	0.000	0.006
767	8.10	8.00	0.00041	31.5	0.00644	0.18	1.17	0.06	1.12	6.42	112.02	0.06	0.00	0.000	0.000	0.006
768	8.00	7.90	0.00041	31.5	0.00644	0.18	1.35	0.06	1.12	6.42	112.02	0.06	0.00	0.000	0.000	0.006
769	7.90	7.80	0.00041	31.5	0.00644	0.18	1.53	0.06	1.12	6.42	112.02	0.06	0.00	0.000	0.000	0.006
770	7.80	7.70	0.00041	31.5	0.00644	0.18	1.71	0.06	1.12	6.42	112.02	0.06	0.00	0.000	0.000	0.006
771	7.70	7.60	0.00041	31.5	0.00644	0.18	1.89	0.06	1.12	6.42	112.02	0.06	0.00	0.000	0.000	0.006
772	7.60	7.50	0.00041	31.5	0.00644	0.18	2.07	0.06	1.12	6.42	112.02	0.06	0.00	0.000	0.000	0.006
773	7.50	7.40	0.00041	31.5	0.00644	0.18	2.25	0.06	1.12	6.42	112.02	0.06	0.00	0.000	0.000	0.006
774	7.40	7.30	0.00041	31.5	0.00644	0.18	2.43	0.06	1.12	6.42	112.02	0.06	0.00	0.000	0.000	0.006
775	7.30	7.20	0.00041	31.5	0.00644	0.18	2.61	0.06	1.12	6.42	112.02	0.06	0.00	0.000	0.000	0.006
TOT						2.61				84.37	1522.46					
AVG					0.0062			0.06	1.09					0.06		

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECA	BOD1 SETT	ABOD1 DECA	BOD1 HYDR	BOD2 DECA	BOD2 SETT	ABOD2 DECA	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECA	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECA	NCM DECA	NCM SETT	
		mg/L	1/da	1/da	1/da	1/da	1/da	1/da	1/da	1/da	*	*	*	1/da	*	**	**	1/da	1/da	1/da							
762	8.500	7.53	17.54	0.13	1.24	0.00	0.00	0.00	0.00	0.00	0.95	1.18	1.18	0.06	1.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
763	8.400	7.51	17.44	0.13	1.23	0.00	0.00	0.00	0.00	0.00	0.96	1.25	1.25	0.06	1.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
764	8.300	7.49	17.49	0.13	1.24	0.00	0.00	0.00	0.00	0.00	0.97	1.22	1.22	0.06	1.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
765	8.200	7.47	17.53	0.13	1.24	0.00	0.00	0.00	0.00	0.00	0.97	1.21	1.21	0.06	1.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
766	8.100	7.45	17.58	0.13	1.24	0.00	0.00	0.00	0.00	0.00	0.98	1.20	1.20	0.06	1.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
767	8.000	7.43	16.11	0.13	1.13	0.00	0.00	0.00	0.00	0.00	0.99	2.03	2.03	0.06	1.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
768	7.900	7.41	16.16	0.13	1.13	0.00	0.00	0.00	0.00	0.00	1.00	1.88	1.88	0.06	1.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
769	7.800	7.39	16.20	0.13	1.14	0.00	0.00	0.00	0.00	0.00	1.01	1.75	1.75	0.06	1.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
770	7.700	7.38	16.24	0.13	1.14	0.00	0.00	0.00	0.00	0.00	1.02	1.64	1.64	0.06	1.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
771	7.600	7.36	16.28	0.14	1.15	0.00	0.00	0.00	0.00	0.00	1.03	1.56	1.56	0.06	1.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
772	7.500	7.34	16.32	0.14	1.15	0.00	0.00	0.00	0.00	0.00	1.04	1.50	1.50	0.06	1.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
773	7.400	7.32	16.36	0.14	1.15	0.00	0.00	0.00	0.00	0.00	1.05	1.44	1.44	0.06	1.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
774	7.300	7.30	16.40	0.14	1.16	0.00	0.00	0.00	0.00	0.00	1.06	1.40	1.40	0.06	1.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
775	7.200	7.28	16.44	0.14	1.16	0.00	0.00	0.00	0.00	0.00	1.07	1.37	1.37	0.06	1.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20	DEG C	RATE	13.64	0.08	0.06	0.00	0.00	0.00	0.00	0.00	0.50			0.03	0.06	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	
*	g/m ² /d			**	mg/L/day																						

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO	BOD1	BOD2	EBOD1	EBOD2	ORG-N	NH3-N	NO3-N	TOT-N	EORG-N	ETOT-N	ORG-P	PO4-P	TOT-P	EORG-P	ETOT-P	CHL A	PERIP	COLI
						mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	g/m ²	#/100mL
762	8.500	30.15	0.27	537.61	11.26	6.08	3.61	0.00	3.61	0.00	2.52	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.
763	8.400	30.30	0.27	543.00	12.56	6.06	4.58	0.00	4.58	0.00	3.54	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.
764	8.300	30.45	0.27	543.00	12.56	6.09	4.05	0.00	4.05	0.00	3.02	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.
765	8.200	30.59	0.27	543.00	12.56	6.10	3.62	0.00	3.62	0.00	2.61	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.
766	8.100	30.74	0.27	543.00	12.56	6.11	3.29	0.00	3.29	0.00	2.28	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.
767	8.000	30.89	0.30	594.30	24.92	5.06	16.08	0.00	16.08	0.00	15.43	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.
768	7.900	31.04	0.30	594.30	24.92	5.19	13.44	0.00	13.44	0.00	12.87	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

769	7.800	31.19	0.30	594.30	24.92	5.33	11.29	0.00	11.29	0.00	10.75	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																								
770	7.700	31.34	0.30	594.30	24.92	5.45	9.52	0.00	9.52	0.00	9.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																								
771	7.600	31.49	0.30	594.30	24.92	5.55	8.09	0.00	8.09	0.00	7.56	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																								
772	7.500	31.63	0.30	594.30	24.92	5.63	6.91	0.00	6.91	0.00	6.36	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																								
773	7.400	31.78	0.30	594.30	24.92	5.69	5.95	0.00	5.95	0.00	5.38	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																								
774	7.300	31.93	0.30	594.30	24.92	5.73	5.17	0.00	5.17	0.00	4.57	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																								
775	7.200	32.08	0.30	594.30	24.92	5.76	4.54	0.00	4.54	0.00	3.91	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																								

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT					PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI					PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²	
				N PREF	LIT LIM	N LIM	P LIM	N&P LIM								N PREF	LIT LIM	N LIM	P LIM	N&P LIM							
762	8.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
763	8.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
764	8.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
765	8.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
766	8.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
767	8.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
768	7.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
769	7.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
770	7.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
771	7.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
772	7.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
773	7.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
774	7.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
775	7.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT BAYOU PAQUET WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 76 PAQUET FROM HWY 190 TO DD16 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
776	UPR RCH	0.00041	32.08	0.30	594.30	24.92	5.76	4.54	0.00	4.54	0.00	3.91	0.10	0.10	0.00	0.00	0.00	0.00
776	WSTLD	0.00283	33.80	0.26	520.90	7.23	6.53	2.16	0.00	2.16	0.00	0.95	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
776	7.20	7.10	0.00325	91.3	0.02636	0.04	2.65	0.08	1.56	12.31	156.28	0.12	0.00	0.000	0.000	0.026
777	7.10	7.00	0.00325	91.3	0.02636	0.04	2.69	0.08	1.56	12.31	156.28	0.12	0.00	0.000	0.000	0.026
778	7.00	6.90	0.00325	91.3	0.02636	0.04	2.74	0.08	1.56	12.31	156.28	0.12	0.00	0.000	0.000	0.026
779	6.90	6.80	0.00325	91.3	0.02636	0.04	2.78	0.08	1.56	12.31	156.28	0.12	0.00	0.000	0.000	0.026
780	6.80	6.70	0.00325	91.3	0.02636	0.04	2.83	0.08	1.56	12.31	156.28	0.12	0.00	0.000	0.000	0.026
781	6.70	6.60	0.00325	91.3	0.02636	0.04	2.87	0.08	1.56	12.31	156.28	0.12	0.00	0.000	0.000	0.026

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

780	6.700	32.08	0.27	530.25	9.48	6.32	2.44	0.00	2.44	0.00	1.28	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																								
781	6.600	32.08	0.27	530.25	9.48	6.31	2.44	0.00	2.44	0.00	1.28	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																								
782	6.500	32.08	0.27	530.25	9.48	6.31	2.44	0.00	2.44	0.00	1.27	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																								
783	6.400	32.08	0.27	530.25	9.48	6.31	2.43	0.00	2.43	0.00	1.26	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																								
784	6.300	32.08	0.27	530.25	9.48	6.31	2.43	0.00	2.43	0.00	1.25	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																								
785	6.200	32.08	0.27	530.25	9.48	6.31	2.43	0.00	2.43	0.00	1.25	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																								
786	6.100	32.08	0.27	530.25	9.48	6.31	2.42	0.00	2.42	0.00	1.24	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																								
787	6.000	32.08	0.27	530.25	9.48	6.31	2.42	0.00	2.42	0.00	1.24	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																								
788	5.900	32.08	0.27	530.25	9.48	6.31	2.42	0.00	2.42	0.00	1.23	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																								
789	5.800	32.08	0.27	530.25	9.48	6.31	2.42	0.00	2.42	0.00	1.22	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																								
790	5.700	32.08	0.27	530.25	9.48	6.31	2.41	0.00	2.41	0.00	1.22	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																								
791	5.600	32.08	0.27	530.25	9.48	6.31	2.41	0.00	2.41	0.00	1.21	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																								
792	5.500	32.08	0.27	530.25	9.48	6.31	2.41	0.00	2.41	0.00	1.21	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																								
793	5.400	32.08	0.27	530.25	9.48	6.31	2.41	0.00	2.41	0.00	1.20	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																								
794	5.300	32.08	0.27	530.25	9.48	6.31	2.40	0.00	2.40	0.00	1.20	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																								
795	5.200	32.08	0.27	530.25	9.48	6.31	2.40	0.00	2.40	0.00	1.19	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																								
796	5.100	32.08	0.27	530.25	9.48	6.31	2.40	0.00	2.40	0.00	1.19	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00																								

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
776	7.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
777	7.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
778	6.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
779	6.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
780	6.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
781	6.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
782	6.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
783	6.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
784	6.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
785	6.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
786	6.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
787	6.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
788	5.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
789	5.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
790	5.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
791	5.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
792	5.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
793	5.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
794	5.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
795	5.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
796	5.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

FINAL REPORT BAYOU PAQUET
REACH NO. 78 PAQUET FROM RKM 5.1 TO DD17

WATER QUALITY/HYDRAULIC MODEL FOR:
BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A ug/L	COLI #/100mL	NCM
806	UPR RCH	0.00325	32.08	0.27	530.25	9.48	6.31	2.40	0.00	2.40	0.00	1.19	0.10	0.10	0.00	0.00	0.00	0.00
806	TRIB	0.00029	32.08	0.26	523.02	7.74	5.97	2.12	0.00	2.12	0.00	0.98	0.10	0.10	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
806	5.10	5.00	0.00353	84.0	0.02713	0.04	3.57	0.08	1.60	13.02	160.28	0.13	0.00	0.000	0.000	0.027
807	5.00	4.90	0.00353	84.0	0.02713	0.04	3.61	0.08	1.60	13.02	160.28	0.13	0.00	0.000	0.000	0.027
808	4.90	4.80	0.00353	84.0	0.02713	0.04	3.66	0.08	1.60	13.02	160.28	0.13	0.00	0.000	0.000	0.027
809	4.80	4.70	0.00353	84.0	0.02713	0.04	3.70	0.08	1.60	13.02	160.28	0.13	0.00	0.000	0.000	0.027
810	4.70	4.60	0.00353	84.0	0.02713	0.04	3.74	0.08	1.60	13.02	160.28	0.13	0.00	0.000	0.000	0.027
811	4.60	4.50	0.00353	84.0	0.02713	0.04	3.79	0.08	1.60	13.02	160.28	0.13	0.00	0.000	0.000	0.027
812	4.50	4.40	0.00353	84.0	0.02713	0.04	3.83	0.08	1.60	13.02	160.28	0.13	0.00	0.000	0.000	0.027
813	4.40	4.30	0.00353	84.0	0.02713	0.04	3.87	0.08	1.60	13.02	160.28	0.13	0.00	0.000	0.000	0.027
814	4.30	4.20	0.00353	84.0	0.02713	0.04	3.91	0.08	1.60	13.02	160.28	0.13	0.00	0.000	0.000	0.027
815	4.20	4.10	0.00353	84.0	0.02713	0.04	3.96	0.08	1.60	13.02	160.28	0.13	0.00	0.000	0.000	0.027
816	4.10	4.00	0.00353	84.0	0.02713	0.04	4.00	0.08	1.60	13.02	160.28	0.13	0.00	0.000	0.000	0.027
817	4.00	3.90	0.00353	84.0	0.02713	0.04	4.04	0.08	1.60	13.02	160.28	0.13	0.00	0.000	0.000	0.027
818	3.90	3.80	0.00353	84.0	0.02713	0.04	4.08	0.08	1.60	13.02	160.28	0.13	0.00	0.000	0.000	0.027
TOT AVG					0.0271	0.55		0.08	1.60	169.22	2083.67	0.13				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECATY 1/da	BOD1 SETT DECATY 1/da	ABOD1 DECATY 1/da	BOD1 HYDR DECATY 1/da	BOD2 DECATY 1/da	BOD2 SETT DECATY 1/da	ABOD2 DECATY 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR	ORG-N SETT DECATY 1/da	NH3-N DECATY 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECATY 1/da	NCM DECATY 1/da	NCM SETT 1/da	
806	5.000	7.28	16.14	0.14	0.82	0.00	0.00	0.00	0.00	0.00	1.07	1.23	1.23	0.07	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
807	4.900	7.28	16.14	0.14	0.82	0.00	0.00	0.00	0.00	0.00	1.07	1.23	1.23	0.07	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
808	4.800	7.28	16.14	0.14	0.82	0.00	0.00	0.00	0.00	0.00	1.07	1.23	1.23	0.07	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
809	4.700	7.28	16.14	0.14	0.82	0.00	0.00	0.00	0.00	0.00	1.07	1.23	1.23	0.07	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
810	4.600	7.28	16.14	0.14	0.82	0.00	0.00	0.00	0.00	0.00	1.07	1.23	1.23	0.07	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
811	4.500	7.28	16.14	0.14	0.82	0.00	0.00	0.00	0.00	0.00	1.07	1.23	1.23	0.07	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
812	4.400	7.28	16.14	0.14	0.82	0.00	0.00	0.00	0.00	0.00	1.07	1.23	1.23	0.07	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
813	4.300	7.28	16.14	0.14	0.82	0.00	0.00	0.00	0.00	0.00	1.07	1.23	1.23	0.07	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
814	4.200	7.28	16.14	0.14	0.82	0.00	0.00	0.00	0.00	0.00	1.07	1.23	1.23	0.07	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
815	4.100	7.28	16.14	0.14	0.82	0.00	0.00	0.00	0.00	0.00	1.07	1.23	1.23	0.07	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
816	4.000	7.28	16.14	0.14	0.82	0.00	0.00	0.00	0.00	0.00	1.07	1.23	1.23	0.07	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
817	3.900	7.28	16.14	0.14	0.82	0.00	0.00	0.00	0.00	0.00	1.07	1.23	1.23	0.07	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
818	3.800	7.28	16.14	0.14	0.82	0.00	0.00	0.00	0.00	0.00	1.07	1.23	1.23	0.07	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE		12.95	0.08	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.50			0.03	0.05	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM	ENDING	TEMP	SALN	COND	CL	DO	BOD1	BOD2	EBOD1	EBOD2	ORG-N	NH3-N	NO3-N	TOT-N	EORG-N	ETOT-N	ORG-P	PO4-P	TOT-P	EORG-P	ETOT-P	CHL A	PERIP	COLI
----------	--------	------	------	------	----	----	------	------	-------	-------	-------	-------	-------	-------	--------	--------	-------	-------	-------	--------	--------	-------	-------	------

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
836	3.80	3.70	0.00576	85.3	0.03203	0.04	4.12	0.10	1.86	17.98	185.62	0.18	0.00	0.000	0.000	0.032
837	3.70	3.60	0.00576	85.3	0.03203	0.04	4.16	0.10	1.86	17.98	185.62	0.18	0.00	0.000	0.000	0.032
838	3.60	3.50	0.00576	85.3	0.03203	0.04	4.19	0.10	1.86	17.98	185.62	0.18	0.00	0.000	0.000	0.032
839	3.50	3.40	0.00576	85.3	0.03203	0.04	4.23	0.10	1.86	17.98	185.62	0.18	0.00	0.000	0.000	0.032
TOT AVG					0.0320	0.14			0.10	71.91	742.48	0.18				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECA	BOD1 SETT	ABOD1 DECA	BOD1 HYDR	BOD2 DECA	BOD2 SETT	ABOD2 DECA	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECA	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECA	NCM DECA	NCM SETT			
836	3.700	7.28	14.43	0.14	0.69	0.00	0.00	0.00	0.00	0.00	1.07	1.72	1.72	0.06	0.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
837	3.600	7.28	14.43	0.14	0.69	0.00	0.00	0.00	0.00	0.00	1.07	1.70	1.70	0.06	0.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
838	3.500	7.28	14.43	0.14	0.69	0.00	0.00	0.00	0.00	0.00	1.07	1.69	1.69	0.06	0.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
839	3.400	7.27	14.43	0.14	0.69	0.00	0.00	0.00	0.00	0.00	1.07	1.94	1.94	0.06	0.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20	DEG C RATE	11.58	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.50			0.03	0.13	0.00	0.00	0.00	0.00	0.00	0.00				0.00	0.00	0.00		

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL		
836	3.700	32.08	0.33	642.39	20.13	5.70	9.78	0.00	10.17	0.00	1.07	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.7	0.0	0.
837	3.600	32.08	0.33	642.39	20.13	5.79	9.54	0.00	10.32	0.00	1.07	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.3	0.0	0.
838	3.500	32.08	0.33	642.39	20.13	5.86	9.30	0.00	10.47	0.00	1.07	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.0	0.0	0.
839	3.400	32.08	0.72	1352.56	260.21	4.43	13.00	0.00	14.56	0.00	2.68	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.6	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
836	3.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.7	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
837	3.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	7.3	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
838	3.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	11.0	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
839	3.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.6	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20	DEG C RATE								0.000	0.000	0.000	0.000									0.000	0.000	0.000		

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT BAYOU PAQUET
 REACH NO. 81 PAQUET TIDAL REACH TO BP02

WATER QUALITY/HYDRAULIC MODEL FOR:
 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
840	UPR RCH	0.00576	32.08	0.72	1352.56	260.21	4.43	13.00	0.00	14.56	0.00	2.68	0.10	0.10	0.00	14.60	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
840	3.40	3.30	0.00576	85.3	0.00028	4.18	8.41	1.10	18.90	2079.00	1890.00	20.79	189.00	0.000	0.067	0.000
841	3.30	3.20	0.00576	85.3	0.00028	4.18	12.58	1.10	18.90	2079.00	1890.00	20.79	378.00	0.001	0.114	0.001
842	3.20	3.10	0.00576	85.3	0.00028	4.18	16.76	1.10	18.90	2079.00	1890.00	20.79	567.00	0.001	0.167	0.001
843	3.10	3.00	0.00576	85.3	0.00028	4.18	20.94	1.10	18.90	2079.00	1890.00	20.79	756.00	0.001	0.221	0.001
844	3.00	2.90	0.00576	85.3	0.00028	4.18	25.12	1.10	18.90	2079.00	1890.00	20.79	945.00	0.001	0.276	0.001
845	2.90	2.80	0.00576	85.3	0.00028	4.18	29.30	1.10	18.90	2079.00	1890.00	20.79	1134.00	0.002	0.331	0.002
846	2.80	2.70	0.00576	85.3	0.00028	4.18	33.47	1.10	18.90	2079.00	1890.00	20.79	1323.00	0.002	0.386	0.002
847	2.70	2.60	0.00576	85.3	0.00028	4.18	37.65	1.10	18.90	2079.00	1890.00	20.79	1512.00	0.002	0.441	0.002
848	2.60	2.50	0.00576	85.3	0.00028	4.18	41.83	1.10	18.90	2079.00	1890.00	20.79	1701.00	0.002	0.496	0.002
849	2.50	2.40	0.00576	85.3	0.00028	4.18	46.01	1.10	18.90	2079.00	1890.00	20.79	1890.00	0.003	0.551	0.003
TOT						41.78				20790.00	18900.00					
AVG				0.0003				1.10	18.90			20.79				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECAT	BOD1 SETT	ABOD1 DECAT	BOD1 HYDR	BOD2 DECAT	BOD2 SETT	ABOD2 DECAT	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECAT	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECAT	NCM DECAT	NCM SETT	
840	3.300	7.25	0.79	0.14	0.06	0.00	0.00	0.00	0.00	0.00	0.68	1.77	1.77	0.05	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
841	3.200	7.24	0.79	0.14	0.06	0.00	0.00	0.00	0.00	0.00	0.68	1.86	1.86	0.05	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
842	3.100	7.24	0.79	0.13	0.06	0.00	0.00	0.00	0.00	0.00	0.68	1.90	1.90	0.04	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
843	3.000	7.23	0.79	0.13	0.06	0.00	0.00	0.00	0.00	0.00	0.68	1.93	1.93	0.04	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
844	2.900	7.23	0.79	0.13	0.06	0.00	0.00	0.00	0.00	0.00	0.68	1.93	1.93	0.03	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
845	2.800	7.22	0.79	0.13	0.06	0.00	0.00	0.00	0.00	0.00	0.68	1.92	1.92	0.03	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
846	2.700	7.22	0.79	0.13	0.06	0.00	0.00	0.00	0.00	0.00	0.68	1.90	1.90	0.04	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
847	2.600	7.21	0.79	0.13	0.06	0.00	0.00	0.00	0.00	0.00	0.68	1.88	1.88	0.04	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
848	2.500	7.21	0.79	0.14	0.06	0.00	0.00	0.00	0.00	0.00	0.68	1.84	1.84	0.04	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
849	2.400	7.20	0.79	0.14	0.06	0.00	0.00	0.00	0.00	0.00	0.68	1.80	1.80	0.05	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
AVG 20	DEG C	RATE	0.64	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.32			0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	
*	g/m²/d		**	mg/L/day																							

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL
840	3.300	32.08	1.05	1937.40	457.91	2.69	16.33	0.00	17.89	0.00	4.04	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.6	0.0	0.
841	3.200	32.08	1.27	2332.12	591.35	2.14	17.63	0.00	19.19	0.00	4.65	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.6	0.0	0.
842	3.100	32.08	1.46	2664.32	703.65	1.93	18.31	0.00	19.87	0.00	5.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.6	0.0	0.
843	3.000	32.08	1.62	2952.46	801.06	1.86	18.63	0.00	20.19	0.00	5.19	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.6	0.0	0.

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

844	2.900	32.08	1.76	3209.71	888.02	1.84	18.70	0.00	20.26	0.00	5.28	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.6	0.0	0.
845	2.800	32.08	1.90	3444.03	967.23	1.84	18.58	0.00	20.14	0.00	5.27	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.6	0.0	0.
846	2.700	32.08	2.02	3660.54	1040.42	1.86	18.30	0.00	19.86	0.00	5.21	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.6	0.0	0.
847	2.600	32.08	2.13	3862.72	1108.77	1.90	17.89	0.00	19.45	0.00	5.10	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.6	0.0	0.
848	2.500	32.08	2.24	4053.06	1173.12	1.95	17.36	0.00	18.92	0.00	4.94	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.6	0.0	0.
849	2.400	32.08	2.34	4233.41	1234.09	2.02	16.73	0.00	18.29	0.00	4.76	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.6	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
840	3.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
841	3.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
842	3.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
843	3.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
844	2.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
845	2.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
846	2.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
847	2.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
848	2.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
849	2.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT BAYOU PAQUET WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 82 PAQUET FROM BP02 TO BP03 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
850	UPR RCH	0.00576	32.08	2.34	4233.41	1234.09	2.02	16.73	0.00	18.29	0.00	4.76	0.10	0.10	0.00	14.60	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRS N m²/s	MEAN VELO m/s
850	2.40	2.30	0.00576	85.3	0.00031	3.68	49.68	1.00	18.29	1829.00	1829.00	18.29	2072.90	0.003	0.635	0.003
851	2.30	2.20	0.00576	85.3	0.00031	3.68	53.36	1.00	18.29	1829.00	1829.00	18.29	2255.80	0.003	0.691	0.003
852	2.20	2.10	0.00576	85.3	0.00031	3.68	57.04	1.00	18.29	1829.00	1829.00	18.29	2438.70	0.004	0.747	0.004
853	2.10	2.00	0.00576	85.3	0.00031	3.68	60.71	1.00	18.29	1829.00	1829.00	18.29	2621.60	0.004	0.804	0.004
854	2.00	1.90	0.00576	85.3	0.00031	3.68	64.39	1.00	18.29	1829.00	1829.00	18.29	2804.50	0.004	0.860	0.004
855	1.90	1.80	0.00576	85.3	0.00031	3.68	68.06	1.00	18.29	1829.00	1829.00	18.29	2987.40	0.005	0.916	0.005
856	1.80	1.70	0.00576	85.3	0.00031	3.68	71.74	1.00	18.29	1829.00	1829.00	18.29	3170.30	0.005	0.972	0.005
857	1.70	1.60	0.00576	85.3	0.00031	3.68	75.41	1.00	18.29	1829.00	1829.00	18.29	3353.20	0.005	1.028	0.005
TOT AVG					0.0003	29.41		1.00	18.29	14632.00	14632.00	18.29				

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT DECAT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR 1/da	BOD2 DECAT 1/da	BOD2 SETT DECAT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT DECAT 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da	
850	2.300	7.20	1.00	0.14	0.07	0.00	0.00	0.00	0.00	0.00	1.63	2.69	2.69	0.05	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
851	2.200	7.20	1.00	0.14	0.07	0.00	0.00	0.00	0.00	0.00	1.63	2.65	2.65	0.05	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
852	2.100	7.19	1.00	0.14	0.07	0.00	0.00	0.00	0.00	0.00	1.63	2.61	2.61	0.05	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
853	2.000	7.19	1.00	0.14	0.07	0.00	0.00	0.00	0.00	0.00	1.63	2.59	2.59	0.05	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
854	1.900	7.18	1.00	0.14	0.07	0.00	0.00	0.00	0.00	0.00	1.63	2.56	2.56	0.05	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
855	1.800	7.18	1.00	0.14	0.07	0.00	0.00	0.00	0.00	0.00	1.63	2.54	2.54	0.05	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
856	1.700	7.18	1.00	0.14	0.07	0.00	0.00	0.00	0.00	0.00	1.63	2.53	2.53	0.05	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
857	1.600	7.18	1.00	0.14	0.07	0.00	0.00	0.00	0.00	0.00	1.63	2.51	2.51	0.05	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20	DEG C RATE		0.80	0.08	0.01	0.00	0.00	0.00	0.00	0.00	0.76			0.03	0.01	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00
*	g/m ² /d		**	mg/L/day																						

***** WATER QUALITY CONSTITUENT VALUES

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL
850	2.300	32.08	2.44	4412.61	1294.66	2.11	15.97	0.00	17.53	0.00	4.53	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.6	0.0	0.0
851	2.200	32.08	2.54	4591.62	1355.18	2.20	15.33	0.00	16.89	0.00	4.35	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.6	0.0	0.0
852	2.100	32.08	2.63	4764.48	1413.61	2.29	14.82	0.00	16.38	0.00	4.21	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.6	0.0	0.0
853	2.000	32.08	2.73	4931.85	1470.19	2.38	14.41	0.00	15.97	0.00	4.11	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.6	0.0	0.0
854	1.900	32.07	2.82	5094.24	1525.09	2.47	14.07	0.00	15.63	0.00	4.04	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.6	0.0	0.0
855	1.800	32.07	2.91	5252.11	1578.46	2.55	13.78	0.00	15.34	0.00	3.99	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.6	0.0	0.0
856	1.700	32.07	2.99	5405.85	1630.43	2.64	13.54	0.00	15.10	0.00	3.97	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.6	0.0	0.0
857	1.600	32.07	3.08	5555.80	1681.12	2.74	13.34	0.00	14.90	0.00	3.98	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.6	0.0	0.0

***** PHYTOPLANKTON AND PERIPHYTON DATA

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
850	2.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
851	2.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
852	2.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
853	2.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
854	1.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
855	1.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
856	1.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
857	1.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20	DEG C RATE									0.000	0.000	0.000	0.000										0.000	0.000	0.000		

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT BAYOU PAQUET
REACH NO. 83 PAQUET FROM BP03 TO TRIB 24

WATER QUALITY/HYDRAULIC MODEL FOR:
BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
858	UPR RCH	0.00576	32.07	3.08	5555.80	1681.12	2.74	13.34	0.00	14.90	0.00	3.98	0.10	0.10	0.00	14.60	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
858	1.60	1.50	0.00576	85.3	0.00018	6.43	81.85	1.50	21.34	3201.00	2134.00	32.01	3566.60	0.003	0.876	0.003
859	1.50	1.40	0.00576	85.3	0.00018	6.43	88.28	1.50	21.34	3201.00	2134.00	32.01	3780.00	0.003	0.929	0.003
860	1.40	1.30	0.00576	85.3	0.00018	6.43	94.71	1.50	21.34	3201.00	2134.00	32.01	3993.40	0.004	0.981	0.004
TOT AVG				0.0002		19.30		1.50	21.34	9603.00	6402.00	32.01				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECA	BOD1 SETT	ABOD1 DECA	BOD1 HYDR	BOD2 DECA	BOD2 SETT	ABOD2 DECA	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECA	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECA	NCM DECA	NCM SETT		
858	1.500	7.17	0.75	0.14	0.04	0.00	0.00	0.00	0.00	0.00	1.28	2.16	2.16	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
859	1.400	7.17	0.75	0.14	0.04	0.00	0.00	0.00	0.00	0.00	1.28	2.15	2.15	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
860	1.300	7.17	0.75	0.14	0.04	0.00	0.00	0.00	0.00	0.00	1.28	2.15	2.15	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20	DEG C RATE	0.61	0.08	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.60			0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00				0.00	0.00	0.00	
*	g/m²/d	**	mg/L/day																									

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL		
858	1.500	32.07	3.15	5676.57	1721.95	2.83	13.19	0.00	14.72	0.00	4.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.3	0.0	0.
859	1.400	32.07	3.20	5776.92	1755.87	2.93	13.09	0.00	14.58	0.00	4.01	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.9	0.0	0.
860	1.300	32.07	3.26	5873.65	1788.57	3.07	13.00	0.00	14.46	0.00	4.02	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.6	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
858	1.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	14.3	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
859	1.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	13.9	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
860	1.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	13.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20	DEG C RATE									0.000	0.000	0.000	0.000										0.000	0.000	0.000		

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

FINAL REPORT BAYOU PAQUET WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 85 PAQUET FROM TRIB 24 TO TRIB 25 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
865	UPR RCH	0.00576	32.07	3.26	5873.65	1788.57	3.07	13.00	0.00	14.46	0.00	4.02	0.10	0.10	0.00	13.60	0.00	0.00
865	TRIB	0.00028	32.07	3.30	5948.50	1813.93	3.32	12.20	0.00	13.66	0.00	3.88	0.10	0.10	0.00	13.60	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
865	1.30	1.20	0.00604	81.3	0.00019	6.13	100.85	1.50	21.34	3201.00	2134.00	32.01	5010.80	0.004	1.232	0.004
866	1.20	1.10	0.00604	81.3	0.00019	6.13	106.98	1.50	21.34	3201.00	2134.00	32.01	5224.20	0.005	1.284	0.005
867	1.10	1.00	0.00604	81.3	0.00019	6.13	113.11	1.50	21.34	3201.00	2134.00	32.01	5437.60	0.005	1.337	0.005
TOT AVG					0.0002	18.39		1.50	21.34	9603.00	6402.00	32.01				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR 1/da	BOD2 DECAT 1/da	BOD2 SETT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAT 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da		
865	1.200	7.14	0.76	0.14	0.04	0.00	0.00	0.00	0.00	0.00	0.65	1.52	1.52	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
866	1.100	7.11	0.76	0.14	0.04	0.00	0.00	0.00	0.00	0.00	0.66	1.54	1.54	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
867	1.000	7.09	0.76	0.14	0.05	0.00	0.00	0.00	0.00	0.00	0.67	1.55	1.55	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.61	0.08	0.01	0.00	0.00	0.00	0.00	0.00	0.30			0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00				0.00	0.00	0.00	

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL		
865	1.200	32.29	3.30	5958.70	1817.32	3.23	12.94	0.00	14.39	0.00	4.03	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.6	0.0	0.
866	1.100	32.50	3.35	6038.54	1844.29	3.34	13.04	0.00	14.49	0.00	4.05	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.6	0.0	0.
867	1.000	32.72	3.39	6116.34	1870.57	3.47	13.03	0.00	14.48	0.00	4.02	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.6	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
865	1.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	13.6	0.50	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

878	0.900	32.72	3.43	6179.61	1891.95	3.60	12.94	0.00	14.39	0.00	3.97	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.6	0.0	0.0
879	0.800	32.72	3.46	6235.27	1910.74	3.71	13.10	0.00	14.55	0.00	3.95	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.6	0.0	0.0
880	0.700	32.72	3.49	6289.42	1929.02	3.82	13.12	0.00	14.57	0.00	3.89	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.6	0.0	0.0
881	0.600	32.72	3.52	6342.16	1946.82	3.95	13.02	0.00	14.47	0.00	3.80	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.6	0.0	0.0
882	0.500	32.72	3.55	6393.56	1964.18	4.10	12.79	0.00	14.24	0.00	3.66	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.6	0.0	0.0
883	0.400	32.72	3.57	6443.72	1981.11	4.28	12.45	0.00	13.90	0.00	3.48	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.6	0.0	0.0
884	0.300	32.72	3.60	6492.69	1997.64	4.47	11.99	0.00	13.44	0.00	3.27	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.6	0.0	0.0
885	0.200	32.72	3.63	6540.54	2013.80	4.70	11.41	0.00	12.86	0.00	3.02	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.6	0.0	0.0

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
878	0.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	13.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
879	0.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	13.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
880	0.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	13.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
881	0.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	13.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
882	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	13.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
883	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	13.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
884	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	13.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
885	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	13.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT BAYOU PAQUET WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 89 PAQUET FROM BP04 TO LIBERTY BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
886	UPR RCH	0.00633	32.72	3.63	6540.54	2013.80	4.70	11.41	0.00	12.86	0.00	3.02	0.10	0.10	0.00	13.60	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
886	0.20	0.10	0.00633	77.6	0.00014	8.37	188.40	1.50	30.48	4572.00	3048.00	45.72	10293.00	0.006	1.773	0.006
887	0.10	0.00	0.00633	77.6	0.00014	8.37	196.77	1.50	30.48	4572.00	3048.00	45.72	10597.80	0.007	1.826	0.007
TOT AVG					0.0001	16.73		1.50	30.48	9144.00	6096.00	45.72				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM ENDING SAT REAER BOD1 BOD1 ABOD1 BOD1 BOD2 BOD2 ABOD2 BKGD FULL CORR ORG-N NH3-N NH3-N DENIT ORG-P ORG-P PO4 PHYTO PERIP COLI NCM NCM

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

NO.	DIST	D.O. mg/L	RATE 1/da	DECAY 1/da	SETT 1/da	DECAY 1/da	HYDR 1/da	DECAY 1/da	SETT 1/da	DECAY 1/da	SOD *	SOD *	SOD *	HYDR 1/da	SETT 1/da	DECAY 1/da	SRCE *	RATE 1/da	HYDR 1/da	SETT 1/da	SRCE *	PROD **	PROD **	DECAY 1/da	DECAY 1/da	SETT 1/da			
886	0.100	7.21	0.75	0.14	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.71	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
887	0.000	7.35	0.73	0.13	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.58	0.58	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
AVG 20 DEG C RATE			0.61	0.08	0.02	0.00	0.00	0.00	0.00	0.00	0.00			0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00				0.00	0.00	0.00	0.00	
*	g/m ² /d		**	mg/L/day																									

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO	BOD1	BOD2	EBOD1	EBOD2	ORG-N	NH3-N	NO3-N	TOT-N	EORG-N	ETOT-N	ORG-P	PO4-P	TOT-P	EORG-P	ETOT-P	CHL A µg/L	PERIP g/m ²	COLI #/100mL	
886	0.100	31.58	3.66	6587.34	2029.59	4.96	10.72	0.00	11.81	0.00	2.73	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.2	0.0	0.
887	0.000	30.44	3.68	6633.12	2045.05	5.24	9.04	0.00	9.77	0.00	2.26	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.8	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
886	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
887	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20 DEG C RATE										0.000	0.000	0.000	0.000														

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT DRAINAGE DITCH 16
REACH NO. 77 DD16

WATER QUALITY/HYDRAULIC MODEL FOR:
BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO	BOD1	BOD2	EBOD1	EBOD2	ORG-N	NH3-N	NO3-N	PO4-P	CHL A µg/L	COLI #/100mL	NCM
797	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	2.20	0.00	2.20	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
797	WSTLD	0.00000	30.00	0.39	753.60	63.30	2.00	6.90	0.00	6.90	0.00	6.90	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
797	0.90	0.80	0.00029	0.9	0.00568	0.20	0.20	0.05	1.00	5.03	100.25	0.05	0.00	0.000	0.000	0.006
798	0.80	0.70	0.00029	0.9	0.00568	0.20	0.41	0.05	1.00	5.03	100.25	0.05	0.00	0.000	0.000	0.006
799	0.70	0.60	0.00029	0.9	0.00568	0.20	0.61	0.05	1.00	5.03	100.25	0.05	0.00	0.000	0.000	0.006
800	0.60	0.50	0.00029	0.9	0.00568	0.20	0.82	0.05	1.00	5.03	100.25	0.05	0.00	0.000	0.000	0.006
801	0.50	0.40	0.00029	0.9	0.00568	0.20	1.02	0.05	1.00	5.03	100.25	0.05	0.00	0.000	0.000	0.006
802	0.40	0.30	0.00029	0.9	0.00568	0.20	1.22	0.05	1.00	5.03	100.25	0.05	0.00	0.000	0.000	0.006
803	0.30	0.20	0.00029	0.9	0.00568	0.20	1.43	0.05	1.00	5.03	100.25	0.05	0.00	0.000	0.000	0.006
804	0.20	0.10	0.00029	0.9	0.00568	0.20	1.63	0.05	1.00	5.03	100.25	0.05	0.00	0.000	0.000	0.006
805	0.10	0.00	0.00029	0.9	0.00568	0.20	1.83	0.05	1.00	5.03	100.25	0.05	0.00	0.000	0.000	0.006

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

TOT 1.83 45.26 902.28
 AVG 0.0057 0.05 1.00 0.05

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECATY 1/da	BOD1 SETT 1/da	ABOD1 DECATY 1/da	BOD1 HYDR 1/da	BOD2 DECATY 1/da	BOD2 SETT 1/da	ABOD2 DECATY 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECATY 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECATY 1/da	NCM DECATY 1/da	NCM SETT 1/da		
797	0.800	7.52	17.94	0.13	1.27	0.00	0.00	0.00	0.00	0.00	0.95	1.09	1.09	0.06	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
798	0.700	7.49	18.01	0.13	1.28	0.00	0.00	0.00	0.00	0.00	0.97	1.11	1.11	0.06	1.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
799	0.600	7.46	18.08	0.13	1.28	0.00	0.00	0.00	0.00	0.00	0.98	1.12	1.12	0.06	1.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
800	0.500	7.43	18.16	0.13	1.29	0.00	0.00	0.00	0.00	0.00	0.99	1.14	1.14	0.06	1.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
801	0.400	7.40	18.23	0.13	1.30	0.00	0.00	0.00	0.00	0.00	1.01	1.15	1.15	0.06	1.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
802	0.300	7.37	18.30	0.13	1.31	0.00	0.00	0.00	0.00	0.00	1.02	1.17	1.17	0.06	1.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
803	0.200	7.34	18.37	0.14	1.31	0.00	0.00	0.00	0.00	0.00	1.04	1.18	1.18	0.06	1.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
804	0.100	7.31	18.44	0.14	1.32	0.00	0.00	0.00	0.00	0.00	1.05	1.20	1.20	0.06	1.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
805	0.000	7.28	18.51	0.14	1.33	0.00	0.00	0.00	0.00	0.00	1.07	1.21	1.21	0.06	1.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20	DEG C RATE	14.86	0.08	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.50			0.03	0.11	0.00	0.00	0.00	0.00	0.00	0.00				0.00	0.00	0.00	0.00
*	g/m ² /d		**		mg/L/day																							

***** WATER QUALITY CONSTITUENT VALUES

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	
797	0.800	30.23	0.26	523.02	7.74	6.21	2.23	0.00	2.23	0.00	1.04	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
798	0.700	30.46	0.26	523.02	7.74	6.24	2.22	0.00	2.22	0.00	1.03	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
799	0.600	30.69	0.26	523.02	7.74	6.21	2.20	0.00	2.20	0.00	1.02	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
800	0.500	30.92	0.26	523.02	7.74	6.17	2.19	0.00	2.19	0.00	1.01	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
801	0.400	31.16	0.26	523.02	7.74	6.13	2.17	0.00	2.17	0.00	1.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
802	0.300	31.39	0.26	523.02	7.74	6.09	2.16	0.00	2.16	0.00	1.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
803	0.200	31.62	0.26	523.02	7.74	6.05	2.15	0.00	2.15	0.00	0.99	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
804	0.100	31.85	0.26	523.02	7.74	6.01	2.14	0.00	2.14	0.00	0.98	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
805	0.000	32.08	0.26	523.02	7.74	5.97	2.12	0.00	2.12	0.00	0.98	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
797	0.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
798	0.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
799	0.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
800	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
801	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
802	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
803	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
804	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
805	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

20 DEG C RATE

0.000 0.000 0.000 0.000

0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT DRAINAGE DITCH 17
REACH NO. 79 DD17

WATER QUALITY/HYDRAULIC MODEL FOR:
BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
819	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	2.20	0.00	2.20	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
819	WSTLD	0.00195	30.00	0.45	864.70	41.60	5.00	85.00	0.00	85.00	0.00	2.41	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
819	1.70	1.60	0.00223	87.3	0.01142	0.10	0.10	0.11	1.86	19.51	185.68	0.20	0.00	0.000	0.000	0.011
820	1.60	1.50	0.00223	87.3	0.01142	0.10	0.20	0.11	1.86	19.51	185.68	0.20	0.00	0.000	0.000	0.011
821	1.50	1.40	0.00223	87.3	0.01142	0.10	0.30	0.11	1.86	19.51	185.68	0.20	0.00	0.000	0.000	0.011
822	1.40	1.30	0.00223	87.3	0.01142	0.10	0.41	0.11	1.86	19.51	185.68	0.20	0.00	0.000	0.000	0.011
823	1.30	1.20	0.00223	87.3	0.01142	0.10	0.51	0.11	1.86	19.51	185.68	0.20	0.00	0.000	0.000	0.011
824	1.20	1.10	0.00223	87.3	0.01142	0.10	0.61	0.11	1.86	19.51	185.68	0.20	0.00	0.000	0.000	0.011
825	1.10	1.00	0.00223	87.3	0.01142	0.10	0.71	0.11	1.86	19.51	185.68	0.20	0.00	0.000	0.000	0.011
826	1.00	0.90	0.00223	87.3	0.01142	0.10	0.81	0.11	1.86	19.51	185.68	0.20	0.00	0.000	0.000	0.011
827	0.90	0.80	0.00223	87.3	0.01142	0.10	0.91	0.11	1.86	19.51	185.68	0.20	0.00	0.000	0.000	0.011
828	0.80	0.70	0.00223	87.3	0.01142	0.10	1.01	0.11	1.86	19.51	185.68	0.20	0.00	0.000	0.000	0.011
829	0.70	0.60	0.00223	87.3	0.01142	0.10	1.11	0.11	1.86	19.51	185.68	0.20	0.00	0.000	0.000	0.011
830	0.60	0.50	0.00223	87.3	0.01142	0.10	1.22	0.11	1.86	19.51	185.68	0.20	0.00	0.000	0.000	0.011
831	0.50	0.40	0.00223	87.3	0.01142	0.10	1.32	0.11	1.86	19.51	185.68	0.20	0.00	0.000	0.000	0.011
832	0.40	0.30	0.00223	87.3	0.01142	0.10	1.42	0.11	1.86	19.51	185.68	0.20	0.00	0.000	0.000	0.011
833	0.30	0.20	0.00223	87.3	0.01142	0.10	1.52	0.11	1.86	19.51	185.68	0.20	0.00	0.000	0.000	0.011
834	0.20	0.10	0.00223	87.3	0.01142	0.10	1.62	0.11	1.86	19.51	185.68	0.20	0.00	0.000	0.000	0.011
835	0.10	0.00	0.00223	87.3	0.01142	0.10	1.72	0.11	1.86	19.51	185.68	0.20	0.00	0.000	0.000	0.011
TOT						1.72				331.69	3156.51					
AVG				0.0114				0.11	1.86			0.20				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECAT	BOD1 SETT	ABOD1 DECAT	BOD1 HYDR	BOD2 DECAT	ABOD2 SETT	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECAT	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECAT	NCM DECAT	NCM SETT	
819	1.600	7.53	9.49	0.13	0.60	0.00	0.00	0.00	0.00	0.95	5.36	5.36	0.05	0.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
820	1.500	7.51	9.51	0.13	0.61	0.00	0.00	0.00	0.00	0.95	5.08	5.08	0.04	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
821	1.400	7.49	9.53	0.13	0.61	0.00	0.00	0.00	0.00	0.96	4.81	4.81	0.04	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
822	1.300	7.48	9.55	0.13	0.61	0.00	0.00	0.00	0.00	0.97	4.57	4.57	0.04	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
823	1.200	7.46	9.57	0.13	0.61	0.00	0.00	0.00	0.00	0.98	4.34	4.34	0.04	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
824	1.100	7.45	9.59	0.13	0.61	0.00	0.00	0.00	0.00	0.98	4.12	4.12	0.05	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
825	1.000	7.43	9.61	0.13	0.62	0.00	0.00	0.00	0.00	0.99	3.92	3.92	0.05	0.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
826	0.900	7.42	9.63	0.13	0.62	0.00	0.00	0.00	0.00	1.00	3.74	3.74	0.05	0.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
827	0.800	7.40	9.65	0.13	0.62	0.00	0.00	0.00	0.00	1.01	3.56	3.56	0.05	0.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
828	0.700	7.38	9.67	0.13	0.62	0.00	0.00	0.00	0.00	1.01	3.40	3.40	0.05	0.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
829	0.600	7.37	9.69	0.13	0.62	0.00	0.00	0.00	0.00	1.02	3.25	3.25	0.05	0.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
830	0.500	7.35	9.71	0.14	0.62	0.00	0.00	0.00	0.00	1.03	3.11	3.11	0.05	0.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
831	0.400	7.34	9.73	0.14	0.63	0.00	0.00	0.00	0.00	1.04	2.98	2.98	0.06	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
832	0.300	7.32	9.75	0.14	0.63	0.00	0.00	0.00	0.00	1.05	2.86	2.86	0.06	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
833	0.200	7.31	9.77	0.14	0.63	0.00	0.00	0.00	0.00	1.05	2.74	2.74	0.06	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

834	0.100	7.29	9.79	0.14	0.63	0.00	0.00	0.00	0.00	0.00	1.06	2.64	2.64	0.06	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
835	0.000	7.28	9.81	0.14	0.63	0.00	0.00	0.00	0.00	0.00	1.07	2.54	2.54	0.06	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE		7.87	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.50			0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	
819	1.600	30.12	0.43	821.03	37.23	3.21	69.41	0.00	69.41	0.00	2.13	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
820	1.500	30.24	0.43	821.03	37.23	2.39	64.68	0.00	64.68	0.00	2.03	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
821	1.400	30.37	0.43	821.03	37.23	2.13	60.25	0.00	60.25	0.00	1.93	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
822	1.300	30.49	0.43	821.03	37.23	2.14	56.12	0.00	56.12	0.00	1.85	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
823	1.200	30.61	0.43	821.03	37.23	2.28	52.27	0.00	52.27	0.00	1.76	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
824	1.100	30.73	0.43	821.03	37.23	2.48	48.68	0.00	48.68	0.00	1.69	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
825	1.000	30.86	0.43	821.03	37.23	2.70	45.32	0.00	45.32	0.00	1.61	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
826	0.900	30.98	0.43	821.03	37.23	2.91	42.20	0.00	42.20	0.00	1.54	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
827	0.800	31.10	0.43	821.03	37.23	3.12	39.28	0.00	39.28	0.00	1.48	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
828	0.700	31.22	0.43	821.03	37.23	3.32	36.56	0.00	36.56	0.00	1.42	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
829	0.600	31.35	0.43	821.03	37.23	3.51	34.03	0.00	34.03	0.00	1.36	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
830	0.500	31.47	0.43	821.03	37.23	3.68	31.67	0.00	31.67	0.00	1.30	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
831	0.400	31.59	0.43	821.03	37.23	3.84	29.47	0.00	29.47	0.00	1.25	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
832	0.300	31.71	0.43	821.03	37.23	3.99	27.42	0.00	27.42	0.00	1.20	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
833	0.200	31.84	0.43	821.03	37.23	4.13	25.52	0.00	25.52	0.00	1.16	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
834	0.100	31.96	0.43	821.03	37.23	4.26	23.74	0.00	23.74	0.00	1.11	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
835	0.000	32.08	0.43	821.03	37.23	4.37	22.09	0.00	22.09	0.00	1.07	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
819	1.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
820	1.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
821	1.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
822	1.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
823	1.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
824	1.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
825	1.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
826	0.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
827	0.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
828	0.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
829	0.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
830	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

831	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
832	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
833	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
834	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
835	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT TRIBUTARY 24 WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 84 TRIB 24 FROM TOP TO PAQUET BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
861	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	2.20	0.00	2.20	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
861	0.40	0.30	0.00028	0.0	0.00002	60.83	60.83	0.74	20.10	1487.40	2010.00	14.87	201.00	0.000	0.059	0.000
862	0.30	0.20	0.00028	0.0	0.00002	60.83	121.66	0.74	20.10	1487.40	2010.00	14.87	402.00	0.001	0.118	0.001
863	0.20	0.10	0.00028	0.0	0.00002	60.83	182.49	0.74	20.10	1487.40	2010.00	14.87	603.00	0.001	0.177	0.001
864	0.10	0.00	0.00028	0.0	0.00002	60.83	243.33	0.74	20.10	1487.40	2010.00	14.87	804.00	0.002	0.236	0.002
TOT AVG					0.0000	243.33		0.74	20.10	5949.60	8040.00	14.87				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT DECAT 1/da	ABOD1 1/da	BOD1 HYDR DECAT 1/da	BOD2 DECAT 1/da	BOD2 SETT DECAT 1/da	ABOD2 1/da	BKGD SOD *	FULL SOD *	CORR HYDR *	ORG-N 1/da	ORG-N SETT 1/da	NH3-N SRCE *	NH3-N RATE 1/da	DENIT HYDR 1/da	ORG-P SETT 1/da	ORG-P SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da	
861	0.300	7.36	1.15	0.13	0.09	0.00	0.00	0.00	0.00	0.00	0.97	1.40	1.40	0.05	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
862	0.200	7.30	1.16	0.13	0.09	0.00	0.00	0.00	0.00	0.00	1.00	1.53	1.53	0.06	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
863	0.100	7.23	1.17	0.14	0.09	0.00	0.00	0.00	0.00	0.00	1.03	1.69	1.69	0.06	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
864	0.000	7.17	1.18	0.14	0.09	0.00	0.00	0.00	0.00	0.00	1.07	1.88	1.88	0.06	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE		0.95	0.08	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.50			0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00	
*	g/m²/d		**	mg/L/day																						

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m²	COLI #/100mL		
861	0.300	30.52	3.17	5719.02	1737.54	4.59	6.74	0.00	7.11	0.00	2.65	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.4	0.0	0.
862	0.200	31.03	3.23	5830.66	1774.70	4.21	8.09	0.00	8.82	0.00	2.98	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.8	0.0	0.
863	0.100	31.55	3.27	5899.04	1797.47	3.77	9.92	0.00	11.01	0.00	3.39	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.2	0.0	0.

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

864 0.000 32.07 3.30 5948.50 1813.93 3.32 12.20 0.00 13.66 0.00 3.88 0.10 0.10 0.00 0.00 0.00 0.00 0.00 0.00 0.00 13.6 0.0 0.0

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m²
861	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	3.4	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
862	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	6.8	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
863	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	10.2	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
864	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	13.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000 0.000 0.000 0.000 0.000 0.000 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT TRIBUTARY 25 WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 86 TRIB 25 FROM TOP TO RKM 0.3 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
868	HDWTR	0.00028	33.80	0.26	520.90	7.23	6.00	2.20	0.00	2.20	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
868	1.00	0.90	0.00028	0.0	0.00002	63.28	63.28	0.94	16.46	1547.24	1646.00	15.47	164.60	0.000	0.057	0.000
869	0.90	0.80	0.00028	0.0	0.00002	63.28	126.56	0.94	16.46	1547.24	1646.00	15.47	329.20	0.001	0.114	0.001
870	0.80	0.70	0.00028	0.0	0.00002	63.28	189.84	0.94	16.46	1547.24	1646.00	15.47	493.80	0.001	0.170	0.001
871	0.70	0.60	0.00028	0.0	0.00002	63.28	253.11	0.94	16.46	1547.24	1646.00	15.47	658.40	0.001	0.227	0.001
872	0.60	0.50	0.00028	0.0	0.00002	63.28	316.39	0.94	16.46	1547.24	1646.00	15.47	823.00	0.001	0.284	0.001
873	0.50	0.40	0.00028	0.0	0.00002	63.28	379.67	0.94	16.46	1547.24	1646.00	15.47	987.60	0.002	0.341	0.002
874	0.40	0.30	0.00028	0.0	0.00002	63.28	442.95	0.94	16.46	1547.24	1646.00	15.47	1152.20	0.002	0.398	0.002
TOT AVG					0.0000	442.95		0.94	16.46	10830.68	11522.00	15.47				

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD1 DECAT 1/da	BOD1 SETT 1/da	ABOD1 DECAT 1/da	BOD1 HYDR 1/da	BOD2 DECAT 1/da	BOD2 SETT 1/da	ABOD2 DECAT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORG-N HYDR 1/da	ORG-N SETT 1/da	NH3-N DECAT 1/da	NH3-N SRCE *	DENIT RATE 1/da	ORG-P HYDR 1/da	ORG-P SETT 1/da	PO4 SRCE *	PHYTO PROD **	PERIP PROD **	COLI DECAT 1/da	NCM DECAT 1/da	NCM SETT 1/da	
868	0.900	7.43	0.89	0.13	0.07	0.00	0.00	0.00	0.00	0.00	0.94	1.16	1.16	0.05	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
869	0.800	7.42	0.89	0.13	0.07	0.00	0.00	0.00	0.00	0.00	0.94	1.18	1.18	0.05	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
870	0.700	7.42	0.89	0.13	0.07	0.00	0.00	0.00	0.00	0.00	0.94	1.22	1.22	0.05	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
871	0.600	7.42	0.89	0.13	0.07	0.00	0.00	0.00	0.00	0.00	0.94	1.26	1.26	0.05	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
872	0.500	7.42	0.89	0.13	0.07	0.00	0.00	0.00	0.00	0.00	0.94	1.30	1.30	0.05	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
873	0.400	7.42	0.89	0.13	0.07	0.00	0.00	0.00	0.00	0.00	0.94	1.35	1.35	0.05	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
874	0.300	7.42	0.89	0.13	0.07	0.00	0.00	0.00	0.00	0.00	0.94	1.42	1.42	0.05	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.74	0.08	0.01	0.00	0.00	0.00	0.00	0.00	0.50			0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00		

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

* g/m²/d ** mg/L/day

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOT-N mg/L	EORG-N mg/L	ETOT-N mg/L	ORG-P mg/L	PO4-P mg/L	TOT-P mg/L	EORG-P mg/L	ETOT-P mg/L	CHL A µg/L	PERIP g/m ²	COLI #/100mL	
868	0.900	30.00	3.20	5778.86	1758.47	5.37	3.51	0.00	3.51	0.00	1.66	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
869	0.800	30.00	3.27	5891.88	1796.12	5.26	3.88	0.00	3.88	0.00	1.79	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
870	0.700	30.00	3.30	5961.10	1819.17	5.12	4.38	0.00	4.38	0.00	1.94	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
871	0.600	30.00	3.33	6011.16	1835.84	4.95	4.99	0.00	4.99	0.00	2.12	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
872	0.500	30.00	3.35	6050.44	1848.93	4.77	5.72	0.00	5.72	0.00	2.32	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
873	0.400	30.00	3.37	6082.81	1859.71	4.56	6.57	0.00	6.57	0.00	2.54	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.
874	0.300	30.00	3.39	6110.36	1868.88	4.35	7.56	0.00	7.56	0.00	2.79	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
868	0.900	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
869	0.800	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
870	0.700	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
871	0.600	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
872	0.500	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
873	0.400	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
874	0.300	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	0.0	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0

20 DEG C RATE 0.000

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

FINAL REPORT TRIBUTARY 25 WATER QUALITY/HYDRAULIC MODEL FOR:
 REACH NO. 87 TRIB 25 FROM RKM 0.3 TO PAQUET BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

***** REACH INPUTS *****

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	COND	CL	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	PO4-P mg/L	CHL A µg/L	COLI #/100mL	NCM
875	UPR RCH	0.00028	30.00	3.39	6110.36	1868.88	4.35	7.56	0.00	7.56	0.00	2.79	0.10	0.10	0.00	0.00	0.00	0.00

***** HYDRAULIC PARAMETER VALUES *****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m ³ /s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	CUM TIME days	DEPTH m	WIDTH m	VOLUME m ³	SURFACE AREA m ²	X-SECT AREA m ²	TIDAL PRISM m ³	TIDAL VELO m/s	DISPRSN m ² /s	MEAN VELO m/s
875	0.30	0.20	0.00028	0.0	0.00001	100.77	543.72	0.77	32.00	2464.00	3200.00	24.64	1472.20	0.002	0.270	0.002
876	0.20	0.10	0.00028	0.0	0.00001	100.77	644.50	0.77	32.00	2464.00	3200.00	24.64	1792.20	0.002	0.329	0.002
877	0.10	0.00	0.00028	0.0	0.00001	100.77	745.27	0.77	32.00	2464.00	3200.00	24.64	2112.20	0.002	0.388	0.002

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

TOT 302.32 7392.00 9600.00
 AVG 0.0000 0.77 32.00 24.64

***** BIOLOGICAL AND PHYSICAL COEFFICIENTS *****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD1 DECA	BOD1 SETT	ABOD1 DECA	BOD1 HYDR	BOD2 DECA	BOD2 SETT	ABOD2 DECA	BKGD SOD	FULL SOD	CORR SOD	ORG-N HYDR	ORG-N SETT	NH3-N DECA	NH3-N SRCE	DENIT RATE	ORG-P HYDR	ORG-P SETT	PO4 SRCE	PHYTO PROD	PERIP PROD	COLI DECA	NCM DECA	NCM SETT		
		mg/L	1/da	1/da	1/da	1/da	1/da	1/da	1/da	1/da	*	*	*	1/da	1/da	1/da	*	1/da	1/da	1/da	*	**	**	1/da	1/da	1/da		
875	0.200	7.31	1.11	0.13	0.08	0.00	0.00	0.00	0.00	0.00	0.99	1.56	1.56	0.05	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
876	0.100	7.19	1.13	0.14	0.09	0.00	0.00	0.00	0.00	0.00	1.05	1.73	1.73	0.06	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
877	0.000	7.08	1.14	0.14	0.09	0.00	0.00	0.00	0.00	0.00	1.11	1.94	1.94	0.06	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
AVG 20 DEG C RATE			0.91	0.08	0.02	0.00	0.00	0.00	0.00	0.00	0.50				0.03	0.02	0.00	0.00	0.00	0.00	0.00				0.00	0.00	0.00	
* g/m ² /d			** mg/L/day																									

***** WATER QUALITY CONSTITUENT VALUES *****

ELEM NCM NO.	ENDING DIST	TEMP deg C	SALN ppt	COND	CL	DO	BOD1	BOD2	EBOD1	EBOD2	ORG-N	NH3-N	NO3-N	TOT-N	EORG-N	ETOT-N	ORG-P	PO4-P	TOT-P	EORG-P	ETOT-P	CHL A	PERIP	COLI	
		deg C	ppt			mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	g/m ²	#/100mL	
875	0.200	30.91	3.40	6135.05	1877.11	4.11	8.74	0.00	9.22	0.00	3.07	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.5	0.0	0.
876	0.100	31.81	3.41	6156.56	1884.27	3.83	10.30	0.00	11.27	0.00	3.42	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.1	0.0	0.
877	0.000	32.72	3.42	6174.62	1890.29	3.61	12.21	0.00	13.66	0.00	3.82	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.6	0.0	0.

***** PHYTOPLANKTON AND PERIPHYTON DATA *****

ELEM NO.	ENDING DIST	BANK SHADE frac	SECCHI DEPTH m	PHYT N PREF	PHYT LIT LIM	PHYT N LIM	PHYT P LIM	PHYT N&P LIM	PHYT TOT LIM	PHYT GROW 1/da	PHYT RESP 1/da	PHYT DEATH 1/da	PHYT SETT 1/da	PHYT P/R RATIO	PHYTO µg/L	PERI N PREF	PERI LIT LIM	PERI N LIM	PERI P LIM	PERI N&P LIM	PERI SPC LIM	PERI TOT LIM	PERI GROW 1/da	PERI RESP 1/da	PERI DEATH 1/da	PERI P/R RATIO	PERIP g/m ²
875	0.200	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	4.5	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
876	0.100	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	9.1	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
877	0.000	0.00	Inf	1.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.0	13.6	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.0	0.0
20 DEG C RATE										0.000	0.000	0.000	0.000														

NOTE ON NITR PREF: 1.0=NO3 ; 0.0=NH3

.....BEGIN SENSITIVITY RUN 1 ON PARAMETER SET 1 AND COLUMN 1
HYDRAULIC CALCULATIONS COMPLETED
TRIDIAGONAL MATRIX TERMS INITIALIZED
OXYGEN DEPENDENT RATES CONVERGENT IN 59 ITERATIONS
CONSTITUENT CALCULATIONS COMPLETED

.....BEGIN SENSITIVITY RUN 2 ON PARAMETER SET 1 AND COLUMN 2
HYDRAULIC CALCULATIONS COMPLETED
TRIDIAGONAL MATRIX TERMS INITIALIZED
OXYGEN DEPENDENT RATES CONVERGENT IN 27 ITERATIONS
CONSTITUENT CALCULATIONS COMPLETED

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

.....BEGIN SENSITIVITY RUN 3 ON PARAMETER SET 2 AND COLUMN 1
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN 49 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED

.....BEGIN SENSITIVITY RUN 4 ON PARAMETER SET 2 AND COLUMN 2
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN 49 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED

.....BEGIN SENSITIVITY RUN 5 ON PARAMETER SET 3 AND COLUMN 1
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN 38 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED

.....BEGIN SENSITIVITY RUN 6 ON PARAMETER SET 3 AND COLUMN 2
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN 49 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED

.....BEGIN SENSITIVITY RUN 7 ON PARAMETER SET 4 AND COLUMN 1
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN 52 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED

.....BEGIN SENSITIVITY RUN 8 ON PARAMETER SET 4 AND COLUMN 2
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN 33 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED

.....BEGIN SENSITIVITY RUN 9 ON PARAMETER SET 5 AND COLUMN 1
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN 49 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED

.....BEGIN SENSITIVITY RUN 10 ON PARAMETER SET 5 AND COLUMN 2
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN 37 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

.....BEGIN SENSITIVITY RUN 11 ON PARAMETER SET 6 AND COLUMN 1
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN 36 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED

.....BEGIN SENSITIVITY RUN 12 ON PARAMETER SET 6 AND COLUMN 2
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN 49 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED

.....BEGIN SENSITIVITY RUN 13 ON PARAMETER SET 7 AND COLUMN 1
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN 49 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED

.....BEGIN SENSITIVITY RUN 14 ON PARAMETER SET 7 AND COLUMN 2
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN 49 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED

.....BEGIN SENSITIVITY RUN 15 ON PARAMETER SET 8 AND COLUMN 1
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN 49 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED

.....BEGIN SENSITIVITY RUN 16 ON PARAMETER SET 8 AND COLUMN 2
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN 49 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED

.....BEGIN SENSITIVITY RUN 17 ON PARAMETER SET 9 AND COLUMN 1
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN 36 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED

.....BEGIN SENSITIVITY RUN 18 ON PARAMETER SET 9 AND COLUMN 2
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN 49 ITERATIONS

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

.....CONSTITUENT CALCULATIONS COMPLETED

.....BEGIN SENSITIVITY RUN 19 ON PARAMETER SET 10 AND COLUMN 1
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN 30 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED

.....BEGIN SENSITIVITY RUN 20 ON PARAMETER SET 10 AND COLUMN 2
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN 96 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED

.....BEGIN SENSITIVITY RUN 21 ON PARAMETER SET 11 AND COLUMN 1
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN 47 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED

.....BEGIN SENSITIVITY RUN 22 ON PARAMETER SET 11 AND COLUMN 2
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN 36 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED

.....BEGIN SENSITIVITY RUN 23 ON PARAMETER SET 12 AND COLUMN 1
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN 49 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED

.....BEGIN SENSITIVITY RUN 24 ON PARAMETER SET 12 AND COLUMN 2
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN 49 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED

.....BEGIN SENSITIVITY RUN 25 ON PARAMETER SET 13 AND COLUMN 1
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN 49 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED

.....BEGIN SENSITIVITY RUN 26 ON PARAMETER SET 13 AND COLUMN 2
.....HYDRAULIC CALCULATIONS COMPLETED

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN 49 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED

.....BEGIN SENSITIVITY RUN 27 ON PARAMETER SET 14 AND COLUMN 1
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN 49 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED

.....BEGIN SENSITIVITY RUN 28 ON PARAMETER SET 14 AND COLUMN 2
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN 49 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED

.....BEGIN SENSITIVITY RUN 29 ON PARAMETER SET 15 AND COLUMN 1
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN 39 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED

.....BEGIN SENSITIVITY RUN 30 ON PARAMETER SET 15 AND COLUMN 2
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN 30 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED

.....BEGIN SENSITIVITY RUN 31 ON PARAMETER SET 16 AND COLUMN 1
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN 43 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED

.....BEGIN SENSITIVITY RUN 32 ON PARAMETER SET 16 AND COLUMN 2
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN 50 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED

.....BEGIN SENSITIVITY RUN 33 ON PARAMETER SET 17 AND COLUMN 1
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN 49 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

```
.....BEGIN SENSITIVITY RUN 34 ON PARAMETER SET 17 AND COLUMN 2
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN 49 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED
```

```
.....BEGIN SENSITIVITY RUN 35 ON PARAMETER SET 18 AND COLUMN 1
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN 49 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED
```

```
.....BEGIN SENSITIVITY RUN 36 ON PARAMETER SET 18 AND COLUMN 2
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN 49 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED
```

```
.....BEGIN SENSITIVITY RUN 37 ON PARAMETER SET 19 AND COLUMN 1
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN 36 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED
```

```
.....BEGIN SENSITIVITY RUN 38 ON PARAMETER SET 19 AND COLUMN 2
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN 50 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED
```

```
.....BEGIN SENSITIVITY RUN 39 ON PARAMETER SET 20 AND COLUMN 1
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN 36 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED
```

```
.....BEGIN SENSITIVITY RUN 40 ON PARAMETER SET 20 AND COLUMN 2
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN 49 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED
```

```
.....BEGIN SENSITIVITY RUN 41 ON PARAMETER SET 21 AND COLUMN 1
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN 49 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED
```

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

.....BEGIN SENSITIVITY RUN 42 ON PARAMETER SET 21 AND COLUMN 2
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN 49 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED

.....BEGIN SENSITIVITY RUN 43 ON PARAMETER SET 22 AND COLUMN 1
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN 49 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED

.....BEGIN SENSITIVITY RUN 44 ON PARAMETER SET 22 AND COLUMN 2
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN 49 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED

.....BEGIN SENSITIVITY RUN 45 ON PARAMETER SET 23 AND COLUMN 1
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN 49 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED

.....BEGIN SENSITIVITY RUN 46 ON PARAMETER SET 23 AND COLUMN 2
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN 49 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED

.....BEGIN SENSITIVITY RUN 47 ON PARAMETER SET 24 AND COLUMN 1
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN 49 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED

.....BEGIN SENSITIVITY RUN 48 ON PARAMETER SET 24 AND COLUMN 2
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN 49 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED

.....EXECUTION COMPLETED

SENSITIVITY ANALYSIS SUMMARY

WATER QUALITY/HYDRAULIC MODEL FOR:
 BAYOUS BONFOUCA/VINCENT/LIBERTY/PAQUET

B VINCENT & BONFOUCA Base Model Minimum DO = 0.76

Parameter	%Param Chg	Min D.O.	%D.O. Chg	%Param Chg	Min D.O.	%D.O. Chg
Sediment Oxygen Demand	30.0	0.61	-19.3	-30.0	1.08	43.0
Chlorophyll/Algae(phyto) Ratio	30.0	0.76	0.0	-30.0	0.76	0.0
Stream Velocity	30.0	0.74	-2.4	-30.0	0.78	3.1
Initial Temperature	2.0	0.68	-10.2	-2.0	0.84	11.3
CBOD1 Aerobic Decay Rate	30.0	0.75	-0.8	-30.0	0.76	0.9
CBOD1 Settling Rate	30.0	0.76	0.1	-30.0	0.76	0.0
NBOD Decay Rate	30.0	0.76	0.0	-30.0	0.76	0.0
NBOD Settling Rate	30.0	0.76	0.0	-30.0	0.76	0.0
Stream Dispersion	30.0	0.76	-0.1	-30.0	0.76	0.1
Stream Reaeration	30.0	0.97	28.2	-30.0	0.54	-28.5
Headwater Flow	30.0	0.76	0.5	-30.0	0.75	-0.6
Headwater DO	30.0	0.76	0.0	-30.0	0.76	0.0
Headwater CBOD1	30.0	0.76	0.0	-30.0	0.76	0.0
Headwater NBOD	30.0	0.76	0.0	-30.0	0.76	0.0
Stream Depth	30.0	0.74	-2.3	-30.0	0.74	-2.2
Wasteload Flow	30.0	0.76	0.1	-30.0	0.76	-0.2
Wasteload Temperature	2.0	0.76	0.0	-2.0	0.76	0.0
Wasteload DO	30.0	0.76	0.0	-30.0	0.76	0.0
Wasteload CBOD1	30.0	0.75	-1.0	-30.0	0.76	0.9
Wasteload NBOD	30.0	0.76	0.0	-30.0	0.76	0.0
Lower Boundary Temperature	2.0	0.76	0.0	-2.0	0.76	0.0
Lower Boundary DO	30.0	0.76	0.0	-30.0	0.76	0.0
Lower Boundary CBOD1	30.0	0.76	0.0	-30.0	0.76	0.0
Lower Boundary NBOD	30.0	0.76	0.0	-30.0	0.76	0.0

UPPER B BONFOUCA Base Model Minimum DO = 6.00

Parameter	%Param	Min	%D.O.	%Param	Min	%D.O.
-----------	--------	-----	-------	--------	-----	-------

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

	Chg	D.O.	Chg	Chg	D.O.	Chg
Sediment Oxygen Demand	30.0	6.00	0.0	-30.0	6.00	0.0
Chlorophyll/Algae(phyto) Ratio	30.0	6.00	0.0	-30.0	6.00	0.0
Stream Velocity	30.0	6.00	0.0	-30.0	6.00	0.0
Initial Temperature	2.0	6.00	0.0	-2.0	6.00	0.0
CBOD1 Aerobic Decay Rate	30.0	6.00	0.0	-30.0	6.00	0.0
CBOD1 Settling Rate	30.0	6.00	0.0	-30.0	6.00	0.0
NBOD Decay Rate	30.0	6.00	0.0	-30.0	6.00	0.0
NBOD Settling Rate	30.0	6.00	0.0	-30.0	6.00	0.0
Stream Dispersion	30.0	6.00	0.0	-30.0	6.00	0.0
Stream Reaeration	30.0	6.00	0.0	-30.0	6.00	0.0
Headwater Flow	30.0	6.00	0.0	-30.0	6.00	0.0
Headwater DO	30.0	6.00	0.0	-30.0	5.20	-13.4
Headwater CBOD1	30.0	6.00	0.0	-30.0	6.00	0.0
Headwater NBOD	30.0	6.00	0.0	-30.0	6.00	0.0
Stream Depth	30.0	6.00	0.0	-30.0	6.00	0.0
Wasteload Flow	30.0	6.00	0.0	-30.0	6.00	0.0
Wasteload Temperature	2.0	6.00	0.0	-2.0	6.00	0.0
Wasteload DO	30.0	6.00	0.0	-30.0	6.00	0.0
Wasteload CBOD1	30.0	6.00	0.0	-30.0	6.00	0.0
Wasteload NBOD	30.0	6.00	0.0	-30.0	6.00	0.0
Lower Boundary Temperature	2.0	6.00	0.0	-2.0	6.00	0.0
Lower Boundary DO	30.0	6.00	0.0	-30.0	6.00	0.0
Lower Boundary CBOD1	30.0	6.00	0.0	-30.0	6.00	0.0
Lower Boundary NBOD	30.0	6.00	0.0	-30.0	6.00	0.0

BAYOU LIBERTY Base Model Minimum DO = 1.68

Parameter	%Param Chg	Min D.O.	%D.O. Chg	%Param Chg	Min D.O.	%D.O. Chg
Sediment Oxygen Demand	30.0	0.91	-45.7	-30.0	2.90	72.9
Chlorophyll/Algae(phyto) Ratio	30.0	1.68	0.0	-30.0	1.68	0.0
Stream Velocity	30.0	1.91	13.9	-30.0	1.52	-9.6
Initial Temperature	2.0	1.17	-30.6	-2.0	2.29	36.4
CBOD1 Aerobic Decay Rate	30.0	1.60	-4.7	-30.0	1.77	5.7
CBOD1 Settling Rate	30.0	1.59	-5.4	-30.0	1.79	6.6
NBOD Decay Rate	30.0	1.66	-1.3	-30.0	1.70	1.5
NBOD Settling Rate	30.0	1.68	0.3	-30.0	1.67	-0.4

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

Stream Dispersion	30.0	1.69	0.8	-30.0	1.66	-1.0
Stream Reaeration	30.0	2.83	68.4	-30.0	0.81	-51.9
Headwater Flow	30.0	1.75	4.2	-30.0	1.61	-4.2
Headwater DO	30.0	1.68	0.0	-30.0	1.68	0.0
Headwater CBOD1	30.0	1.68	-0.2	-30.0	1.68	0.2
Headwater NBOD	30.0	1.68	0.0	-30.0	1.68	0.0
Stream Depth	30.0	1.48	-12.0	-30.0	2.06	22.5
Wasteload Flow	30.0	1.94	15.6	-30.0	1.38	-17.8
Wasteload Temperature	2.0	1.68	0.0	-2.0	1.68	0.0
Wasteload DO	30.0	1.69	0.4	-30.0	1.67	-0.4
Wasteload CBOD1	30.0	1.57	-6.6	-30.0	1.80	7.3
Wasteload NBOD	30.0	1.67	-0.3	-30.0	1.68	0.3
Lower Boundary Temperature	2.0	1.68	0.0	-2.0	1.68	0.0
Lower Boundary DO	30.0	1.68	0.0	-30.0	1.68	0.0
Lower Boundary CBOD1	30.0	1.68	0.0	-30.0	1.68	0.0
Lower Boundary NBOD	30.0	1.68	0.0	-30.0	1.68	0.0

BAYOU PAQUET Base Model Minimum DO = 1.84

Parameter	%Param Chg	Min D.O.	%D.O. Chg	%Param Chg	Min D.O.	%D.O. Chg
Sediment Oxygen Demand	30.0	1.70	-7.5	-30.0	1.97	7.2
Chlorophyll/Algae(phyto) Ratio	30.0	1.84	0.0	-30.0	1.84	0.0
Stream Velocity	30.0	1.20	-34.6	-30.0	3.04	65.2
Initial Temperature	2.0	1.71	-6.7	-2.0	1.96	6.5
CBOD1 Aerobic Decay Rate	30.0	1.79	-2.8	-30.0	1.91	4.1
CBOD1 Settling Rate	30.0	1.83	-0.3	-30.0	1.84	0.0
NBOD Decay Rate	30.0	1.81	-1.3	-30.0	1.87	1.6
NBOD Settling Rate	30.0	1.85	0.9	-30.0	1.82	-1.1
Stream Dispersion	30.0	1.89	2.6	-30.0	1.78	-3.0
Stream Reaeration	30.0	2.93	59.6	-30.0	0.88	-52.3
Headwater Flow	30.0	1.85	0.5	-30.0	1.83	-0.5
Headwater DO	30.0	1.84	0.0	-30.0	1.84	0.0
Headwater CBOD1	30.0	1.84	0.0	-30.0	1.84	0.0
Headwater NBOD	30.0	1.84	0.0	-30.0	1.84	0.0
Stream Depth	30.0	1.83	-0.6	-30.0	1.26	-31.6
Wasteload Flow	30.0	1.85	0.9	-30.0	1.81	-1.3
Wasteload Temperature	2.0	1.84	0.0	-2.0	1.84	0.0
Wasteload DO	30.0	1.84	0.0	-30.0	1.84	0.0

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL

Subsegments 040905, 040906, 040907, and 040908

Originated: September 21, 2011

Wasteload CBOD1	30.0	1.81	-1.6	-30.0	1.86	1.5
Wasteload NBOD	30.0	1.84	0.0	-30.0	1.84	0.0
Lower Boundary Temperature	2.0	1.84	0.0	-2.0	1.84	0.0
Lower Boundary DO	30.0	1.84	0.0	-30.0	1.84	0.0
Lower Boundary CBOD1	30.0	1.84	-0.1	-30.0	1.84	0.1
Lower Boundary NBOD	30.0	1.84	0.0	-30.0	1.84	0.0

DRAINAGE DITCH 22 Base Model Minimum DO = 5.24

Parameter	%Param Chg	Min D.O.	%D.O. Chg	%Param Chg	Min D.O.	%D.O. Chg
Sediment Oxygen Demand	30.0	5.18	-1.2	-30.0	5.30	1.2
Chlorophyll/Algae(phyto) Ratio	30.0	5.24	0.0	-30.0	5.24	0.0
Stream Velocity	30.0	5.24	-0.1	-30.0	5.25	0.1
Initial Temperature	2.0	5.16	-1.6	-2.0	5.32	1.5
CBOD1 Aerobic Decay Rate	30.0	5.23	-0.3	-30.0	5.26	0.3
CBOD1 Settling Rate	30.0	5.20	-0.7	-30.0	5.28	0.8
NBOD Decay Rate	30.0	5.24	0.0	-30.0	5.24	0.0
NBOD Settling Rate	30.0	5.24	0.0	-30.0	5.24	0.0
Stream Dispersion	30.0	5.24	0.0	-30.0	5.24	0.0
Stream Reaeration	30.0	5.40	3.1	-30.0	5.05	-3.6
Headwater Flow	30.0	5.25	0.1	-30.0	5.24	-0.1
Headwater DO	30.0	5.27	0.6	-30.0	5.21	-0.6
Headwater CBOD1	30.0	5.24	0.0	-30.0	5.24	0.0
Headwater NBOD	30.0	5.24	0.0	-30.0	5.24	0.0
Stream Depth	30.0	5.18	-1.1	-30.0	5.33	1.7
Wasteload Flow	30.0	5.21	-0.5	-30.0	5.28	0.8
Wasteload Temperature	2.0	5.24	0.0	-2.0	5.24	0.0
Wasteload DO	30.0	6.00	14.5	-30.0	4.15	-20.8
Wasteload CBOD1	30.0	5.19	-1.1	-30.0	5.30	1.1
Wasteload NBOD	30.0	5.24	0.0	-30.0	5.24	0.0
Lower Boundary Temperature	2.0	5.24	0.0	-2.0	5.24	0.0
Lower Boundary DO	30.0	5.24	0.0	-30.0	5.24	0.0
Lower Boundary CBOD1	30.0	5.24	0.0	-30.0	5.24	0.0
Lower Boundary NBOD	30.0	5.24	0.0	-30.0	5.24	0.0

DRAINAGE DITCH 20 Base Model Minimum DO = 4.50

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

Parameter	%Param Chg	Min D.O.	%D.O. Chg	%Param Chg	Min D.O.	%D.O. Chg
Sediment Oxygen Demand	30.0	4.28	-4.9	-30.0	4.72	4.9
Chlorophyll/Algae(phyto) Ratio	30.0	4.50	0.0	-30.0	4.50	0.0
Stream Velocity	30.0	4.52	0.3	-30.0	4.53	0.5
Initial Temperature	2.0	4.23	-6.1	-2.0	4.77	6.0
CBOD1 Aerobic Decay Rate	30.0	4.46	-0.8	-30.0	4.54	0.8
CBOD1 Settling Rate	30.0	4.21	-6.5	-30.0	4.82	7.1
NBOD Decay Rate	30.0	4.48	-0.4	-30.0	4.52	0.4
NBOD Settling Rate	30.0	4.50	0.1	-30.0	4.50	-0.1
Stream Dispersion	30.0	4.50	0.0	-30.0	4.50	0.0
Stream Reaeration	30.0	5.04	12.0	-30.0	3.66	-18.7
Headwater Flow	30.0	4.75	5.5	-30.0	4.15	-7.7
Headwater DO	30.0	4.80	6.6	-30.0	4.20	-6.6
Headwater CBOD1	30.0	4.48	-0.4	-30.0	4.52	0.4
Headwater NBOD	30.0	4.50	0.0	-30.0	4.50	0.0
Stream Depth	30.0	4.38	-2.7	-30.0	4.67	3.7
Wasteload Flow	30.0	4.20	-6.6	-30.0	4.87	8.3
Wasteload Temperature	2.0	4.50	0.0	-2.0	4.50	0.0
Wasteload DO	30.0	4.57	1.5	-30.0	4.43	-1.5
Wasteload CBOD1	30.0	4.11	-8.6	-30.0	4.89	8.6
Wasteload NBOD	30.0	4.48	-0.4	-30.0	4.52	0.4
Lower Boundary Temperature	2.0	4.50	0.0	-2.0	4.50	0.0
Lower Boundary DO	30.0	4.50	0.0	-30.0	4.50	0.0
Lower Boundary CBOD1	30.0	4.50	0.0	-30.0	4.50	0.0
Lower Boundary NBOD	30.0	4.50	0.0	-30.0	4.50	0.0

DRAINAGE DITCH 4 Base Model Minimum DO = 4.11

Parameter	%Param Chg	Min D.O.	%D.O. Chg	%Param Chg	Min D.O.	%D.O. Chg
Sediment Oxygen Demand	30.0	3.88	-5.5	-30.0	4.33	5.5
Chlorophyll/Algae(phyto) Ratio	30.0	4.11	0.0	-30.0	4.11	0.0
Stream Velocity	30.0	4.07	-1.0	-30.0	4.18	1.7
Initial Temperature	2.0	3.84	-6.5	-2.0	4.37	6.4
CBOD1 Aerobic Decay Rate	30.0	4.07	-0.9	-30.0	4.14	1.0
CBOD1 Settling Rate	30.0	3.88	-5.6	-30.0	4.35	5.9

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

NBOD Decay Rate	30.0	4.09	-0.5	-30.0	4.12	0.5
NBOD Settling Rate	30.0	4.11	0.1	-30.0	4.10	-0.1
Stream Dispersion	30.0	4.11	0.0	-30.0	4.11	0.0
Stream Reaeration	30.0	4.66	13.6	-30.0	3.26	-20.7
Headwater Flow	30.0	4.25	3.5	-30.0	3.94	-4.0
Headwater DO	30.0	4.11	0.0	-30.0	4.11	0.0
Headwater CBOD1	30.0	4.11	0.0	-30.0	4.11	0.0
Headwater NBOD	30.0	4.11	0.0	-30.0	4.11	0.0
Stream Depth	30.0	3.96	-3.4	-30.0	4.30	4.8
Wasteload Flow	30.0	3.91	-4.8	-30.0	4.39	6.9
Wasteload Temperature	2.0	4.11	0.0	-2.0	4.11	0.0
Wasteload DO	30.0	4.26	3.8	-30.0	3.95	-3.8
Wasteload CBOD1	30.0	3.78	-7.9	-30.0	4.43	7.9
Wasteload NBOD	30.0	4.09	-0.5	-30.0	4.12	0.5
Lower Boundary Temperature	2.0	4.11	0.0	-2.0	4.11	0.0
Lower Boundary DO	30.0	4.11	0.0	-30.0	4.11	0.0
Lower Boundary CBOD1	30.0	4.11	0.0	-30.0	4.11	0.0
Lower Boundary NBOD	30.0	4.11	0.0	-30.0	4.11	0.0

DRAINAGE DITCH 17 Base Model Minimum DO = 2.13

Parameter	%Param Chg	Min D.O.	%D.O. Chg	%Param Chg	Min D.O.	%D.O. Chg
Sediment Oxygen Demand	30.0	1.90	-10.8	-30.0	2.38	11.7
Chlorophyll/Algae(phyto) Ratio	30.0	2.13	0.0	-30.0	2.13	0.0
Stream Velocity	30.0	2.30	7.8	-30.0	1.98	-7.0
Initial Temperature	2.0	1.80	-15.5	-2.0	2.50	17.3
CBOD1 Aerobic Decay Rate	30.0	1.96	-8.1	-30.0	2.32	8.7
CBOD1 Settling Rate	30.0	1.43	-33.0	-30.0	3.02	41.6
NBOD Decay Rate	30.0	2.13	-0.1	-30.0	2.13	0.1
NBOD Settling Rate	30.0	2.13	0.0	-30.0	2.13	0.0
Stream Dispersion	30.0	2.13	0.0	-30.0	2.13	0.0
Stream Reaeration	30.0	3.22	51.0	-30.0	0.92	-56.8
Headwater Flow	30.0	2.29	7.3	-30.0	1.97	-7.6
Headwater DO	30.0	2.16	1.3	-30.0	2.10	-1.4
Headwater CBOD1	30.0	2.13	-0.2	-30.0	2.14	0.2
Headwater NBOD	30.0	2.13	0.0	-30.0	2.13	0.0
Stream Depth	30.0	1.78	-16.3	-30.0	2.66	24.9
Wasteload Flow	30.0	1.97	-7.8	-30.0	2.37	11.3

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
 Subsegments 040905, 040906, 040907, and 040908
 Originated: September 21, 2011

Wasteload Temperature	2.0	2.13	0.0	-2.0	2.13	0.0
Wasteload DO	30.0	2.23	4.7	-30.0	1.97	-7.8
Wasteload CBOD1	30.0	1.15	-45.9	-30.0	3.39	58.9
Wasteload NBOD	30.0	2.13	-0.1	-30.0	2.13	0.1
Lower Boundary Temperature	2.0	2.13	0.0	-2.0	2.13	0.0
Lower Boundary DO	30.0	2.13	0.0	-30.0	2.13	0.0
Lower Boundary CBOD1	30.0	2.13	0.0	-30.0	2.13	0.0
Lower Boundary NBOD	30.0	2.13	0.0	-30.0	2.13	0.0

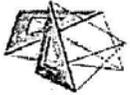
BROWNS VILL RD (DD2) Base Model Minimum DO = 4.74

Parameter	%Param Chg	Min D.O.	%D.O. Chg	%Param Chg	Min D.O.	%D.O. Chg
Sediment Oxygen Demand	30.0	4.56	-3.7	-30.0	4.91	3.7
Chlorophyll/Algae(phyto) Ratio	30.0	4.74	0.0	-30.0	4.74	0.0
Stream Velocity	30.0	4.62	-2.5	-30.0	4.90	3.6
Initial Temperature	2.0	4.54	-4.1	-2.0	4.93	4.0
CBOD1 Aerobic Decay Rate	30.0	4.72	-0.3	-30.0	4.75	0.3
CBOD1 Settling Rate	30.0	4.65	-1.8	-30.0	4.83	1.9
NBOD Decay Rate	30.0	4.73	-0.1	-30.0	4.74	0.1
NBOD Settling Rate	30.0	4.74	0.0	-30.0	4.73	0.0
Stream Dispersion	30.0	4.74	0.0	-30.0	4.74	0.0
Stream Reaeration	30.0	5.16	9.1	-30.0	4.12	-13.0
Headwater Flow	30.0	4.81	1.6	-30.0	4.65	-1.8
Headwater DO	30.0	4.92	3.9	-30.0	4.55	-3.9
Headwater CBOD1	30.0	4.73	-0.1	-30.0	4.74	0.1
Headwater NBOD	30.0	4.74	0.0	-30.0	4.74	0.0
Stream Depth	30.0	4.65	-1.8	-30.0	4.87	2.8
Wasteload Flow	30.0	4.55	-4.0	-30.0	4.98	5.2
Wasteload Temperature	2.0	4.74	0.0	-2.0	4.74	0.0
Wasteload DO	30.0	4.92	3.8	-30.0	4.55	-3.8
Wasteload CBOD1	30.0	4.63	-2.3	-30.0	4.84	2.3
Wasteload NBOD	30.0	4.73	-0.1	-30.0	4.74	0.1
Lower Boundary Temperature	2.0	4.74	0.0	-2.0	4.74	0.0
Lower Boundary DO	30.0	4.74	0.0	-30.0	4.74	0.0
Lower Boundary CBOD1	30.0	4.74	0.0	-30.0	4.74	0.0
Lower Boundary NBOD	30.0	4.74	0.0	-30.0	4.74	0.0

Appendix J – Public Comments and Response to Comments

Appendix J1 – Wildlife and Fisheries Comments

See 2/9



Brigette Firmin/R4/FWS/DOI
06/09/2011 10:01 AM

To Robert V Smith/R4/FWS/DOI@FWS
cc
bcc
Subject Fw: LDEQ TMDL PUBLIC NOTICE

FYI

----- Forwarded by Brigette Firmin/R4/FWS/DOI on 06/09/2011 10:00 AM -----



DÉQ PUBLIC NOTICES
<DEQ.PUBLICNOTICES@LA.GOV>
Sent by: Department of Environmental Quality
<DEQ-TMDL303PN@LISTSERV.DOA.LA.GOV>

To DEQ-TMDL303PN@LISTSERV.DOA.LA.GOV
cc
Subject LDEQ TMDL PUBLIC NOTICE

06/09/2011 09:54 AM
Please respond to
Department of Environmental Quality
<DEQ-TMDL303PN@LISTSERV.DOA.LA.GOV>

According to our records, you have expressed an interest in receiving electronic public notification of environmental TMDL actions for facilities located in a specified parish or parishes within our state. The attached public notice document(s) solicits your comments on the TMDL action related to the activities below:

Total Maximum Daily Load
Bayou Liberty and Bayou Bonfouca Watersheds (Subsegments 040905, 040906, 040907 and 040908)



Pub-PN-LibertyBonfoucaTMDL.doc

2011 JUL 14 AM 11:13
DEQ - OES

This project has been reviewed for effects to Federal trust resources under our jurisdiction and currently protected by the Endangered Species Act of 1973 (Act). The project, as proposed,
 Will have no effect on those resources
 Is not likely to adversely affect those resources.
This finding fulfills the requirements under Section 7(a)(2) of the Act.

Debra A. Laska
Acting Supervisor
Louisiana Field Office
U.S. Fish and Wildlife Service
Date *June 29, 2011*

NCAA for GS, manatee

Final Bayou Liberty and Bayou Bonfouca Watershed TMDL
Subsegments 040905, 040906, 040907, and 040908
Originated: September 21, 2011

Appendix J2 – Louisiana Urban Stormwater Coalition Comments and LDEQ Responses

Rodney D Hendrick, Ph .D.
President, LUSC
PO Box 242
Erwinville, LA 70729
225-718-1825

**Louisiana Urban
Stormwater Coalition**

June 20, 2011

RECEIVED

2011 JUN 20 10 20

Mr. Chuck Berger, P.E.
Office of Environmental Assessment
Water Quality Assessment Division
P.O. Box 4314
Baton Rouge, LA 70831-4314

JUN 20 2011

Re: Bayou Liberty and Bayou Bonfouca Watershed TMDL for Biochemical Oxygen-Demanding Substances – Phase I Subsegment 040905, 040906, 040907 and 040908

LA. DEPARTMENT OF
PUBLIC SAFETY
OFFICE OF PUBLIC SAFETY SERVICES
FOR INDUSTRIAL PERMITS

Dear Mr. Berger,

The Louisiana Urban Stormwater Coalition (LUSC) appreciates the opportunity to comment on the above-referenced draft TMDL. The LUSC is a non-profit organization that represents MS4s in EPA Region 6. The LUSC considers the subject TMDL to be of high importance and requests additional time for its review. Currently, written comments must be received by LDEQ by 12:30 p.m., on **July 18, 2011**. We would like to request an extension of at least 30 days for the comment period on the Bayou Liberty and Bayou Bonfouca Watersheds TMDLs.

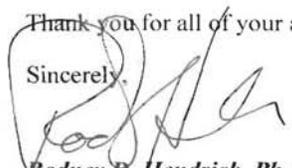
This single TMDL covers four Water Quality Subsegments (040905, 040906, 040907, and 040908), four Agency Interest Numbers (91287, 91288, 91289, and 91290, respectively), and includes in the attached documentation over 1,600 pages of information, amounting to 69 Megabytes of information. It is impossible to cover that much technical information and perform a rational and reasoned review of the data and models in 30 days. Haste causes errors and this is not what either of our organizations want.

Additionally we have requested a considerable amount of the support information that is needed for rational review and this may be a considerable additional mass of documents to review. The public records request has not yet been filled. Please add at least an additional 30 days to the comment period.

Should you have any questions regarding the written comments of the LUSC, please do not hesitate to contact me at (225) 718-1825.

Thank you for all of your assistance and cooperation.

Sincerely,



Rodney D. Hendrick, Ph.D.
President, LUSC

RECEIVED

JUN 20 2011

LDEQ

Chuck Berger

From: Chuck Berger
Sent: Thursday, June 23, 2011 1:57 PM
To: 'Hendrick, Rodney D.'
Cc: Melvin "Mitch" Mitchell
Subject: RE: Bayou Liberty & Bayou Bonfouca Watersheds TMDL for BOD Substances - Phase I

Dr. Hendrick,

We have received your request to extend the comment period by 30 days. After much consideration, we have determined that we can provide an additional 14 days to the comment period. Just as with the original public notice, the notice of the extension will be published in newspapers and sent out through LDEQ's TMDL listserver. The notice will include all details regarding the extension.

THANKS,

CHUCK BERGER, P.E.
MANAGER
WATER QUALITY MODELING /TMDL SECTION
WATER PERMITS DIVISION
LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY
PHONE: (225)- 219-3366

"People seem not to see that their opinion of the world is also a confession of their character." - Ralph Waldo Emerson

From: Hendrick, Rodney D. [<mailto:RHendrick@agcenter.lsu.edu>]
Sent: Tuesday, June 14, 2011 2:22 PM
To: Chuck Berger
Subject: Bayou Liberty & Bayou Bonfouca Watersheds TMDL for BOD Substances - Phase I

We would like to request an extension of at least 30 days for the comment period on the Bayou Liberty and Bayou Bonfouca Watersheds TMDLs. These TMDLs cover 4 stream segments and include in the attached documentation over 1,600 pages of information, some 69 Megabytes of information. It is impossible to cover that much technical information and perform a rational and reasoned review of the data in 30 days. Haste causes errors and this not what either of our organizations want.

Additionally we have requested a considerable amount of the support information that is needed for rational review and this may be a considerable additional mass of documents to review.

Please add at least an additional 30 days to the comment period.

Sincerely
Rodney Hendrick, Ph. D.
President, Louisiana Urban Stormwater Coalition

Appendix J3 – Lake Pontchartrain Basin Foundation Comments and LDEQ Responses

LAKE PONTCHARTRAIN BASIN FOUNDATION
SAVE OUR COAST SAVE OUR LAKE

July 29, 2011

Mr. William C. Berger
Office of Environmental Services
Water Permits Division
P.O. Box 4313
Baton Rouge, Louisiana, 70821-4313.

Dear Mr. Berger.

The Lake Pontchartrain Basin Foundation (LPBF) has had the opportunity to review the Draft Bayou Liberty and Bayou Bonfouca Watershed TMDL for Biochemical Oxygen-Demanding Substances- Phase I and would like to submit the following comments into the record.

Tables 12, 14, 16, and 18 show the TMDLs for Bayous Liberty and Bonfouca and their tributaries Bayous Vincent and Paquet.

- The tables indicate vastly lower load reductions for the winter months compared to the summer months. Having vast seasonal differences in reductions could become confusing.
- The TMDL states that most of the sources are thought to be man-made. As such, these sources will have to be addressed by repair or BMPs. The reality is that an 80% reduction in the summer will also be an 80% reduction in the winter.
- The TMDL makes it obvious that it is the summer reductions that are of the greatest importance because they represent the critical conditions. I would recommend that the summer and winter reductions match to avoid confusion. This is the case for other TMDLs written for the Pontchartrain Basin, including Colyell Creek and Selser's Creek.
- Finally, on page 29, text indicates that the summer and winter reductions need to be the same.

Figure 10 on page 33 states that it represents the Bayou Bonfouca summer projection for a target D.O. level of 2.3 mg/l. The graph, however, does not show the D.O. levels going down to 2.3 mg/l. It actually appears to be the same graph as Figure 8. Figure 11, the alternate projection for Bayou Liberty, does show the D.O. levels going down to 2.3 mg/l.

It is stated in the TMDL that ambient monitoring site WQN 0301 was used to determine critical conditions. However, this site is also located south of Hwy 190 on Bayou Bonfouca, an area that the TMDL states is tidally influenced. The site is also upstream of the confluence with Bayou Liberty and would not represent the input from that major tributary. Perhaps sites more upstream (out of the tidal zone) on both Bayou Bonfouca and Liberty would be most representative of each stream individually.

The LPBF thanks LDEQ for the opportunity to comment on this TMDL and looks forward to continuing to work together to improve water quality.

Sincerely,



Andrea Bourgeois-Calvin, PhD.

Water Quality Program Director



BOBBY JINDAL
GOVERNOR

PEGGY M. HATCH
SECRETARY

State of Louisiana
DEPARTMENT OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL SERVICES

August 29, 2011

Andrea Bourgeois-Calvin, Ph.D.
Water Quality Program Director
Lake Pontchartrain Basin Foundation
P.O. Box 6965
Metairie, LA 70009-6965

RE: LDEQ Response to Comments for LDEQ's *Draft Bayou Liberty and Bayou Bonfouca Watershed Total Maximum Daily Load (TMDL) for Biochemical Oxygen-Demanding Substances—Phase I (5/6/2011)*

Dear Dr. Bourgeois-Calvin,

The referenced TMDL was public noticed on June 10, 2011 with a comment period deadline of July 18th, 2011 at 12:30 pm. On June 13th and 14th, 2011, LDEQ received a requests to extend the comment period by 30 days from St. Tammany Parish and the Louisiana Urban Stormwater Coalition, respectively. On June 29th, 2011, LDEQ issued a public notice, extending the comment period to August 1st, 2011 at 12:30 pm. The following official public comments were received from the Lake Pontchartrain Basin Foundation (LPBF) on July 29th, 2011 at 9:00 am. The Louisiana Department of Environmental Quality (LDEQ) appreciates your interest and comments for the above referenced TMDL and submits the following responses.

LPBF Comment No. 1: Tables 12, 14, 16, and 18 indicate vastly lower load reductions for the winter months compared to the summer months. Having vast seasonal differences in reductions could be confusing.

LPBF Comment No. 2: The TMDL states that most of the sources are thought to be man-made. As, such, these sources will have to be addressed by repair or BMPs. The reality is that an 80% reduction in the summer will also be an 80% reduction in the winter.

LPBF Comment No. 3: The TMDL makes it obvious that it is the summer reductions that are of the greatest importance because they represent the critical conditions. I would recommend that the summer and winter reductions match to avoid confusion. This is the case for other TMDLs written for the Pontchartrain Basin, including Colyell Creek and Selser's Creek.

Andrea Bourgeois-Calvin, Ph.D.

Response to Comments for *Draft Bayou Liberty/ Bayou Bonfouca Watershed TMDL for Biochemical Oxygen-Demanding Substances—Phase I*

Page 2 of 3

LPBF Comment No. 4: On Page 29, text indicates that the summer and winter reductions need to be the same.

LDEQ Response to Comments No. 1-4: Load reductions for the winter critical season are typically less than load reductions required for the summer critical season. However, loading enters the waterbody continuously throughout the year and best management practices are typically applied throughout the year, not on a seasonal basis. The LDEQ agrees that seasonal differences in reductions may be confusing in the case of the Bayou Bonfouca/Bayou Liberty watershed. The LDEQ had modified the report to show equivalent load reduction percentages for the summer and winter critical seasons.

LPBF Comment No. 5: Figure 10 on page 33 states that it represents the Bayou Bonfouca summer projection for a target dissolved oxygen (DO) level of 2.3 mg/l. The graph, however, does not show the DO levels going down to 2.3 mg/l. It actually appears to be the same graph as Figure 8. Figure 11, the alternate projection for Bayou Liberty, does show the DO levels going down to 2.3 mg/l.

LDEQ Response to Comment No. 5: Figures 8 and 10 present plots of the results for existing and alternative criteria, respectively for Bayou Bonfouca. As stated on pages 30 and 31 of the report, Bayou Bonfouca required load reductions to meet the existing DO criteria of 5.0 mg/L above Highway 433 (Subsegment 040906), but not below Highway 433 (Subsegment 040907). Below Highway 433, load reductions were also not required to meet proposed DO target of 2.3 mg/L. In the reaches upstream of Hwy 433, the DO criteria must be met in all tributaries as well as the mainstem. In order for the tributaries to meet the criteria, the minimum DO level in the mainstem turned out to be well above the 2.3 mg/l criteria. Therefore, there was only a small difference between Figures 8 and 10, upstream of Highway 433 and no difference downstream of 433.

In regards to Figures 9 and 11, Bayou Liberty did require load reductions to meet the existing criteria in Subsegment 040905, below Highway 190. Load reductions were not required to meet the proposed DO target and the model results fell to a minimum value of 2.27 mg/L for those reaches.

LPBF Comment No. 6: It is stated in the TMDL that ambient monitoring site WQN 0301 was used to determine critical conditions. However, this site is also located south of Hwy 190 on Bayou Bonfouca, an area that the TMDL states are tidally influenced. The site is also upstream of the confluence with Bayou Liberty and would not represent the input from that major tributary. Perhaps sites more upstream (out of the tidal zone) on both Bayou Bonfouca and Liberty would be most representative of each stream individually.

LDEQ Response to Comment No. 6: In this case, the critical condition of interest is the temperature. The temperature value obtained from this site was used in Data Type 11 – Initial Conditions. Parameters set in the Data Type 11 serve only as starting points for the iterative algorithm resolution technique used by LAQUAL and do not readily impact the model as a

Andrea Bourgeois-Calvin, Ph.D.
Response to Comments for *Draft Bayou Liberty/ Bayou Bonfouca Watershed TMDL for
Biochemical Oxygen-Demanding Substances—Phase I*
Page 3 of 3

boundary condition would. WQN 0301 was selected to calculate the critical season temperature for this TMDL due to the long term period of record available versus the short period of record available for the other sites (WQN Sites 1076, 1077, and 1078). In addition, the difference between the 90th percentile temperatures for WQN site 0301 and the other WQN sites was only 1.0 degrees Celsius. This difference was insignificant, considering how the data was being used.

The draft TMDL report can be viewed at:

http://www.deq.louisiana.gov/portal/portals/0/technology/tmdl/pdf/Draft_Liberty_Bonfouca_TMDL_06062011.pdf.

The comments and public notices can be found in LDEQ's Electronic Document Management System (EDMS) under the Agency Interest numbers 91287, 91288, 91289, and 91290. Please see EDMS Document ID Nos. 8067080, 8067079, 8000999, 8055277 and 8021636. The date of the final report is August 29th, 2011. The final report and all responses to comments will be available in EDMS and on LDEQ's TMDL website upon submittal to EPA. EDMS and the TMDL website can be accessed through any public library computer, LDEQ Headquarters, or LDEQ Regional Offices. In addition, copies of the report and all associated documents can be obtained by submitting a public records request to LDEQ's Customer Service Center. The Customer Service Center can be contacted by calling toll free at (866)-896-LDEQ or emailing DEQ-CustomerServiceCenter@la.gov.

Again, LDEQ appreciates your interest and comments for this TMDL.

Sincerely,



Mr. William C. Berger, Jr., P.E., Manager
Water Quality Modeling/TMDL Section
Water Permits Division

cc: Sam L. Phillips, Assistant Secretary
Melvin C. Mitchell, Administrator, Water Permits Division
Karen Vidrine, ECS Staff, Water Quality Modeling/TMDL Section
Yvonne Wingate-Baker, TMDL-Permit Coordinator, Water Permits Division

Appendix J4 – St. Tammany Parish Comments and LDEQ Responses

Chuck Berger

From: Elizabeth D. Smythe [edsmythe@stpgov.org]
Sent: Monday, August 01, 2011 12:15 PM
To: Chuck Berger
Cc: Bill Oiler; John E. Smith; Greg Gordon; Paul Carroll; Sabrina Schenk; Jay Watson; dodell@cityofslidell.org; Heather Salyer
Subject: STP Review Comments_Bayou Liberty and Bayou Bonfouca Watershed TMDL for Biochemical Oxygen-Demanding Substances - Phase I
Attachments: Bayou Liberty TMDL_STP Review Comments 080111.pdf; Bayou Liberty TMDL_STP Review Comments 080111.doc
Importance: High

Dear Mr. Berger,

St Tammany Parish is pleased to submit public comments for the "*Bayou Liberty and Bayou Bonfouca Watershed TMDL for Biochemical Oxygen-Demanding Substances - Phase I (Subsegments 040905, 040906, 040907 and 040908)*".

Please accept these emailed comments; the executed original will be sent to you by U.S. Mail.

Regards,
deEtte

E. deEtte Smythe, PhD
Department of Engineering
St. Tammany Parish
21490 Koop Drive
Mandeville, LA 70471
(985) 898-2552
edsmythe@stpgov.org

"Excellence is not a destination, but a journey." (Author unknown)



ST. TAMMANY PARISH
DEPARTMENT OF ENGINEERING
21490 KOOP DRIVE
P.O. BOX 628
COVINGTON, LA 70434
PHONE: (985) 898-2552 FAX: (985) 898-5205
DR. E. DEETTE SMYTHE/REGULATORY MANAGER
edsmythe@stpgov.org

Kevin Davis
Parish President

August 1, 2011

Mr. Chuck Berger, P.E.
Office of Environmental Assessment
Water Quality Assessment Division
P.O. Box 4314
Baton Rouge, LA 70831-4314

Re: *Bayou Liberty and Bayou Bonfouca Watershed TMDL for Biochemical Oxygen-Demanding Substances – Phase I (Subsegments 040905, 040906, 040907 and 040908)*

Dear Mr. Berger,

St Tammany Parish appreciates the opportunity to comment on the above-referenced proposed TMDL. We consider the subject TMDL to be of high importance and requests that these comments be placed into the administrative record for the proposed TMDL.

Modeling results in the TMDL Report require the manmade sources must be reduced by percents varying from 0% to 80% in summer for Point Source Dischargers (WLA), Non-Point Sources and the City of Slidell MS₄ and St Tammany Parish MS₄. The Parish is concerned that the TMDL will effectively stop development in the watershed and/or present hardships for dischargers, including major service providers and the MS₄s. Detailed review comments follow.

The Parish welcomes further review and dialogue with LDEQ personnel in light of the significant impact the proposed TMDL may have on development within the four Watersheds represented by the TMDL (Bayou Liberty, Bayou Paquet, Bayou Vincent and Bayou Bonfouca). Additionally, the process utilized to develop the proposed Watershed TMDL will have a far reaching impact on public and private wastewater utility operations throughout the Parish. Please be aware that the cost of any wastewater treatment improvements that will be required as a result of the proposed TMDL will be borne by ratepayers and/or taxpayers. The cost of these improvements may prove an undue burden should they have to be completed in an accelerated time frame.

Should you have any questions regarding the written comments of St Tammany Parish reviewers, please do not hesitate to contact me at (985) 898-2552.

Thank you for all of your assistance and cooperation.

Sincerely,

Dr. E. deEtte Smythe
Engineering Regulatory Manager

cc: John Smith, STP Director of Engineering
Greg Gordon, STP Director of Environmental Services
Sabrina Schenk, STP Watershed Coordinator/MS₄ Administrator
Paul Carroll, STP Drainage Engineer

St Tammany Parish review comments on the proposed, “Bayou Liberty and Bayou Bonfouca Watershed TMDL for Biochemical Oxygen-Demanding Substances – Phase I”, are as follows:

LDEQ estimates that the overall loading must be reduced by 0 - 80% to meet the current, respective DO criterias of 5.0 and 4.0 mg/L.

- Load reductions varied from zero to 80 percent as follows:
 - Bayou Vincent & Bonfouca above Hwy 433 – 77% - min DO – 4.92
 - Bayou Vincent & Bonfouca below Hwy 433 – 0% - min DO – ~4.9
 - Bayou Liberty above Hwy 190 – 80% - min DO – ~4.9
 - Bayou liberty below Hwy 190 – 38% - min DO – 4.89
 - Bayou Paquet – 35% - min DO – 4.01

Technical Summary (page v) Phase I Permit Implementation

1. New discharges of oxygen-demanding loads:

In general, LDEQ does not intend to permit additional discharges of oxygen-demanding loads. However, in the event that a proposed or existing facility can meet one of the criteria listed below, LDEQ may permit the new discharge. The typical permit limits will be 5 mg/L BOD5 / 2 mg/L NH3 / 5 mg/L DO. 2.

2. Existing discharges of oxygen demanding loads:

The Phase I reductions for existing dischargers in the Bayou Liberty and Bayou Bonfouca Watersheds are presented in TMDL Tables 8 - 11. Existing facilities discovered to be discharging oxygen-demanding loads without LPDES permits as of the TMDL approval date are to be permitted in accordance with the limits established for existing facilities with permits. Unpermitted facilities that are newly activated or reactivated and discharging after the TMDL approval date may be subjected to enforcement actions and will be required to tie into regional collection and treatment systems, once those systems are available. Once the TMDL is approved, existing facilities may have up to 3 years from their next permit renewal date to meet the interim limits.

3. Nutrient monitoring (i.e., reporting for Total Nitrogen and Total Phosphorus)

Will be required for individual permits. Nutrient monitoring will be added to each general permit series (LAG530000, LAG540000, LAG560000, and LAG570000) upon the next scheduled renewal of each series.

Comment No. 1 General Comment on Calibration Model Set-up

This TMDL represented an incredibly complex watershed consisting of 1600+ pages, four waterbodies (represented by four LDEQ Ambient Water Quality Monitoring Stations), two Dissolved Oxygen (DO) standards, 45 Km of receiving stream with innumerable drainage ditches and canals resulted in recommendations of up to 80% load reductions affecting 180+ permitted dischargers, two MS4s and 5700 residents and 54 commercial businesses. St Tammany Parish appreciated the additional two weeks of review time, however, found it to be inadequate for a thorough review. A TMDL so complex that it took two years to model, surely should have been granted a full eight weeks for review.

The review process was hampered by having to switch back-and-forth among various pages in order to determine the hydrology & hydrologic connections and to correlate with the corresponding water quality. For instance Table "Bayou Liberty and Bayou Bonfouca" (page 323) presents the KEY to the model set-up: the reach numbers, segment names, element numbers and locations by RKm. The vector diagram (page 321) is a stick diagram of the reaches in each of five segments indicating the inflows, confluences and sample site numbers. Other critical model set-up information was referenced only by Reach or Element Number; this was understandable because they were apparently the input datasets for modeling. Sample locations were listed by Reach rather than by RKm, forcing the reviewer to create their own cross-references.

- The reviewers respectfully request that a column be added to each of these complex spreadsheets presenting RKm information. There is an incredible wealth of information and scientific process presented in the TMDL. Providing this column allows reviewers to appreciate this body of knowledge, makes the TMDL more defensible and aids in future implementation.

Comment No. 2 - Section 2.4 Water Quality Conditions/Assessment (page ii)

There are a significant number of Impairments, Mercury, Mercury in Fish Tissue and Dissolved Oxygen) that have resulted in the 2006, 2008 and proposed 2010 303(d)-listings for subsegments 040905 and 040906 and Mercury, Mercury in Fish Tissue, Dissolved Oxygen, Chloride and Sulfates and Fecal Coliform in the 2006, 2008 and proposed 2010 303(d)-listings for subsegments 040907 and 040908.

MODEL CALIBRATION:

Comment No. 3 - Section 5.2.10 Sediment Oxygen Demand, Data Type 12 (page 20)

The Calibration Model Sensitivity Analyses (pages 37-38, Table 33) indicate that the simulated streams are almost entirely dominated by stream reaeration (K_2) and Sediment Oxygen Demand (SOD) and somewhat from initial temperature, stream depth and wasteload flow.

Sediment Oxygen Demand (SOD) and reaeration (K_2) are inversely proportional to each other and are dependent upon depth. Thus, the zero-order values for SOD and K_2 are critical to the calibration and projection scenarios; thus, to calculation of the TMDL.

From the LA Reference Stream work, in general, flowing streams have lower SOD (range 0 - 3.5 g- O_2/m^2 *day) than non-flowing ones. As has been documented, SOD/benthic demand is related to depth (up to about 3-4 feet, after which, the "zone of influence" is removed), and to stream bottom type (mud bottoms favor higher SOD). Thus, shallower streams with silt/mud bottoms, such as upper reaches of Bayou Liberty, Bonfouca and Vincent (Subsegments 040905 and 040907), would be expected to have the highest SOD values (Smythe, 2002). The deeper, tidal reaches of Bayou Bonfouca and Paquet (Subsegments 040908 and 040906) will be expected to have NO SOD because stream depths exceed 5.0ft, where the "Zone of Influence is removed from the water column.

The TMDL reports that SOD values were obtained through calibration. Calibration SOD values (20°C) ranged from a low of 0.0 g- O_2/m^2 *day to an incredibly high of 7.0 g- O_2/m^2 *day in Bayou Vincent Reaches #3, 6, 8 and 10 (reflecting the extremely high NPS loading between BV02 and BV03) and 3.6 g- O_2/m^2 *day in Reach #20 (reflecting the extremely high NPS loading directly downstream of BB02), see exhibit below.

- The Parish concurs that the calibration SOD values exhibited throughout most of the Bayou Liberty Watershed may be supported due to loading & depths, and are corroborated with the LA Reference Streams Study.
- However, the SOD values in the summer critical projection scenario are problematic because they do NOT reflect Natural Background subtracted out and allocations are based upon the entire Benthic Demand.

MODEL PROJECTION SCENARIOS

Comment No. 5 - Section 6.2.6 Reaeration Rates, Carbonaceous BOD Decay and Settling Rates, Nitrogenous BOD Decay and Settling Rates, Data Type 12 and 15 (page 27)

It was stated in the TMDL report that, "The reaeration rate equations, CBOD decay and settling rates, NBOD decay and settling rates, and the fractions converting settled CBOD and settled NBOD to SOD were not changed from the calibration." Since the calibration was extremely sensitive to reaeration and SOD and somewhat sensitive to temperature, it is essential that these values and relationships be confirmed in the calibration so as not to compromise the projections (and the TMDL allocations).

The general protocol with TMDLs has been to subtract out natural background loads in order to appropriately allocate loads. A section in the TMDL report was devoted to the Reference Stream Study, but the summer critical projection scenario does NOT appear to have been adjusted by Natural Background Loads.

- Background SOD and Total Benthic Load should never be less than that observed in the Louisiana Reference Streams. Please verify that the values used in the projection scenarios are representative of this fact.
- The Parish requests that consideration be given to using appropriate Reference Stream loadings and kinetics to Bayou Liberty TMDL projection scenarios. This will result in a more robust, defensible TMDL.

Comment No. 6 - Section 6.2.7 Sediment Oxygen Demand, Nonpoint Sources, Headwaters, Wasteloads Data Types 12, 19, 20, 21, 22, 24, 25 and 26 (page 27)

In the TMDL, SOD was reduced to $0.0 \text{ g-O}_2/\text{m}^2\cdot\text{day}$ for the summer critical conditions in ALL Reaches #1. With stream depths measuring only inches in the headwaters (BV01 and BV02) mud-bottomed stream, removal of SOD to concentrations lower than the $1.72 \text{ g-O}_2/\text{m}^2\cdot\text{day}$ that was characterized for the average of flowing Louisiana Reference Streams, seems indefensible

As the TMDL is implemented and dischargers are held to more stringent discharge limitations, the existing stream SOD is resuspended and oxidized by bacteria in the water column and the benthic load should decrease to the level that is documented for an appropriate Louisiana Reference Stream. In the case of this TMDL, where the LDEQ apparently intended to use an average for the flowing Reference Streams (SOD= $1.72 \text{ g-O}_2/\text{m}^2\cdot\text{day}$). This should be the lowest value found in the stream reaches that do not exceed depth of 5.0 ft. All Reaches deeper than that should have NO SOD influence and NO resuspended CBOD or NBOD.

If SOD in this summer projection model is brought back to the to a Reference Stream concentration of as little as $1.72 \text{ g-O}_2/\text{m}^2\cdot\text{day}$, the modeled dissolved oxygen still may not meet the 5.0 mg/L standard. Thus, another model adjustment could be made in the projection. The Parish suggests that at this point LDEQ's lower decay rates already built into the summer projection scenario will be appropriate (as indicated by the Michaelis-Menton relationships between bacterial populations and substrate concentrations, below)².

² Decay rates (K_d and K_n) that were used in calibration were also applied in the summer-critical 80% removal scenario. The Louisiana Technical Procedures Manual states that this is the appropriate protocol to use for TMDL development

- The Parish concurs that the LTP protocol calling for subtracting out the natural background loads is appropriate. This begs the question: Why was a $0.0 \text{ g-O}_2/\text{m}^2\cdot\text{day}$ natural background uniformly applied throughout the waterbody (all 90 reaches)?
- The Parish requests clarification for why no natural background load was accounted for in the Summer Projection Scenario?
- The Parish requests that consideration be given to using appropriate Reference Stream loadings and kinetics to the projection scenarios. This will result in a more robust, defensible TMDL.

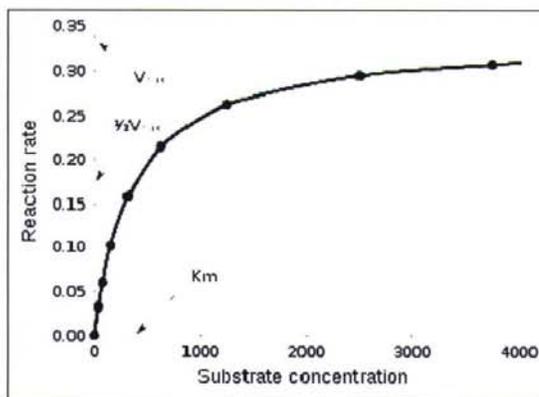
Comment No. 7 - Section 6.2.8 Boundary Conditions, Data Type 27 (page 29)

It is apparent from the water quality samples obtained during the Intensive Survey, that TOC is being added to the Watershed at impaired LOWER reaches (Subsegments 040906 and 040908). Wetland seepage is very low in solids and is high in color (from the dissolved tannins); it would be expected to remain in the water column, not dropped out to be resuspended at a later time. These constituents are naturally occurring and will remain even after TMDL allocations are promulgated.

Although Coastal Plains Streams are not referenced in the Louisiana Reference Stream study, it seems apparent to the Parish reviewers that Subsegments 040906 and 040908, are naturally dystrophic. With brackish water inflow, tidal influence tends to dominate the transport phenomenon, kinetics and conversions. These LOWER reaches are dominated by the Lake Pontchartrain influent and seepage from adjacent wetlands.

Additionally, from the Louisiana Reference Stream Studies, wetlands have been demonstrated to discharge constituents that contribute to low DO in receiving waters as seen in the LOWER Reaches

(LTP, 2010). However, scientific literature suggests that another protocol could be considered. In any Michaelis-Menton scenario, bacterial viability is dependent upon substrate concentration, as shown in the example below. As the TMDL is implemented and the BOD [substrate] concentrations are reduced in the water column, bacterial populations will decrease; thus, decay rates would be expected to decrease. The decrease in decay rates will allow for better assimilative capacity and faster DO recovery in the waterbody.



(Subsegments 040906 and 040908).

As discussed previously, "LDEQ assumes these benthic loads are long-term loads brought to the stream by various sources throughout the year". SOD and consequently resuspended CBOD and NBOD would be expected to be far less in the LOWER reaches (Subsegments 040906 and 040908) due to the scouring effect from tidal washing. Additionally, the low DO may result from loads delivered by dischargers (permitted and non-permitted), but is certainly compounded by continuous, long-term BOD requirements of the wetland discharges. SOD, and resultant high resuspended CBOD and NBOD would be expected to have no influence in these Subsegments due to water depth > 5 feet.

The Parish suggests that TOC measured at the WQM stations (#1078 in Subsegment 040808, #301 in Subsegment 040907, #1077 in Subsegment 0409005 and #1076 in Subsegment 040906) are naturally dystrophic, rather than impaired. This was further corroborated by the color samples at the Historical Ambient Sites, which ranged 210 to 240 pcu. Forcing the summer critical conditions to meet a DO standard of even 4.0 mg/L in this part of the Bayou Liberty Watershed may be inappropriate. Additionally, because inherently low DO concentrations were measured in the LOWER reaches, the summer critical model forces the entire stream DO upward to greater than 7.0 mg/L in the UPPER and headwater reaches, which may not be achievable in the shallow, narrow UPPER channels.

- The Parish suggests that TOC measured at the WQM stations (#1078 in Subsegment 040808, #301 in Subsegment 040907, #1077 in Subsegment 0409005 and #1076 in Subsegment 040906) are naturally dystrophic, rather than impaired.
- LDEQ is justified in proposing to conduct a UAA for this hydrologically & geomorphologically different segment of the Bayou Liberty Watershed.

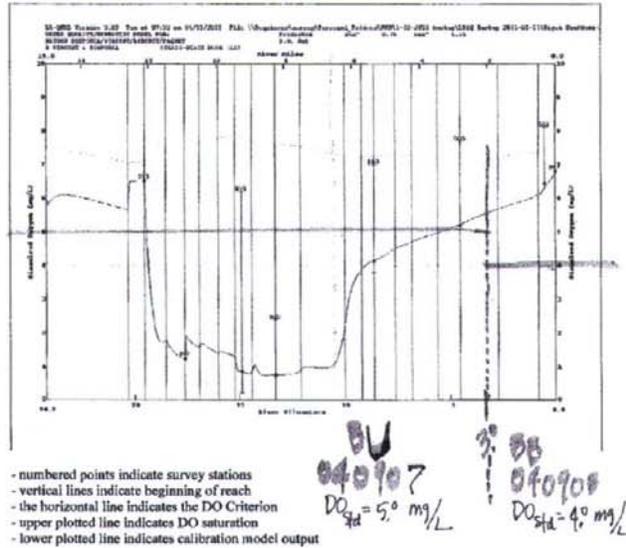
Comment No. 8 - Section 6.3 Model Discussion and Results (page 29)

Sampling during the Intensive Survey of June 15-19, 2009, verified that DO exceeded the minimum DO Standard of 4.0 mg/L in *in-situ* samples as well as average Continuous Monitoring samples (as shown in the exhibit-Figure 6 from the TMDL Report). The LDEQ Modeler recommended that NO reductions were necessary in Reaches #24-37 (Bayou Vincent and Bayou Bonfouca below Hwy 433), because the minimum DO=4.9 mg/L. Why then were the limits for dischargers in Subsegment reduced for oxygen-demanding substances and Nutrient Monitoring made a requirement for permit renewals (such as Coin du Lestin)?

Additionally, from the Input datasets for Dischargers into the Calibration Model, the majors that were sampled during the Intensive Survey of June 15-19, 2009 (Coin du Lestin, Eagle Lake MHP, Huntwyck Village, Oakmont S/D and The Meadows S/D) indicate that they are meeting their current discharge limits and are not contributing to the excessive loading in their respective Reaches.

- The Parish requests that the LDEQ re-examine the limit changes for dischargers in Subsegment 040908. Per LDEQ Modeler recommendations, there should be NO limit changes.
- Further, the Parish requests that LDEQ NOT impose Nutrient Monitoring on dischargers in Subsegment 040908.

Figure 6. Bayou Bonfouca Calibration Model Dissolved Oxygen versus River Kilometer



Additional General Comment

Literature provides relationships between CBOD and surrogates, such as TOC, that may provide a better assessment of long-term oxygen demand than CBOD for waters receiving wetland seepage (as is the case in the LOWER reaches of Selsers Creek).

The Parish wishes to thank LDEQ for researching water quality in the Watersheds that would allow utilizing TOC as a surrogate for UCBOD when simulating and allocating natural background. It was determined by LDEQ to not be a good surrogate, presumably because the upper Watershed is effluent-dominated. TOC has been found to be a good surrogate in the tannic-dominated waters receiving wetland seepage and may still be appropriate in the LOWER Subsegments that may be receiving wetland seepage.



BOBBY JINDAL
GOVERNOR

PEGGY M. HATCH
SECRETARY

State of Louisiana
DEPARTMENT OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL SERVICES

August 29, 2011

E. deEtte Smythe, Ph.D.
Engineering Regulatory Manager
St. Tammany Parish
21490 Koop Drive
P.O. Box 628
Covington, LA 70434

RE: LDEQ Response to Comments for LDEQ's *Draft Bayou Liberty and Bayou Bonfouca Watershed Total Maximum Daily Load (TMDL) for Biochemical Oxygen-Demanding Substances—Phase I (5/6/2011)*

Dear Dr. Smythe,

The referenced TMDL was public noticed on June 10, 2011 with a comment period deadline of July 18th, 2011 at 12:30 pm. On June 13th and 14th, 2011, LDEQ received a requests to extend the comment period by 30 days from St. Tammany Parish and the Louisiana Urban Stormwater Coalition, respectively. On June 29th, 2011, LDEQ issued a public notice, extending the comment period to August 1st, 2011 at 12:30 pm. The following official public comments were received from St. Tammany Parish on August 1st, 2011 at 12:15 pm. The Louisiana Department of Environmental Quality (LDEQ) appreciates your interest and comments for the above referenced TMDL and submits the following responses.

ST. TAMMANY PARISH Comment No. 1: General Comment on Calibration Model Set-up

This TMDL represented an incredibly complex watershed consisting of 1600+ pages, four waterbodies (represented by four LDEQ Ambient Water Quality Monitoring Stations), two Dissolved Oxygen (D) standards, 45 Km of receiving stream with innumerable drainage ditches and canals resulted in recommendations of up to 80% load reductions affecting 180+ permitted dischargers, two MS4s and 5700 residents and 54 commercial businesses. St Tammany Parish appreciated the additional two weeks of review time, however, found it to be inadequate for a thorough review. A TMDL so complex that it took two years to model, surely should have been granted a full eight weeks for review.

E. deEtte Smythe, Ph.D.

Response to Comments for *Draft Bayou Liberty/ Bayou Bonfouca Watershed TMDL for Biochemical Oxygen-Demanding Substances—Phase I*
Page 2 of 9

The review process was hampered by having to switch back-and-forth among various pages in order to determine the hydrology & hydrologic connections and to correlate with the corresponding water quality. For instance Table “Bayou Liberty and Bayou Bonfouca” (page 323) presents the KEY to the model set-up: the reach numbers, segment names, element numbers and locations by RKM. The vector diagram (page 321) is a stick diagram of the reaches in each of five segments indicating the inflows, confluences and sample site numbers. Other critical model set-up information was referenced only by Reach or Element Number; this was understandable because they were apparently the input datasets for modeling. Sample locations were listed by Reach rather than by RKM, forcing the reviewer to create their own cross-references.

- The reviewers respectfully request that a column be added to each of these complex spreadsheets presenting RKM information. There is an incredible wealth of information and scientific process presented in the TMDL. Providing this column allows reviewers to appreciate this body of knowledge, makes the TMDL more defensible and aids in future implementation.

LDEQ Response No. 1: The river kilometers (RKM) have been added to the survey data tables.

ST. TAMMANY PARISH Comment No. 2: Section 2.4 Water Quality Conditions/Assessment (pageii)

There are a significant number of Impairments, Mercury, Mercury in Fish Tissue and Dissolved Oxygen) that have resulted in the 2006, 2008 and proposed 2010 303(d)-listings for subsegments 040905 and 040906 and Mercury, Mercury in Fish Tissue, Dissolved Oxygen, Chloride and Sulfates and Fecal Coliform in the 2006, 2008 and proposed 2010 303(d)-listings for subsegments 040907 and 040908.

LDEQ Response No. 2: The impairments are as reported in the 2006 and draft 2008 and 2010 303(d) lists.

ST. TAMMANY PARISH Comment No. 3: Section 5.2.10 Sediment Oxygen Demand, Data Type 12 (page 20)

The Calibration Model Sensitivity Analyses (pages 37-38, Table 33) indicate that the simulated streams are almost entirely dominated by stream reaeration (K_2) and Sediment Oxygen Demand (SOD) and somewhat from initial temperature, stream depth and wasteload flow.

Sediment Oxygen Demand (SOD) and reaeration (K_2) are inversely proportional to each other and are dependent upon depth. Thus, the zero-order values for SOD and K_2 are critical to the calibration and projection scenarios; thus, to calculation of the TMDL.

From the LA Reference Stream work, in general, flowing streams have lower SOD (range 0 – 3.5 g- O_2 /m²*day) than non-flowing ones. As has been documented, SOD/benthic demand is related to depth (up to about 3-4 feet, after which, the “zone of influence” is removed), and to

E. deEtte Smythe, Ph.D.

Response to Comments for *Draft Bayou Liberty/ Bayou Bonfouca Watershed TMDL for Biochemical Oxygen-Demanding Substances—Phase I*

Page 3 of 9

stream bottom type (mud bottoms favor higher SOD). Thus, shallower streams with silt/mud bottoms, such as upper reaches of Bayou Liberty, Bonfouca and Vincent (Subsegments 040905 and 040907), would be expected to have the highest SOD values (Smythe, 2002). The deeper, tidal reaches of Bayou Bonfouca and Paquet (Subsegments 040908 and 040906) will be expected to have NO SOD because stream depths exceed 5.0ft, where the “Zone of Influence is removed from the water column.

The TMDL reports that SOD values were obtained through calibration. Calibration SOD values (20°C) ranged from a low of 0.0 g-O₂/m²*day to an incredibly high of 7.0 g-O₂/m²*day in Bayou Vincent Reaches #3, 6, 8 and 10 (reflecting the extremely high NPS loading between BV02 and BV03) and 3.6 g-O₂/m²*day in Reach #20 (reflecting the extremely high NPS loading directly downstream of BB02), see exhibit below.

- The Parish concurs that the calibration SOD values exhibited throughout most of the Bayou Liberty Watershed may be supported due to loading & depth, and are corroborated with the LA Reference Streams Study.
- However, the SOD values in the summer critical projection scenario are problematic because they do NOT reflect Natural Background subtracted out and allocations are based upon the entire Benthic Demand.

LDEQ Response No. 3 Based on waterbody characteristics LDEQ did not consider any of the state’s reference streams to be representative of the Bonfouca/Liberty Watershed. In the absence of a representative reference stream, the nonpoint source (NPS) loads could not be segregated into “natural background” and “man-made” loads. In LAQUAL, the term “Background SOD” (sediment oxygen demand) refers to a baseline SOD since the model also includes an option to convert settled BOD (biochemical oxygen demand) to SOD. To clarify further, the term “Background SOD” does not mean “natural SOD” or SOD found in unimpacted streams such as the Louisiana Reference Streams.

ST. TAMMANY PARISH Comment No. 4: Section 5.2.11 CBOD Decay Rates, Data Type 12 and Section 5.2.12 NBOD Decay Rates, Data Type 13 (page 20)

UCBOD (ultimate carbonaceous biochemical oxygen demand) and UNBOD (ultimate nitrogenous biochemical oxygen demand) decay rates were based upon laboratory analyses of samples taken during the intensive survey of June 15-19, 2009. The TMDL report states that instream decay rates (“bottle rates) for CBOD (K_d) ranged from 0.042 day⁻¹ to 0.134 day⁻¹ and NBOD decay rates (K_n) ranged from 0.19 day⁻¹ to 0.451 day⁻¹. Decay rates for nitrogen (K_n) were unusually high, much higher than observed in other waterbodies in the Pontchartrain Basin. This would have the effect of utilizing oxygen faster during the decay process, potentially creating DO “hot spots”. These Reaches/sampling sites do, in fact, reflect areas of very low DO (BV02 – BB02 in Reaches #5 – 19, BL02 – BL05 in Reaches #37 – 53 and BP02 – BP03 in Reach #81), which also have the highest SODs and lowest measured DOs).

E. deEttE Smythe, Ph.D.

Response to Comments for *Draft Bayou Liberty/ Bayou Bonfouca Watershed TMDL for Biochemical Oxygen-Demanding Substances—Phase I*

Page 4 of 9

However, significantly lower rates of $K_d = 0.08 \text{ day}^{-1}$ and $K_n = 0.03 \text{ day}^{-1}$ were used to calibrate the model. Although the rationale for substituting the lower decay rates appears to bring the decay rates to a comparable equivalent, the net effect in the model is that it will require the SOD/Benthic Demand to be higher. While the model may then appear to be “calibrated”, during the projection scenarios, these higher-than-necessary SOD rates will remain unchanged and % reductions will be higher. This protocol is not supportable.

- The Parish requests that the calibrations be re-run using rates closer to “bottle rates” for K_d and K_n with the objective of being able to Model lower SOD values.

LDEQ Response No. 4: The calibration input file was modified to include the bottle rates for CBOD and NBOD decay. LDEQ could not obtain a stable calibration using the bottle rates, therefore the decay rates presented in the draft report were retained.

ST. TAMMANY PARISH Comment No. 5:Section 6.2.6 Reaeration Rates, Carbonaceous BOD Decay and Settling Rates, Nitrogenous BOD Decay and Settling Rates, Data Type 12 and 15 (page 27)

It was stated in the TMDL report that, “The reaeration rate equations, CBOD decay and settling rates, NBOD decay and settling rates, and the fractions converting settled CBOD and settled NBOD to SOD were not changed from the calibration.” Since the calibration was extremely sensitive to reaeration and SOD and somewhat sensitive to temperature, it is essential that these values and relationships be confirmed in the calibration so as not to compromise the projections (and the TMDL allocations).

The general protocol with TMDLs has been to subtract out natural background loads in order to appropriately allocate loads. A section in the TMDL report was devoted to the Reference Stream Study, but the summer critical projection scenario does NOT appear to have been adjusted by Natural Background Loads.

- Background SOD and Total Benthic Load should never be less than that observed in the Louisiana Reference Streams. Please verify that the values used in the projection scenarios are representative of this fact.
- The Parish requests that consideration be given to using appropriate Reference Stream loadings and kinetics to Bayou Liberty TMDL projection scenarios. This will result in a more robust, defensible TMDL.

LDEQ Response No. 5: Please refer to LDEQ Response # 3.

The SOD values from the mainstem and named tributaries were compared to the reference stream sites available. The SOD for most the reaches did fall above Six Mile and Pearl Creek and below all of the other reference streams. The total benthic loads for most of the reaches were above that of the reference streams. Total benthic loads were lower for a few reaches, but

E. deEtte Smythe, Ph.D.
Response to Comments for *Draft Bayou Liberty/ Bayou Bonfouca Watershed TMDL for
Biochemical Oxygen-Demanding Substances—Phase I*
Page 5 of 9

still above values obtained on Sixmile Creek and Pearl Creek. Again it should be reiterated that there was no suitable reference stream available for this watershed.

**ST. TAMMANY PARISH Comment No. 6: Section 6.207 Sediment Oxygen Demand,
Nonpoint Sources, Headwaters, Wasteloads Data Types 12, 19, 20, 21, 22, 24, 25 and 26
(page 27)**

In the TMDL, SOD was reduced to 0.0 g-O₂/m²*day for the summer critical conditions in ALL Reaches #1. With stream depths measuring only inches in the headwaters ((BV01 and BV02) mud-bottomed stream, removal of SOD to concentrations lower than the 1.72 g-O₂/m²*day that was characterized for the average of flowing Louisiana Reference Streams, seems indefensible

As the TMDL is implemented and dischargers are held to more stringent discharge limitations, the existing stream SOD is resuspended and oxidized by bacteria in the water column and the benthic load should decrease to the level that is documented for an appropriate Louisiana Reference Stream. In the case of this TMDL, where the LDEQ apparently intended to use an average for the flowing Reference Streams (SOD=1.72 g-O₂/m²*day). This should be the lowest value found in the stream reaches that do not exceed depth of 5.0 ft. All Reaches deeper that should have NO SOD influence and NO resuspended CBOD or NBOD.

If SOD I this summer projection model is brought back to the Reference Stream concentration of as little as 1.72 g-O₂/m²*day, the modeled dissolved oxygen still may not meet the 5.0 mg/L standard. Thus, another model adjustment could be made in the projection. The Parish suggests that at this point LDEQ's lower decay rates already built into the summer projection scenario will be appropriate (as indicated by the Michaelis-Menton relationships between bacterial populations and substrate concentrations, below).

- The Parish concurs that the LTP protocol calling for subtracting out the natural background loads is appropriate. This begs the question: Why was 0.0 g-O₂/m²*day natural background uniformly applied throughout the waterbody (all 90 reaches)?
- The Parish requests clarification for why no natural background load was accounted for in the Summer Projection Scenario?
- The Parish requests that consideration be given to using appropriate Reference Stream loadings and kinetics to the projection scenarios. This will result in a more robust, defensible TMDL.

LDEQ Response No. 6: LDEQ does segregate the "natural background" and "man-made" loading when suitable reference stream data is available and reductions of "natural background" loading is not required to meet the water quality standards. This is a general practice and not a requirement. Guidelines are provided in the *Louisiana Total Maximum Daily Load Technical Procedures* document. Please refer to LDEQ Response # 3.

E. deEtte Smythe, Ph.D.

Response to Comments for *Draft Bayou Liberty/ Bayou Bonfouca Watershed TMDL for Biochemical Oxygen-Demanding Substances—Phase I*

Page 6 of 9

ST. TAMMANY PARISH Comment No. 7:Section 6.2.8 Boundary Conditions, Data Type 26 (page 29)

It is apparent from the water quality samples obtained during the Intensive Survey, that TOC is being added to the Watershed at impaired LOWER reaches (Subsegments 040906 and 040908). Wetland seepage is very low in solids and is high in color (from the dissolved tannins); it would be expected to remain in the water column, not dropped out to be resuspended at a later time. These constituents are naturally occurring and will remain even after TMDL allocations are promulgated.

Although Coastal Plains Streams are not referenced in the Louisiana Reference Stream study, it seems apparent to the Parish reviewers that Subsegments 040906 and 040908, are naturally dystrophic. With brackish water inflow, tidal influence tends to dominate the transport phenomenon, kinetics and conversions. These LOWER reaches are dominated by the Lake Pontchartrain influent and seepage from adjacent wetlands.

Additionally, from the Louisiana Reference Stream Studies, wetlands have been demonstrated to discharge constituents that contribute to low DO in receiving waters as seen in the LOWER Reaches (Subsegment 040906 and 040908).

As discussed previously, "LDEQ assumes these benthic loads are long-term loads brought to the stream by various sources throughout the year". SOD and consequently resuspended CBOD and NBOD would be expected to be far less in the LOWER reaches (Subsegments 040906 and 040908) due to the scouring effect from tidal washing. Additionally, the low DO may result from loads delivered by dischargers (permitted and non-permitted), but is certainly compounded by continuous, long-term BOD requirements of the wetland discharges. SOD, and resultant high resuspended CBOD and NBOD would be expected to have no influence in these Subsegments due to water depth > 5 feet.

The Parish suggests that TOC measured at the WQM stations (#1078 in Subsegment 040808, #301 in Subsegment 040907, #1077 in Subsegment 040905 and #1076 in Subsegment 040906) are naturally dystrophic, rather than impaired. This was further corroborated by the color samples at the Historical Ambient Sites, which ranged 210 to 240 pcu. Forcing the summer critical conditions to meet a DO standard of even 4.0 mg/L in this part of the Bayou Liberty Watershed may be inappropriate. Additionally, because inherently low DO concentrations were measured in the LOWER reaches, the summer critical model forces the entire stream DO upward to greater than 7.0 mg/L in the UPPER and headwater reaches, which may not be achievable in the shallow, narrow UPPER channels.

- The Parish suggests that TOC measured at the WQM stations (#1078 in Subsegments 040908, #301 in Subsegment 040907, #1077 in Subsegment 040905 and #1076 in Subsegment 040906) are naturally dystrophic, rather than impaired.
- LDEQ is justified in proposing to conduct a UAA for this hydrologically & geomorphologically different segment of the Bayou Liberty Watershed.

E. deEtte Smythe, Ph.D.

Response to Comments for *Draft Bayou Liberty/ Bayou Bonfouca Watershed TMDL for Biochemical Oxygen-Demanding Substances—Phase I*
Page 7 of 9

LDEQ Response No. 7: The ability of the watershed to assimilate man-made, oxygen-demanding load may be hindered by the natural characteristics of the waterbody. Nonetheless, data obtained during the survey and the modeling results indicate man-made impairments do exist. In addition, LDEQ evaluated the ratio of TOC to CBOD for all sites. The results did show a general trend of lower ratios in the upper reaches and higher ratios in the lower reaches. However, a maximum value of 2.1 was observed at site 3851 (BV01, the headwaters for Bayou Vincent) and values in the lower reaches indicated the presence of man-made impairments. The approximate maximum value observed in the lower reaches was only 2.0. A minimum value of 0.4 was observed at site 3851 (BV02). Values in the upper reaches of Bayou Liberty were generally in the range of 0.7 to 0.8. Ratios obtained in the lower reaches for all waterbodies were generally in the range of 1.3 to 1.8.

ST. TAMMANY PARISH Comment No. 8:Section 6.3 Model Discussion and Results (page 29)

Sampling during the Intensive Survey of June 15-19, 2009, verified that DO exceeded the minimum DO Standard of 4.0 mg/L in in-situ samples as well as average Continuous Monitoring samples (as shown in the exhibit-Figure 6 from the TMDL Report). The LDEQ Modeler recommended that NO reductions were necessary in Reaches #24-37 (Bayou Vincent and Bayou Bonfouca below Hwy 433), because the minimum DO=4.9 mg/L. Why then were the limits for dischargers in Subsegment reduced for oxygen-demanding substances and Nutrient Monitoring made a requirement for permit renewals (such as Coin du Lestin)?

Additionally, from the Input datasets for Dischargers into the Calibration Model, the majors that were sampled during the Intensive Survey of June 15-19, 2009 (Coin du Lestin, Eagle Lake MHP, Huntwyck Village, Oakmont S/D and The Meadows S/D) indicate that they are meeting their current discharge limits and are not contributing to the excessive loading in their respective Reaches.

- The Parish requests that the LDEQ re-examine the limit changes for dischargers in Subsegment 040908. Per LDEQ Modeler recommendations, there should be NO limit changes.
- Further, the Parish requests that LDEQ NOT impose Nutrient Monitoring on dischargers in Subsegment 040908.

LDEQ Response No. 8: The projection model was revised, restoring all dischargers in Subsegment 040908 back to their current permit limits. The executed projection models indicated these dischargers can remain at their current permit limits. The report has been updated accordingly.

Nutrient monitoring became a component of the Phase I Permitting Implementation because of the nutrient impairments listed in the Integrated Report for Lake Pontchartrain Basin waterbodies. In addition EPA is pushing states to develop nutrient criteria. Nutrient monitoring

E. deEtte Smythe, Ph.D.

Response to Comments for *Draft Bayou Liberty/ Bayou Bonfouca Watershed TMDL for Biochemical Oxygen-Demanding Substances—Phase I*
Page 8 of 9

is intended to provide both LDEQ and the individual facilities with a means to assess current facility nutrient contributions and where reductions need to occur.

ST. TAMMANY PARISH Additional General Comment:

Literature provides relationships between CBOD and surrogates, such as TOC, that may provide a better assessment of long-term oxygen demand than CBOD for waters receiving wetland seepage (as is the case in the LOWER reaches of Selsers Creek).

The Parish wishes to thank LDEQ for researching water quality in the Watersheds that would allow utilizing TOC as a surrogate for UCBOD when simulating and allocating natural background. It was determined by LDEQ to not be a good surrogate, presumably because the upper Watershed is effluent-dominated. TOC has been found to be a good surrogate in the tannic-dominated waters receiving wetland seepage and may still be appropriate in the LOWER Subsegments that may be receiving wetland seepage.

LDEQ Response to additional general comment: Your comments are noted. LDEQ will continue to evaluate the relationship between TOC (Total Organic Carbon) and UCBOD (ultimate carbonaceous biochemical oxygen demand).

The draft TMDL report can be viewed at:

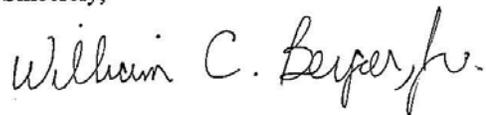
http://www.deq.louisiana.gov/portal/portals/0/technology/tmdl/pdf/Draft_Liberty_Bonfouca_TMDL_06062011.pdf.

The comments and public notices can be found in LDEQ's Electronic Document Management System (EDMS) under the Agency Interest numbers 91287, 91288, 91289, and 91290. Please see EDMS Document ID Nos. 8067080, 8067079, 8000999, 8055277 and 8021636. The date of the final report is August 29th, 2011. The final report and all responses to comments will be available in EDMS and on LDEQ's TMDL website upon submittal to EPA. EDMS and the TMDL website can be accessed through any public library computer, LDEQ Headquarters, or LDEQ Regional Offices. In addition, copies of the report and all associated documents can be obtained by submitting a public records request to LDEQ's Customer Service Center. The Customer Service Center can be contacted by calling toll free at (866)-896-LDEQ or emailing DEQ-CustomerServiceCenter@la.gov.

Again, LDEQ appreciates your interest and comments for this TMDL.

E. deEtte Smythe, Ph.D.
Response to Comments for *Draft Bayou Liberty/ Bayou Bonfouca Watershed TMDL for
Biochemical Oxygen-Demanding Substances—Phase I*
Page 9 of 9

Sincerely,



Mr. William C. Berger, Jr., P.E., Manager
Water Quality Modeling/TMDL Section
Water Permits Division

cc: Sam L. Phillips, Assistant Secretary
Melvin C. Mitchell, Administrator, Water Permits Division
Karen Vidrine, ECS Staff, Water Quality Modeling/TMDL Section
Yvonne Wingate-Baker, TMDL-Permit Coordinator, Water Permits Division

Chuck Berger

From: Chuck Berger
Sent: Thursday, June 23, 2011 1:56 PM
To: 'Elizabeth D. Smythe'
Cc: Melvin "Mitch" Mitchell
Subject: RE: Bayou Liberty & Bayou Bonfouca Watersheds TMDL for BOD Substances - Phase I

Dr. Smythe,

We have received your request to extend the comment period by 30 days. After much consideration, we have determined that we can provide an additional 14 days to the comment period. Just as with the original public notice, the notice of the extension will be published in newspapers and sent out through LDEQ's TMDL listserver. The notice will include all details regarding the extension.

THANKS,

CHUCK BERGER, P.E.
MANAGER
WATER QUALITY MODELING /TMDL SECTION
WATER PERMITS DIVISION
LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY
PHONE: (225)- 219-3366

"People seem not to see that their opinion of the world is also a confession of their character." - Ralph Waldo Emerson

From: Elizabeth D. Smythe [<mailto:edsmythe@stpgov.org>]
Sent: Monday, June 13, 2011 11:24 AM
To: Chuck Berger
Cc: Hendrick, Rodney D.
Subject: Bayou Liberty & Bayou Bonfouca Watersheds TMDL for BOD Substances - Phase I
Importance: High

Chuck,

Pertinent to the recently released, "*Bayou Liberty & Bayou Bonfouca Watersheds TMDL for BOD Substances - Phase I*", I would like to request information that was utilized in the TMDL modeling effort (Calibration or Projection):

- GPS coordinates, or shapefiles, for the following:
 - All LPDES permitted & unpermitted dischargers
 - All survey sites
 - Water quality monitoring sites (historical)
 - USGS gauging stations used to determine flows
 - MS4 boundaries (St Tammany Parish and City of Slidell)
 - Modeling Reach designations
 - RKms along stream Reaches

- Locations of former Superfund sites, including disposal areas
- Well monitoring sites
- “Live” versions of spreadsheets for:
 - All LPDES permitted & unpermitted dischargers
 - Water quality (lab, in-situ and historical)
 - Stream geometry
 - Flow
 - All other calculations utilized for the Calibrations or TMDL
- Any pictures that may be available for the survey sites

Additionally, St Tammany Parish would like to request an additional 30-day extension of time in order to complete an adequate review of the TMDL. There are four subsegments addressed in this TMDL and an exhaustive amount of information that must be read and assessed. Thus, we would like to propose that Review Comments would be submitted to LDEQ by Monday August 15, 2011.

If you have questions or comments, please feel free to contact me to discuss.
Thanks,
deEtte

E. deEtte Smythe, PhD
Department of Engineering
St. Tammany Parish
21490 Koop Drive
Mandeville, LA 70471
(985) 898-2552 office
(985) 809-6425 direct
(985) 974-1941 cell
edsmythe@stpgov.org

"Excellence is not a destination, but a journey." (Author unknown)