FINAL

LAKE EDWARDS/SMITHPORT LAKE WATERSHED TMDL FOR BIOCHEMICAL OXYGEN-DEMANDING SUBSTANCES AND NUTRIENTS

SUBSEGMENTS 100605

SURVEYED 8/16 - 18/2005

TMDL REPORT

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EXECUTIVE SUMMARY

This report presents the results of a watershed based, calibrated modeling analysis of Lake Edwards/Smithport Lake. The modeling was conducted to establish a TMDL for biochemical oxygen-demanding pollutants and nutrients for the Lake Edwards/Smithport Lake watershed. The model extends from just upstream of the Mansfield STP on Na Bonchasse Bayou to the dam at the southeast corner of Smithport Lake at the confluence with Bayou Pierre. Lake Edwards/Smithport Lake is located in north Louisiana and this subsegment includes Na Bonchasse Bayou, Siphoriem Bayou, Rambin Bayou, Caney Bayou, and Clear lake. Lake Edwards/Smithport Lake is in the Red River Basin and this study includes Water Quality Subsegment 100605. The area is sparsely populated and land use is dominated by agriculture and forestry. There are eight permitted dischargers located within this subsegment. Additionally there is a dam located along the southeast border of the subsegment 100605.

Input data for the calibration model was developed from data collected during the August 2005 intensive survey; data collected by LDEQ monitoring stations in the watershed; USGS drainage area and low flow publications; and data garnered from several previous LDEQ studies on nonpoint source loadings. The nonpoint source loads included nonpoint loading not associated with flow. A satisfactory calibration was achieved for the main stem. For the projection models, data was taken from ambient temperature records. The Louisiana Total Maximum Daily Load Technical Procedures, Revision 8, have been followed in this study.

The various spreadsheets that were used in conjunction with the modeling program may be found in the appendices. Water quality calibration was also based on measurements taken during the survey. Projections were adjusted to meet the dissolved oxygen criteria by reducing total nonpoint source loads.

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

Lake Edwards/Smithport Lake, Subsegment 100605, was on the 2004 303(d) list. Subsegment 100605 is found to be "not supporting" its designated use of Fish and Wildlife Propagation. It is "fully supporting" Primary and Secondary Contact Recreation and Agriculture. Lake Edwards/Smithport Lake was subsequently scheduled for TMDL development with other listed waters in the Red River Basin. The suspected causes of impairment are dissolved oxygen and nutrients. The suspected sources are natural conditions. As stated on the 2004 303(d) list, a use attainability analysis is needed for this subsegment.

This TMDL establishes load limitations for oxygen-demanding substances and goals for reduction of those pollutants. LDEQ's position, as supported by the declaratory ruling issued by Secretary Givens in response to the lawsuit regarding water quality criteria for nutrients (Sierra Club v. Givens, 710 So.2d 249 (La. App. 1st Cir. 1997), writ denied, 705 So.2d 1106 (La. 1998), is that when oxygen-demanding substances are controlled and limited in order to ensure that the dissolved oxygen criterion

is supported, nutrients are also controlled and limited. The implementation of this TMDL through future wastewater discharge permits (if required) and implementation of best management practices to control and reduce runoff of soil and oxygen-demanding pollutants from nonpoint sources in the watershed will also control and reduce the nutrient loading from those sources.

A calibrated water quality model for the watershed was developed and projections were modeled to quantify the non-point source load reductions which would be necessary in order for Lake Edwards/Smithport Lake, subsegment 100605 to comply with its established water quality standards and criteria. This report presents the results of that analysis.

There are eight permitted dischargers located in this subsegment. All but one of the dischargers located on this waterbody are small and need not be included in a model of this scale because it is unlikely that they are having an impact on the targeted waterbody due to the small load and/or the distance from the waterbody named in the 303(d) lists. These dischargers are accounted for as nonpoint loading through the process of calibration. They fall within one of several state or regional policies that govern permit limitations. Current permit information and discharge monitoring reports were reviewed for all of these facilities. A discharger inventory list is presented at the end of this summary in Table 2.

Only Rambin Bayou was flowing at the time of the survey. The survey was conducted during a period of low flow, therefore, all other tributaries located along Lake Edwards/Smithport Lake were assumed to be intermittent for the calibration and the projection runs.

The results of the projection modeling for subsegment 100605 show that the water quality standard for dissolved oxygen can be maintained during the summer critical season with a 100% reduction of man-made nonpoint source pollution and 40% reduction of natural background source pollution. The minimum DO is 4.84 mg/l. Kisatchie Bayou was the reference stream used to calculate background conditions. The calculations are found in Appendix F5.

Table 1. Total Maximum Daily Load (Sum of UCBOD, UNBOD, and SOD)

ALLOCATION	SUMMER		WINTER	
	% Reduction Required	(MAR-NOV) (lbs/day)	% Reduction Required	(DEC-FEB) (lbs/day)
Point Source WLA	0	86	0	415
Point Source Reserve MOS (20%)		22		104
Natural Nonpoint Source LA	40	2,953	40	2,650
Natural Nonpoint Source Reserve MOS (20%)		0		0
Manmade Nonpoint Source LA	100	0	100	0
Manmade Nonpoint Source Reserve MOS (20%)		0		0
TMDL		3,061		3,169

***Note1: UCBOD as stated in this allocation is Ultimate CBOD.

UCBOD to $CBOD_5$ ratio = 2.3 for all treatment levels
Permit allocations are generally based on $CBOD_5$***

The results of the projection modeling for subsegment 100605 show that the water quality standard for dissolved oxygen can be maintained during the winter critical season with the same 100% reduction of man-made nonpoint source pollution and 40% reduction in natural background pollution. The minimum DO is 5.08 mg/l. Subsegment 100605 has a year round water quality standard for dissolved oxygen of 5.0 mg/l.

The high reduction in the man-made nonpoint source loading, indicates that the current criterion for subsegment 100605 is inappropriate. A reassessment of the dissolved oxygen criteria for this subsegment is recommended. All summer and winter runs assumed a 5.0 dissolved oxygen standard.

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

In accordance with Section 106 of the federal Clean Water Act and under the authority of the Louisiana Environmental Quality Act, the LDEQ has established a comprehensive program for monitoring the quality of the state's surface waters. The LDEQ Surveillance Section collects surface water samples at various locations, utilizing appropriate sampling methods and procedures for ensuring the quality of the data collected. The objectives of the surface water monitoring program are to determine the quality of the state's surface waters, to develop a long-term data base for water quality trend analysis, and to monitor the effectiveness of pollution controls. The data obtained through the surface water monitoring program is used to develop the state's biennial 305(b) report (*Water Quality Inventory*) and the 303 (d) list of impaired waters. This information is also utilized in establishing priorities for the LDEQ nonpoint source program.

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

Table 2. Lake Edwards/Smithport Lake Dischargers Subsegment 100605

FACILITY	AI NUM	FILE_NUM	OUTFALL_DESCRIPTION	FAC_TYPE	FLOW_PATH	EXPECTED FLOW, GPD	BOD, mg/L	Ammonia Limits	MODELING COMMENTS
FRIERSON PLAZA APARTMENTS, PTNRS.	18984	17933236; 32568315	Treated Sanitary Wastewater; Apartment Complex	Apartments	To Rambin Bayou thence to Clear Lake	9200	30	2	Too Far Away
TWIN CORNERS MOBILE HOME PARK	22119	18110484; 32567773	Treated sanitary wastewater from oxidation ponds; Mobile Home park	Mobile Home Park	an unnamed ditch thence to Brushy Bayou, thence to Rambin bayou, thence to Clear Lake	18600	30	2	Too Far Away
N DESOTO HIGH SCHOOL	41247	17972704; 32567599	Treated Sanitary Wastewater; School	Public School	an unnamed ditch thence to Brushy Bayou, thence to Rambin bayou, thence to Clear Lake	12000	30	2	Too Far Away
AJ WILLIAMS SUBDIVISION	18031	12226032; 12225951	Oxidation Pond; Subdivision	Subdivision	an unnamed ditch thence to Rambin Bayou thence to Clear Lake	4800	30	2	Too Far Away
BOBBY DYSON MOBILE HOME PARK	18028	17530012; 25135151	Treated sanitary wastewater from oxidation ponds; Mobile Home park	Mobile Home Park	an unnamed ditch thence to an unnamed creek thence to Brushy Bayou thence to Rsmbin Bayou thence to Clear Lake	22500	30	2	Too Far Away
Bridstone Apartments	18722	17856412; 32569997	Treated Sanitary Wastewater	Apartment Complex	PVC Pipe to Edwards Bayou then five miles to Rambin Bayou thence to Clear Lake	12000	30	2	Too Far Away
SOUTH STONEWALL MOBILE ESTATES, INC	18922	18059107; 34023134	Treated Sanitary Wastewater	Mobile Home Park	an unnamed ditch thence to Brushy Bayou, thence to Rambin bayou, thence to Clear Lake	16200	30	2	Too Far Away
AIRPORT TRAILER PARK	38639	17996087; 32569665	Treated sanitary wastewater from oxidation ponds; Mobile Home park	Mobile Home Park	Natural drainage thence to Elam Branch, thence to Bayou Na Bonchasse, thence to clear lake.	7500	30	2	Too Far Away
LI READY MIX PLANT 17	42106	31987320	Permit Canceled			-	-	-	Permit Canceled
MANSFIELD CITY OF (STP)	4677	34064589	Treated Sanitary Wastewater	STP	unnamed ditch thence to Na Bonchasse Bayou thence to Clear lake	750000	10		Modeled
BOBBY DYSON MOBILE HOME PARK	18030	17530106; 25170401	Treated Sanitary Wastewater	Mobile Home Park	an unnamed ditch, thence to Cypress Bayou, thence to Wallace Lake	4500	45		Too Far Away

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Introduction

Lake Edwards/Smithport Lake, subsegment 100605, of the Red River Basin is listed on the 2004 303(d) list. The subsegment is listed as not supporting fish and wildlife propagation. It is, however, meeting its designated use of Primary and Secondary Contact Recreation and Agriculture. The suspected causes of impairment are low DO and nutrients. The suspected sources are natural conditions. The 303(d) report recommends that a use attainability analysis be conducted. Because of the impairment, this subsegment requires the development of a total maximum daily load (TMDL) for oxygen demanding substances and nutrients. A calibrated water quality model for the Lake Edwards/Smithport Lake, subsegment 100605 watershed was developed and projections for current dissolved oxygen standards were run to quantify the wasteload required to meet established dissolved oxygen criteria. This report presents the model development and results.

2. Study Area Description

2.1 General Information

Red River Basin

The Red River has its origin in eastern New Mexico and flows across portions of Texas, Oklahoma and Arkansas before entering northwestern Louisiana. The river flows south to Shreveport, where it turns southeast and flows for approximately 160 miles to its junction with the Atchafalaya River. From the Arkansas state line to Alexandria, the Red River is contained within high banks which range from 20 to 35 feet above low water level. Below Alexandria, the river flows through a flat alluvial plain which is subject to backwater flooding during periods of high water. The Sabine River Basin lies to the southwest of the Red River Basin, and the Ouachita River Basin lies to the east. The Calcasieu, Vermilion – Teche, and Atchafalaya River Basins lie south of the Red River Basin. The Red River drains approximately 7,760 squares miles within Louisiana.

Subsegment 100605 includes Lake Edwards/Smithport Lake from just below Lake Edwards/Smithport Lake Lake to the Red River. This area is typical of the basin and is primarily comprised of forestry and agriculture as documented in Table 3 (LADEQ, 1999). A detailed land cover map of Subsegment 100605 is also included in Appendix H2. Average annual precipitation in the segment, based on the nearest Louisiana Climatic Station, is 52 inches based on a 30-year period of record (LSU, 1999). There is a Louisiana average annual precipitation map located in Appendix H3.

Table 3. Land Uses in Segment 100605

Land Type	Acres 100605	Percent Land use 100605
Upland Forest Evergreen	34782.50	26.52%
Agriculture/Cropland/Grassland	30330.83	23.13%
Upland Forest Mixed	15126.61	11.53%
Wetland Forest Deciduous	11756.66	8.96%
Upland S/S Mixed	10152.53	7.74%
Upland Forest Deciduous	8154.09	6.22%
Dense Pine Thicket	7367.93	5.62%
Upland S/S Evergreen	4458.12	3.40%
Water	3726.22	2.84%
Upland S/S Deciduous	2249.97	1.71%
Wetland Forest Mixed	2186.81	1.67%
Vegetated Urban	348.49	0.27%
Fresh Marsh	185.70	0.14%
Non-Vegetated Urban	166.80	0.13%
Wetland S/S Deciduous	89.62	0.07%
Upland Barren	40.03	0.03%
Wetland Forest Evergreen	29.58	0.02%

Figure1. Model Layout

Lake Edwards and Smithport Lake Model Layout Subsegment 100605

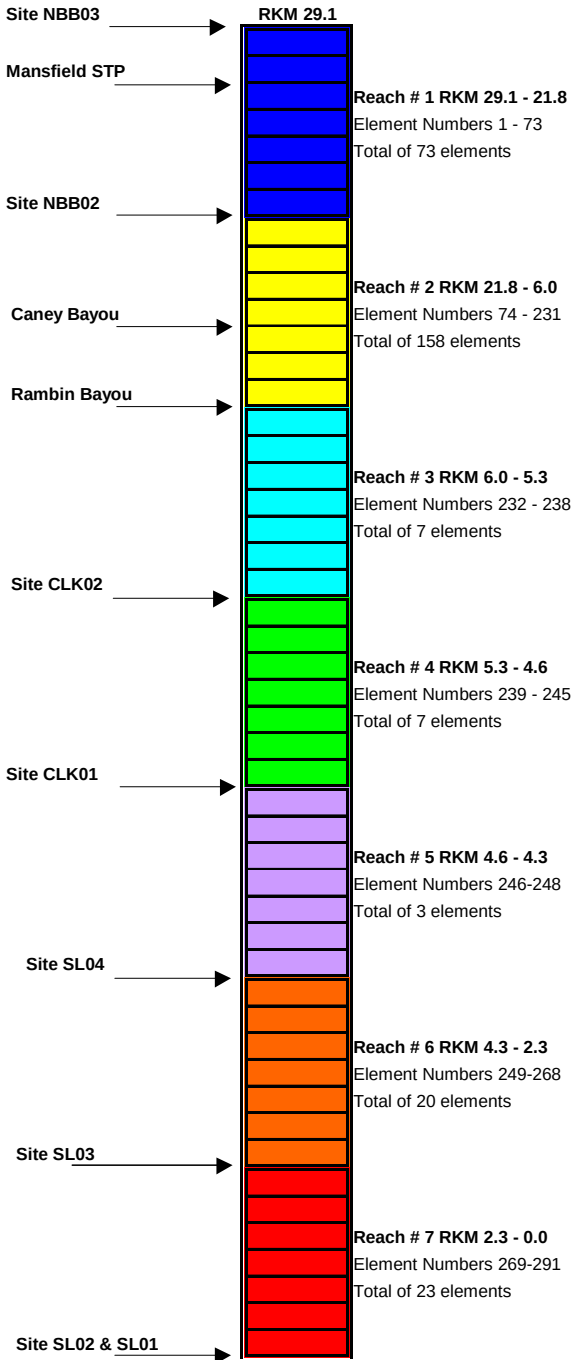
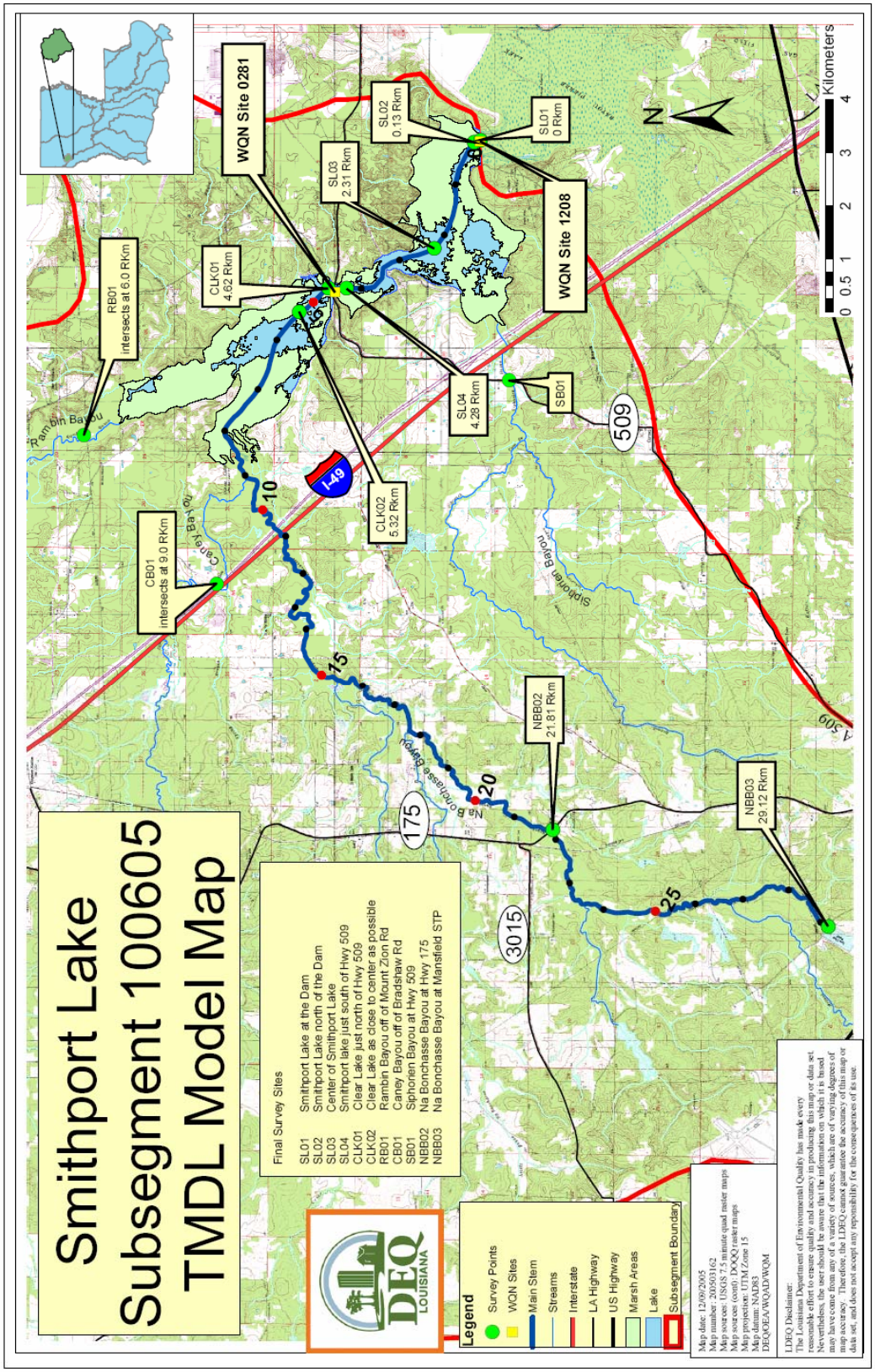


Figure 2. Map of Study Area



2.2 Water Quality Standards

The Water Quality criteria and designated uses for Lake Edwards/Smithport Lake Watershed are shown in Table 4. As noted in the table, Lake Edwards/Smithport Lake, Subsegment 100605 has a year round dissolved oxygen standard of 5.0 mg/L.

Table 4. Water Quality Numerical Criteria and Designated Uses

Parameter	Value
Designated Uses	A B C F
DO, mg/L	5.0
Cl, mg/L	250
SO_4, mg/L	75
pH	6.0 – 8.5
BAC	*See Note 1
Temperature, deg Celsius	32
TDS, mg/L	500

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

*Note 1 – 200 colonies/100mL maximum log mean and no more than 25% of samples exceeding 400 colonies/100mL for the period May through October; 1,000 colonies/100mL maximum log mean and no more than 25% of samples exceeding 2,000 colonies/100mL for the period November through April.

2.3 Wastewater Discharges

There are eight permitted dischargers located in this subsegment. All of the dischargers located on this waterbody, except for the Mansfield STP, are small and need not be included in a model of this scale because it is unlikely that they are having an impact on the targeted waterbody due to the small load and/or the distance from the waterbody named in the 303(d) lists. These dischargers are accounted for as nonpoint loading through the process of calibration. They fall within one of several state or regional policies that govern permit limitations. Current permit information and discharge monitoring reports were reviewed for all of these facilities.

Table 5. Lake Edwards/Smithport Lake Discharger Inventory Subsegment 100605

FACILITY	AI NUM	FILE_NUM	OUTFALL_DESCRIPTION	FAC_TYPE	FLOW_PATH	EXPECTED FLOW, GPD	BOD, mg/L	Ammonia Limits	MODELING COMMENTS
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2.4 Water Quality Conditions/Assessment

Lake Edwards/Smithport Lake, subsegment 100605, of the Red River Basin is listed on the 2004 303(d) list. This subsegment is listed as not supporting fish and wildlife propagation. It is, however, meeting its designated use of Primary and Secondary Contact Recreation, and Agriculture. The suspected causes of impairment in subsegment 100605 are DO and nutrients. The suspected sources for 100605 are natural conditions. It is recommended in this report that a use attainability analysis be conducted. Because of the impairment, this subsegment requires the development of a total maximum daily load (TMDL) for oxygen demanding substances and nutrients.

2.5 Prior Studies

LDEQ had two monthly water quality sampling stations on Lake Edwards/Smithport Lake. LDEQ Water Quality Site 0281, Clear Lake north of Mansfield, Louisiana, has a period of record from January 1990 to May 1998. LDEQ Water Quality Site 1208, Smithport Lake at spillway, west of Abington, Louisiana, has two periods, January 2002 to December 2002 and February 2004 to September 2005. Data collected during the Eularian survey conducted in August 2005, included discharge data, cross-section data, field in-situ data, continuous monitor data, and lab water quality data. This data was used to establish the input for the model calibration and is presented in Appendix F.

3. Documentation Calibration Model

3.1 Program Description

"Simulation models are used extensively in water quality planning and pollution control. Models are applied to answer a variety of questions, support watershed planning and analysis and develop total maximum daily loads (TMDLs). . . . Receiving water models simulate the movement and transformation of pollutants through lakes, streams, rivers, estuaries, or near shore ocean areas. . . . Receiving water models are used to examine the interactions between loadings and response, evaluate loading capacities (LCs), and test various loading scenarios. . . . A fundamental concept for the analysis of receiving waterbody response to point and nonpoint source inputs is the principle of mass balance (or continuity). Receiving water models typically develop a mass balance for one or more constituents, taking into account three factors: transport through the system, reactions within the system, and inputs into the system." (EPA841-b-97-006, pp. 1-30)

The model used for this TMDL was LA-QUAL, a steady-state one-dimensional water quality model. LA-QUAL history dates back to the QUAL-I model developed by the Texas Water Development Board with Frank D. Masch & Associates in 1970 and 1971. William A. White wrote the original code.

In June, 1972, the United States Environmental Protection Agency awarded Water Resources Engineers, Inc. (now Camp Dresser & McKee) a contract to modify QUAL-I for application to the Chattahoochee-Flint River, the Upper Mississippi River, the Iowa-Cedar River, and the Santee River. The modified version of QUAL-I was known as QUAL-II.

Over the next three years, several versions of the model evolved in response to specific client needs. In March, 1976, the Southeast Michigan Council of Governments (SEMCOG) contracted with Water Resources Engineers, Inc. to make further modifications and to combine the best features of the existing versions of QUAL-II into a single model. That became known as the QUAL-II/ SEMCOG version.

Between 1978 and 1984, Bruce L. Wiland with the Texas Department of Water Resources modified QUAL-II for application to the Houston Ship Channel estuarine system. Numerous modifications were made to enable modeling this very large and complex system including the addition of tidal dispersion, lower boundary conditions, nitrification inhibition, sensitivity analysis capability, branching tributaries, and various input/output changes. This model became known as QUAL-TX and was subsequently applied to streams throughout the State of Texas.

In 1999, the Louisiana Department of Environmental Quality and Wiland Consulting, Inc. developed LA-QUAL based on QUAL-TX Version 3.4. The program was converted from a DOS-based program to a Windows-based program with a graphical interface and enhanced graphic output. Other program modifications specific to the needs of Louisiana and the Louisiana DEQ were also made. LA-QUAL is a user-oriented model and is intended to provide the basis for evaluating total maximum daily loads in the State of Louisiana.

The development of a TMDL for dissolved oxygen generally occurs in 3 stages. Stage 1 encompasses the data collection activities. These activities may include gathering such information as stream cross-sections, stream flow, stream water chemistry, stream temperature and dissolved oxygen and various locations on the stream, location of the stream centerline and the boundaries of the watershed which drains into the stream, and other physical and chemical factors which are associated with the stream. Additional data gathering activities include gathering all available information on each facility which discharges pollutants in to the stream, gathering all available stream water quality chemistry and flow data from other agencies and groups, gathering population statistics for the watershed to assist in developing projections of future loadings to the water body, land use and crop rotation data where available, and any other information which may have some bearing on the quality of the waters within the watershed. During Stage 1, any data available from reference or least impacted streams which can be used to gauge the relative health of the watershed is also collected.

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

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

3.2 Input Data Documentation

Data collected during an intensive survey conducted from August 16-18, 2005, was used to establish the input for the model calibration. It is presented in Appendix F. The widths and depths in each reach and headwater were based on the survey measurements.

Field and laboratory water quality data were entered in a spreadsheet for ease of analysis. The total CBOD curve presented in Appendix F5 is the first order equation, which was derived using the Microsoft Excel Solver and was based on the measured daily CBOD values. NBOD simulated organic nitrogen, ammonia nitrogen, and nitrate/nitrite nitrogen. The Louisiana BOD program was applied to the BOD data in a separate spreadsheet and values were computed for each sample taken of ultimate CBOD, CBOD decay rate, CBOD lag time as well as the NBOD, NBOD decay rate, and NBOD lag time. The survey data was the primary source of the model input data for initial conditions, decay rates, mainstem water temperature, dissolved oxygen loading, headwater temperature, and DO data.

3.2.1 Model Schematics and Maps

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

3.2.2 Model Options, Data Type 2

Five constituents were modeled during the calibration process. These were dissolved oxygen, carbonaceous biochemical oxygen demand1, nitrogenous biochemical oxygen demand, chlorides, and conductivity. The continuous monitors did show small diurnal swings indicative of algal activity. The algae cycle was not modeled. This allowed the model to simulate the oxygen production associated with algae without modeling the entire algal cycle. A review of the data showed that conductivity were more reliable as a conservative constituent for this watershed.

3.2.3 Temperature Correction of Kinetics, Data Type 4

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

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

Where:

X_T = the value of the coefficient at the local temperature T in degrees Celsius
X_{20} = the value of the coefficient at the standard temperature at 20 degrees Celsius
Theta = an empirical constant for each reaction coefficient

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

3.2.4 Reach Identification Data, Data Type 8

A diagram of the modeled area is presented in Appendix C1. The vector diagram shows the reach/element design and the location of the Mansfield STP and Rambin Bayou. The modeled area is characterized by 11 sample sites. The model starts just upstream of the Mansfield STP on Na Bonchasse Bayou and extends to the dam on the southeast border of Smithport Lake. This calibrated model includes 7 reaches, 291 elements, one headwater, one discharger, and one tributary. A digitized map of the stream showing river kilometers, and the August 2005 survey sampling sites are included in Figure 2 and Appendix H1.

3.2.5 Advective Hydraulic Coefficients, Data Type 9

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

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

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

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

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

Hydraulic calculation method two was used for this stream to more accurately depict the geometry. The modified Leopold equations were utilized in this model for calibration. This model assumed a uniform channel flowing through Clear Lake and Smithport Lake. Therefore, the constants for datatype 9 were assumed to be the measured values at site NBB02 for reaches 1 and 2. The measured widths and depths at site CLK01 were assumed to be the constants for reaches 3 – 7. The coefficients and exponents were then achieved through calibration.

3.2.6 Dispersive Hydraulic Coefficients, Data Type 10

A dye study was not conducted along Na Bonchasse or Clear lake and Smithport lake for the August 2005 survey. However; in an attempt to calibrate the conservative values for the model, a best professional judgement value for the dispersion was assigned. It was found through calibration that the best value to use was 1.0 m^2/s.

3.2.7 Initial Conditions, Data Type 11

The initial conditions are used to reduce the number of iterations required by the model. The values required for this model were temperature and DO by reach. The input values came from continuous monitoring averages of the survey stations located closest to the reach. Since the initial conditions are only a starting point for the model, all values were set to the calibration values. The input data and sources are shown in Appendix D.

3.2.8 Reaeration Rates, Data Type 12

The applicability of the various equations was examined. The review showed that the Texas Equation was most applicable to Lake Edwards/Smithport Lake. The input data and sources are shown in Appendix D.

3.2.9 Sediment Oxygen Demand, Data Type 12

The SOD values were achieved through calibration. The values were consistent across the entire model. This was probably a result of the uniform depths and widths of the lake waters. The SOD value for each reach is shown in Appendix B. The values were considered to be reasonable for this type of stream. The conversion ratio of settled CBOD and settled NBOD to SOD was considered to be zero for all reaches.

3.2.10 Carbonaceous BOD Decay and Settling Rates, Data Type 12

The decay rates used were based on the bottle rates from the survey. Review of the measured CBOD daily values revealed one distinct CBOD component, which had varying decay rates and lag times. The CBOD component had decay rates ranging from 0.0266 to 0.2319 per day. The CBOD curve presented in Appendix F5 is the first order equation, which was derived using the Microsoft Excel Solver and was based on the measured daily CBOD values. The decay and settling rates used for each reach are shown in Appendix F5.

3.2.11 Nitrogenous BOD Decay and Settling Rates, Data Type 15

These rates are labeled NBOD Decay and Settling in the model. The decay rates used were based on the bottle rates from the survey. NBOD decay rates along the main stem ranged from 0.0050 to 0.1287. The decay and settling rates used for each reach are shown in Appendix B2.

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

The incremental conditions were used in the calibration to represent nonpoint source loads associated with flow for reach 1 only. It was determined from the flow measurements along the mainstem and an evaluation of the water chemistry that groundwater inflow and bank flow could be assumed. Characteristically, the BOD loads for groundwater were assumed to be zero. The data and its source for each reach are presented in Appendix F2.

3.2.13 Nonpoint Sources, Data Type 19

Nonpoint source loads which are not associated with a flow are input into this part of the model. These can be most easily understood as resuspended load from the bottom sediments and are modeled as SOD, CBOD, and NBOD loads. The data and sources are presented in Appendix B2.

3.2.14 Headwaters, Data Types 20, 21, and 22

The headwater flow was set at a minimal flow due to no measurable flow during the August 2005 survey at site NBB03A. The hydrology used for the headwater was from NBB03A. The data and sources are presented in Appendix B2.

3.2.15 Wasteloads, Data Types 23, 24, and 25

There are eight permitted dischargers located in this subsegment. With the exception of the Mansfield STP, all of the dischargers located on this waterbody are small and need not be included in a model of this scale because it is unlikely that they are having an impact on the targeted waterbody due to the small load and/or the distance from the waterbody named in the 303(d) lists. These dischargers are accounted for as nonpoint loading through the process of calibration. They fall within one of several state or regional policies that govern permit limitations. Current permit information and discharge monitoring reports were reviewed for all of these facilities.

The Mansfield STP and Rambin Bayou have been included in the model. The Mansfield STP flow used in the calibration came from the DMR for August 2005.

3.2.16 Boundary Conditions, Data Type 27

The lower boundary conditions were assumed to be equivalent to the measurements taken at SL02 (just above the dam in the southeast corner of Smithport Lake). This station is located just above the model boundary.

3.3 Model Discussion and Results

The calibration model input and output is presented in Appendix B. The overlay plotting option was used to determine if calibration had been achieved. A plot of the dissolved oxygen concentration versus river kilometer is presented in Figure 3. The sites chosen for each reach were a representative cross section of that reach. The coefficients and exponents were determined through calibration for this model.

For all continuous monitoring stations the dissolved oxygen values varied more than 2 mg/L. When we have continuous monitoring dissolved oxygen (DO) data for at least one diurnal cycle, we have generally calibrated to the mean DO. The model would not, without simulating algal productivity, calibrate to this number.

Laqual assumes a steady state model with the ability to simulate algal oxygen production without simulating the full nutrient –algal cycle by doing the following.

Calibrate without simulating algal production as follows:

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

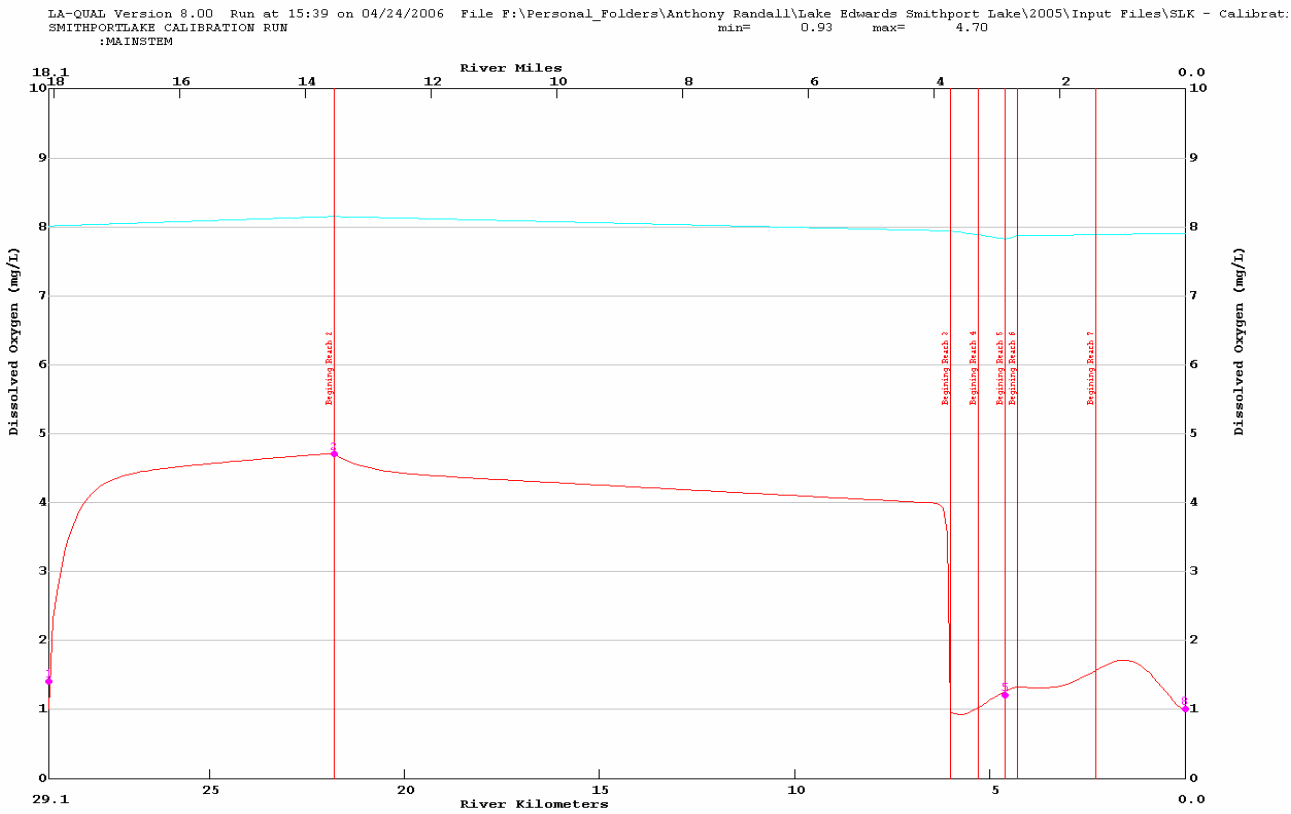
Project without simulation of algal productivity.

This option is based upon the theoretical consideration of production and respiration rates and the default values of the rates and constants given by the Qual2EU manual.

Therefore the dissolved oxygen values used for calibration were set to the dissolved oxygen minimum plus one mg/L . Temperature were based on survey site measurements. The calibration points for CBOD and NBOD were the measured values from the water quality samples.

An adequate calibration was achieved for DO, CBOD, NBOD, chlorides, and conductivity on the main stem. The calibration model shows that during August 2005 survey period, the DO standard of 5.0 mg/l was not being met in any of the modeled reaches. The calibration model minimum DO on the main stem was 0.93 mg/l.

Figure 3. Calibration Model Dissolved Oxygen versus River Kilometer



- numbered points indicate survey stations
- lines through numbered points represent the min and max values
- red vertical lines indicate significant points along the waterbody
- the green horizontal line indicates the DO Criterion
- upper plotted blue line indicates DO saturation
- lower plotted red line indicates calibration model output

4. Water Quality Projections

The traditional summer critical projection loading scenario was performed at the current annual DO standard. This scenario was based on reduced total nonpoint loads at summer season critical conditions (ie. 90th percentile seasonal temperatures and 7Q10 flows) in accordance with the LTP. A winter projection was run based on the percent reduction of total nonpoint loads used for summer critical projections. A no-load scenario was run to identify more appropriate critera.

4.1 Critical Conditions, Seasonality and Margin of Safety

The Clean Water Act requires the consideration of seasonal variation of conditions affecting the constituent of concern, and the inclusion of a margin of safety (MOS) in the development of a TMDL.

For the Lake Edwards/Smithport Lake, subsegment 100605 TMDL, an analysis of LDEQ ambient data has been employed to determine critical seasonal conditions and an appropriate margin of safety.

Critical conditions for dissolved oxygen were determined for Lake Edwards/Smithport Lake using short term water quality data from Lake Edwards/Smithport Lake water quality sites on the LDEQ Ambient Monitoring Network. The WQ sites used were 0281 and 1208. The 90th percentile temperature for each season and the corresponding 90% of saturation DO was determined. Ambient temperature data, critical temperature and DO saturation determinations are shown in Appendix G1.

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

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

This phenomenon is interpreted in TMDL modeling by assuming that nonpoint loading associated with flows into the stream are responsible for the benthic blanket which accumulates on the stream bottom and that the accumulated benthic blanket of the stream, expressed as SOD and/or resuspended BOD in the calibration model, has reached steady state or normal conditions over the long term and that short term additions to the blanket are off set by short term losses. This accumulated loading has its greatest impact on the stream during periods of higher temperature and lower flow. The manmade portion of the NPS loading is the difference between the calibration load and the reference stream load where the calibration load is higher. The only mechanism for changing this normal benthic blanket condition is to implement best management practices and reduce the amount of nonpoint source loading entering the stream and feeding the benthic blanket.

Critical season conditions were simulated in the Lake Edwards/Smithport Lake, subsegment 100605 dissolved oxygen TMDL projection modeling by using the 7Q10 flow for Na Bonchasse Bayou and the 90th percentile temperature. Groundwater inflow was present during this survey, and it is assumed to be present during both summer and winter conditions. The USGS calculated 7Q10 for Na Bonchasse Bayou near Mansfield of 0.25 cfs = 0.0071 cms was used for the headwater during both summer and winter conditions. In accordance with the LTP, a summer flow of 0.1 cfs = 0.0028 cms and a winter flow of 1.0 cfs = 0.028 cms for Rambin Bayou was assumed.

In reality, the highest temperatures occur in July-August, the lowest stream flows occur in October-November, and the maximum point source discharge occurs following a significant rainfall, i.e., high-

flow conditions. The summer projection model is established as if all these conditions happened at the same time. The winter projection model accounts for the seasonal differences in flows and BMP efficiencies. Other conservative assumptions regarding rates and loadings are also made during the modeling process. In addition to the conservative measures, an explicit MOS of 20% was used for all loads to account for future growth, safety, model uncertainty and data inadequacies.

4.2 Input Data Documentation

The USGS calculated 7Q10 for Lake Edwards/Smithport Lake near Grand Bayou of 6.1 cfs = 0.1727 cms was used for the headwater during both summer and winter conditions. The flows in Shell Bayou and Johnson Chute were set to 0.0028 cms in the summer and 0.028 cms for winter critical conditions in accordance with the LTP.

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

4.2.1 Model Options, Data Type 2

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

4.2.2 Temperature Correction of Kinetics, Data Type 4

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

4.2.3 Reach Identification Data, Data Type 8

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

4.2.4 Advective Hydraulic Coefficients, Data Type 9

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

4.2.5 Initial Conditions, Data Type 11

The initial conditions were set to the 90th percentile critical season temperature in accordance with the LTP. The dissolved oxygen values for the initial conditions were set at the stream criteria.

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

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

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

The incremental conditions were used in the calibration to represent nonpoint source loads associated with flows (groundwater). The incremental flow was assumed to be present during projections.

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

The NPS values were calculated for each projection scenario using a load equivalent spreadsheet. An analysis was made of the calibration NPS and SOD loads in terms of total loading in units of gm-O_2/m^2/day. The same spreadsheet also calculated load reductions for the headwaters and wasteloads. The values and sources of the input data and the load analyses are presented in Appendix D for each of the projection runs.

LDEQ has collected and measured the CBOD and NBOD oxygen demand loading components for a number of years. These loads have been found in all streams including the non-impacted reference streams. It is LDEQ's opinion that much of this loading is attributable to run-off loads which are flushed into the stream during run-off events, and subsequently settle to the bottom in our slow moving streams. These benthic loads decay and breakdown during the year, becoming easily resuspended into the water column during the low flow/high temperature season. This season has historically been identified as the critical dissolved oxygen season.

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

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

LDEQ has found variations in the breakdown of the individual CBOD and NBOD components. While the total BOD is reliable, the carbonaceous and nitrogenous component allocation is subject to the type of test method. In the past, LDEQ used a method which suppressed the nitrogenous component to

obtain the carbonaceous component value, which was then subtracted from the total measured BOD to determine the nitrogenous value. The suppressant in this method was only reliable for twenty days thus leading to the assumption that the majority of the carbonaceous loading was depleted within that period of time. The test results supported this assumption. Recently the suppressant started failing around day seven and the manufacturer of the suppressant will only guarantee it's potency for a five day period. LDEQ felt a five day test would not adequately depict the water quality of streams and began a search for a new test method. The research found a new proposed method for testing long term BODs in Standard Methods.

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

LDEQ implemented the new test method beginning with the 2000 survey season. The results obtained using the new method showed that a portion of the CBOD first order equation does begin to level off prior to the twentieth day, however a secondary CBOD component begins to use dissolved oxygen sometime between day ten and day twenty-five. This secondary CBOD component was not being assessed as CBOD using the previous method but was being included in the NBOD load. Thus the CBOD and NBOD component loading used in the reference stream studies is not consistent with the results using the new proposed 60 day method and the individual values should not be used to determine background values for samples processed using the new test methods. However, the sum of CBOD and NBOD should be about the same for both new and old test methods. For this reason LDEQ decided to use the sum of reference stream benthic loads as background values.

The resuspended total nonpoint CBOD and NBOD loading was reduced by 100% of man-made and 40% of background loading for all reaches in the summer critical projection scenario to meet the summer water quality criterion for dissolved oxygen. Since LDEQ assumes these benthic loads are long-term loads brought to the stream by various sources throughout the year, the same percentage reductions were made in the winter projection model as were in the summer critical projection model. These reductions met the summer dissolved oxygen criteria and well surpassed requirements in the non-critical winter projection.

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

4.2.12 Boundary Conditions, Data Type 27

The lower boundary conditions were set at the 90th percentile critical season temperature, the dissolved oxygen criteria was set to the DO criteria for Lake Edwards/Smithport Lake, and the measured stream UCBOD and UNBOD loads for all projections and scenarios.

4.3 Model Discussion and Results

The projection model input and output data sets are presented in Appendix D.

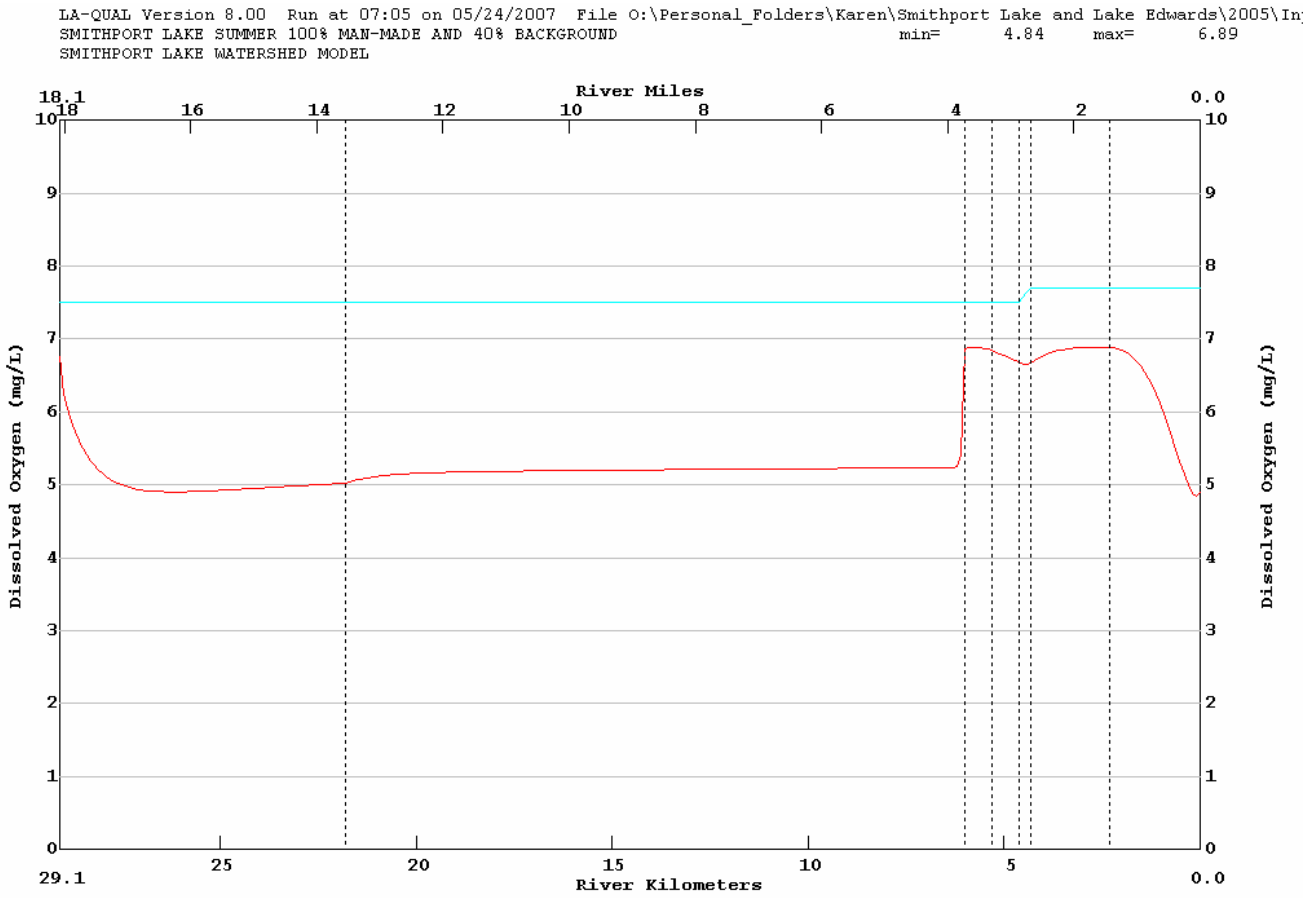
4.3.1 No Load Scenario

An individual no load scenario was run for this stream to identify more appropriate criteria. With 100% removal of manmade sources, the minimum DO was 3.36. Appropriate criteria should be set at 3.0 mg/l DO or less. It is recommended that a use attainability analysis be conducted on this waterbody.

4.3.2 Summer Projection

Summer critical season projections were run for the current standard of 5.0 mg/L May – November. In order to meet the standard, a 100% reduction of man-made and 40% reduction of background loading is necessary. With these percentage reductions in the benthic oxygen loads, Lake Edwards/Smithport Lake meets the dissolved oxygen criterion. The minimum DO on the main stem is 4.84 mg/L. A graph of the dissolved oxygen concentration versus river kilometer for the summer projection is presented in Figure 4.

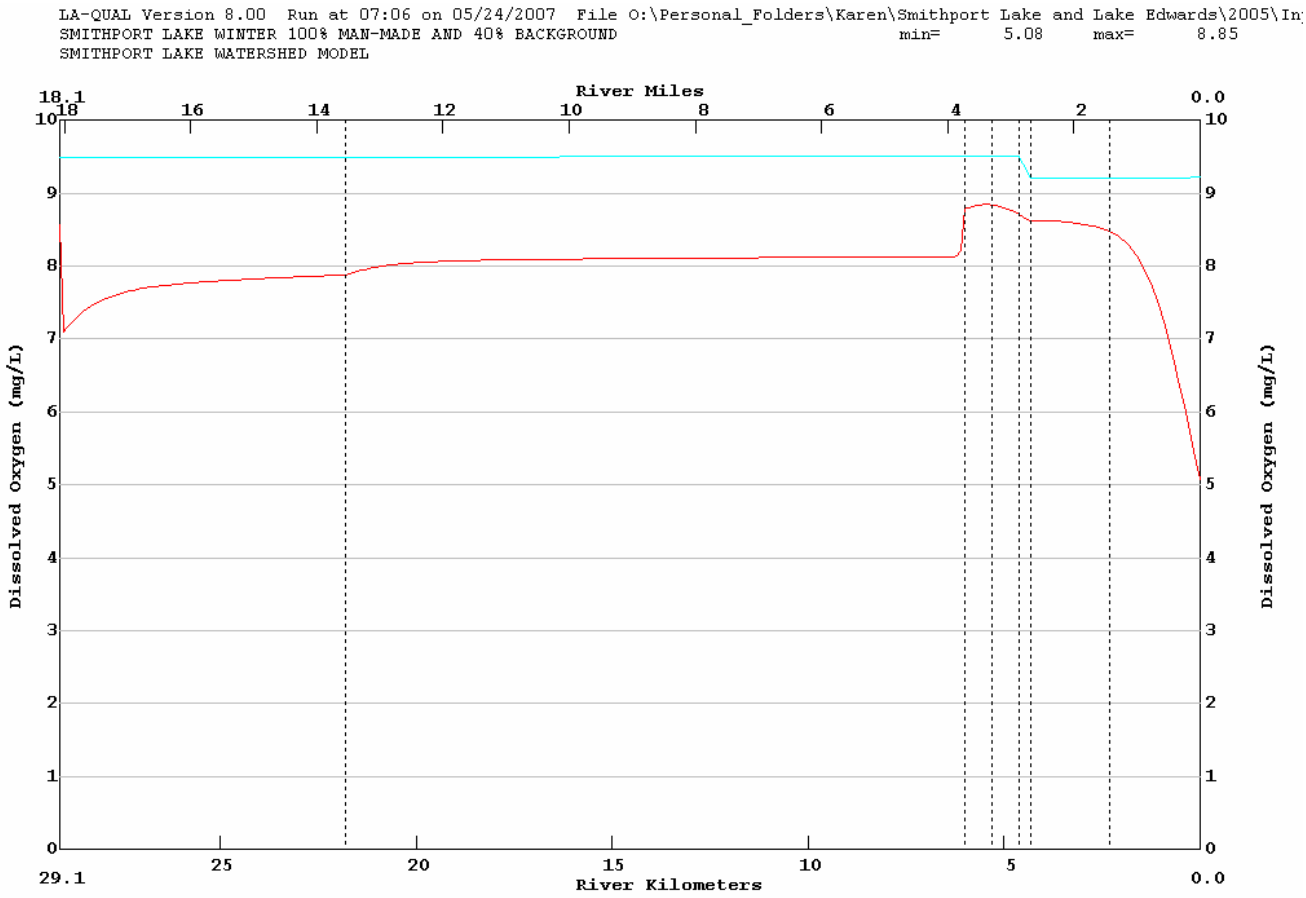
Figure 4. Summer Projection at 100% Removal of Man-Made NPS Loads



4.3.3 Winter Projection

The results of the model show that the water quality criterion for dissolved oxygen of Lake Edwards/Smithport Lake of 5.0 mg/l can be maintained during the winter critical season. The minimum dissolved oxygen is 5.08 mg/l. To achieve the criterion, the model assumed a 100% reduction from all man-made nonpoint sources and a 40% reduction of background loading. A graph of the dissolved oxygen concentration versus river kilometer for the winter projection is presented in Figure 5.

Figure 5. Winter Projection at 100% Removal of Man-Made NPS Loads



4.4 Calculated TMDL, WLAs and LAs

4.4.1 Outline of TMDL Calculations

An outline of the TMDL calculations is provided to assist in understanding the calculations in the Appendices. Slight variances may occur based on individual cases.

4.4.1.1 The natural backgrounds benthic loading was estimated from reference stream resuspension (nonpoint CBOD and NBOD), and SOD load data.

4.4.1.2 The calibration man-made benthic loading was determined as follows:

- Calibration resuspension and SOD loads were summed for each reach as gm O_2/m^2-day to get the calibration benthic loading.
- The natural background benthic loading was subtracted from the calibration benthic loading to obtain the man-made calibration benthic loading.

4.4.1.3 Projection benthic loads are determined by trail and error during the modeling process using a uniform percent reduction for resuspension and SOD. Point sources are reduced as necessary to subsequently more stringent levels of treatment consistent with the size of the treatment facility as much as possible. Point source design flows are increased to obtain an explicit MOS of 20%. Headwater and tributary concentrations of CBOD, NBOD and DO range from reference stream levels to calibration levels based on the character of the headwater. Where headwaters and tributaries exhibit man-made pollutant loads in excess of reference stream values, the loadings are reduced by the same uniform percent reduction as the benthic loads.

- The projection benthic loading at 20 °C is calculated as the sum of the projection resuspension and SOD components expressed as gm O_2/m^2-day.

- The natural background benthic load is subtracted from the projection benthic load to obtain the man-made projection benthic load for each reach.

- The percent reduction of man-made loads for each reach is determined from the difference between the projected man-made non-point load and the man-made non-point load found during calibration.

- The projection loads are also computed in units of lb/d and kg/d for each kind.

4.4.1.4 The total stream loading capacity at critical water temperature is calculated as the sum of:

- Headwater and tributary CBOD and NBOD loading in lb/d and kg/d.

- The natural and man-made projection benthic loading for all reaches of the stream is converted to the loading at critical temperature and summed in lb/d and kg/d.

- Point source CBOD and NBOD loading in lb/d and kg/d.

- The margin of safety in lb/d and kg/d.

4.4.2 Lake Edwards/Smithport Lake, Subsegment 100605 TMDL

The TMDLs for the biochemical oxygen demanding constituents (CBOD, NBOD, and SOD), have been calculated for the summer and winter critical seasons. The TMDLs for the Lake Edwards/Smithport Lake, Subsegment 100605 watershed were set equal to the total stream loading capacity. There is no MOS counted in this TMDL since there was a 100% reduction of man-made NPS. They are presented in Appendix A by reach. A summary of the loads is presented in Table 6.

Table 6. Total Maximum Daily Load (Sum of UCBOD, UNBOD, and SOD)

ALLOCATION	SUMMER		WINTER	
	% Reduction Required	(MAR-NOV) (lbs/day)	% Reduction Required	(DEC-FEB) (lbs/day)
Point Source WLA	0	86	0	415
Point Source Reserve MOS (20%)		22		104
Natural Nonpoint Source LA	40	2,953	40	2,650
Natural Nonpoint Source Reserve MOS (20%)		0		0
Manmade Nonpoint Source LA	100	0	100	0
Manmade Nonpoint Source Reserve MOS (20%)		0		0
TMDL		3,061		3,169

***Note1: UCBOD as stated in this allocation is Ultimate CBOD.
UCBOD to $CBOD_5$ ratio = 2.3 for all treatment levels
Permit allocations are generally based on $CBOD_5$***

5. Sensitivity Analysis

All modeling studies necessarily involve uncertainty and some degree of approximation. It is therefore of value to consider the sensitivity of the model output to changes in model coefficients, and in the hypothesized relationships among the parameters of the model. The LAQUAL model allows multiple parameters to be varied with a single run. The model adjusts each parameter up or down by the percentage given in the input set. The rest of the parameters listed in the sensitivity section are held at their original projection value. Thus the sensitivity of each parameter is reviewed separately. A sensitivity analysis was performed on the calibration. The sensitivity of the model's minimum DO projections to these parameters is presented in Appendix I. Parameters were varied by +/- 30%, except temperature, which was adjusted +/- 2 degrees Centigrade.

Values reported in Appendix I are percentage variations of minimum DO in the main stem Lake Edwards/Smithport Lake. As shown in Table 6, stream reaeration and benthal demand are the parameters to which DO is most sensitive. The model is moderately sensitive to stream velocity, initial temperature, CBOD decay, CBOD settling, and lower boundary DO. The model is slightly sensitive to insensitive to the remaining parameters.

Table 7. Summary of Calibration Model Sensitivity Analysis

SENSITIVITY ANALYSIS SUMMARY

MAINSTEM
SMITHPORTLAKE SENSITIVITY ANALYSIS

Plot 1 Base Model Minimum DO = 0.88

Parameter	%Param Chg	Min D.O.	%D.O. Chg	%Param Chg	Min D.O.	%D.O. Chg
Stream Baseflow	30.	0.88	0.0	-30.	0.88	0.0
Initial Chorophyll a	30.	0.88	0.0	-30.	0.88	0.0
Stream Velocity	30.	0.72	-17.6	-30.	0.99	13.0
Initial Temperature	2.	0.73	-17.1	-2.	1.00	13.7
CBOD Aerobic Decay Rate	30.	0.72	-17.6	-30.	1.00	13.7
CBOD Settling Rate	30.	0.98	11.4	-30.	0.70	-20.4
NBOD Decay Rate	30.	0.88	-0.3	-30.	0.88	0.3
NBOD Settling Rate	30.	0.88	0.1	-30.	0.88	-0.2
Benthal Demand	30.	0.36	-59.1	-30.	1.00	13.7
Stream Dispersion	30.	0.88	0.0	-30.	0.88	0.0
Stream Reaeration	30.	1.00	13.7	-30.	0.00	-100.0
Headwater Flow	30.	0.88	0.0	-30.	0.88	0.0
Headwater DO	30.	0.88	0.0	-30.	0.88	0.0
Headwater CBOD	30.	0.88	0.0	-30.	0.88	0.0
Headwater NBOD	30.	0.88	0.0	-30.	0.88	0.0
Stream Depth	30.	0.85	-2.8	-30.	0.90	1.9
Wasteload Flow	30.	0.88	0.0	-30.	0.88	0.0
Wasteload Temperature	2.	0.88	0.0	-2.	0.88	0.0
Wasteload DO	30.	0.88	0.0	-30.	0.88	0.0
Wasteload CBOD	30.	0.88	0.0	-30.	0.88	0.0
Wasteload NBOD	30.	0.88	0.0	-30.	0.88	0.0
Lower Boundary Temperature	2.	0.88	0.0	-2.	0.88	0.0
Lower Boundary DO	30.	0.89	1.6	-30.	0.72	-17.6
Lower Boundary CBOD	30.	0.85	-3.8	-30.	0.90	2.5
Lower Boundary NBOD	30.	0.88	-0.1	-30.	0.88	0.1

6. Conclusions

This TMDL establishes load limitations for oxygen-demanding substances and nutrients and goals for reduction of those pollutants. LDEQ's position, as supported by the declaratory ruling issued by Secretary Givens in response to the lawsuit regarding water quality criteria for nutrients (Sierra Club v. Givens, 710 So.2d 249 (La. App. 1st Cir. 1997), writ denied, 705 So.2d 1106 (La. 1998), is that when oxygen-demanding substances are controlled and limited in order to ensure that the dissolved oxygen criterion is supported, nutrients are also controlled and limited. The implementation of this TMDL through wastewater discharge permits and implementation of best management practices to control and reduce runoff of soil and oxygen-demanding pollutants from nonpoint sources in the watershed will also control and reduce the nutrient loading from those sources.

A calibrated water quality model for the watershed was developed and projections were modeled to quantify the non-point source load reductions which would be necessary in order for Lake Edwards/Smithport Lake, subsegment 100605 to comply with its established water quality standards and criteria. This report presents the results of that analysis.

The modeling, which has been conducted for this TMDL, is conservative and based on limited information. The TMDL requires a watershed-wide 100% decrease in man-made nonpoint sources and 40% reduction of background loads in order to meet the DO criterion of 5.0 mg/L in the summer critical season. A use-attainability analysis is needed for this stream.

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

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

In accordance with Section 106 of the federal Clean Water Act and under the authority of the Louisiana Environmental Quality Act, the LDEQ has established a comprehensive program for monitoring the quality of the state's surface waters. The LDEQ Surveillance Section collects surface water samples at various locations, utilizing appropriate sampling methods and procedures for ensuring the quality of the data collected. The objectives of the surface water monitoring program are to determine the quality of the state's surface waters, to develop a long-term database for water quality trend analysis, and to monitor the effectiveness of pollution controls. The data obtained through the surface water monitoring program is used to develop the state's biennial 305(b) report (*Water Quality Inventory*) and the 303(d) list of impaired waters. This information is also utilized in establishing priorities for the LDEQ nonpoint source program.

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

7. References

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8. Appendices

Appendix A – Detailed TMDL Analysis

Appendix A1 – Summer TMDL Summary

Lake Edwards/Smithport Lake Watershed TMDL
Subsegment 100605
Originated: June 13, 2007
Final: August 31, 2007

LAKE EDWARDS SMITHPORT LAKE (Subsegment 100605)

Calculation of the TMDL - Kilograms per day

Load description	WLA (kg O_2/day)	CBOD1 LA (kg O_2/day)	CBOD2 LA (kg O_2/day)	Organic-N LA (kg/day)	Ammonia-N LA (kg/day)	NBOD LA (kg O_2/day)	SOD LA (kg O_2/day)	LA (kg O_2/day)	MOS Load (kg O_2/day)
Point Source loads	39								10
Headwater / Tributatary loads		3	0	0	0	1		4	0
Benthic loads		476	0	0	0	250	921	1,647	0
Incremental Loads		0	0	0	0	0		0	0
SUB-TOTAL	**39**	**479**	**0**	**0**	**0**	**251**	**921**	**1,651**	**10**
TMDL = WLA + LA + MOS								***1,700 kg/day***	

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

Calculation of the TMDL - Pounds per day

Load description	WLA (lbs O_2/day)	CBOD1 LA (lbs O_2/day)	CBOD2 LA (lbs O_2/day)	Organic-N LA (lbs/day)	Ammonia-N LA (lbs/day)	NBOD LA (lbs O_2/day)	SOD LA (lbs O_2/day)	LA (lbs O_2/day)	MOS Load (lbs O_2/day)
Point Source loads	86								22
Headwater / Tributatary loads		7	0	0	0	2		9	0
Benthic loads		1,050	0	0	0	551	2,031	3,632	0
Incremental Loads		0	0	0	0	0		0	0
SUB-TOTAL	**86**	**1,057**	**0**	**0**	**0**	**553**	**2,031**	**3,641**	**22**
TMDL = WLA + LA + MOS								***3,749 lb/day***	

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

Calculation of the TMDL - Kilograms per day

Load description	WLA (kg O_2/day)	CBOD1 LA (kg O_2/day)	CBOD2 LA (kg O_2/day)	Organic-N LA (kg/day)	Ammonia-N LA (kg/day)	NBOD LA (kg O_2/day)	SOD LA (kg O_2/day)	LA (kg O_2/day)	MOS Load (kg O_2/day)
Point Source loads	39								10
Natural Nonpoint Loads		479	0	0	0	251	921	1,651	
Manmade Nonpoint Loads		0	0	0	0	0	0	0	0
SUB-TOTAL	**39**	**479**	**0**	**0**	**0**	**251**	**921**	**1,651**	**10**
TMDL = WLA + LA + MOS								***1,700 kg/day***	

Calculation of the TMDL - Pounds per day

Load description	WLA (lbs O_2/day)	CBOD1 LA (lbs O_2/day)	CBOD2 LA (lbs O_2/day)	Organic-N LA (lbs/day)	Ammonia-N LA (lbs/day)	NBOD LA (lbs O_2/day)	SOD LA (lbs O_2/day)	LA (lbs O_2/day)	MOS Load (lbs O_2/day)
Point Source loads	86								22
Natural Nonpoint Loads		1,056	0	0	0	553	2,031	3,640	
Manmade Nonpoint Loads		0	0	0	0	0	0	0	0
SUB-TOTAL	**86**	**1,056**	**0**	**0**	**0**	**553**	**2,031**	**3,640**	**22**
TMDL = WLA + LA + MOS								***3,748 lb/day***	

Appendix A2 – Winter TMDL Summary

Lake Edwards/Smithport Lake Watershed TMDL
Subsegment 100605
Originated: June 13, 2007
Final: August 31, 2007

Winter TMDL Summary:

LAKE EDWARDS SMITHPORT LAKE (Subsegment 100605)

Calculation of the TMDL - Kilograms per day

Load description	WLA (kg O_2/day)	CBOD1 LA (kg O_2/day)	CBOD2 LA (kg O_2/day)	Organic-N LA (kg/day)	Ammonia-N LA (kg/day)	NBOD LA (kg O_2/day)	SOD LA (kg O_2/day)	LA (kg O_2/day)	MOS Load (kg O_2/day)
Point Source loads	188								47
Headwater / Tributatary loads		74	0	0	0	18		92	0
Benthic loads		476	0	0	0	250	469	1,195	0
Incremental Loads		0	0	0	0	0		0	0
SUB-TOTAL	**188**	**550**	**0**	**0**	**0**	**268**	**469**	**1,287**	**47**
TMDL = WLA + LA + MOS								***1,522 kg/day***	

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

Calculation of the TMDL - Pounds per day

Load description	WLA (lbs O_2/day)	CBOD1 LA (lbs O_2/day)	CBOD2 LA (lbs O_2/day)	Organic-N LA (lbs/day)	Ammonia-N LA (lbs/day)	NBOD LA (lbs O_2/day)	SOD LA (lbs O_2/day)	LA (lbs O_2/day)	MOS Load (lbs O_2/day)
Point Source loads	415								104
Headwater / Tributatary loads		163	0	0	0	40		203	0
Benthic loads		1,050	0	0	0	551	1,034	2,635	0
Incremental Loads		0	0	0	0	0		0	0
SUB-TOTAL	**415**	**1,213**	**0**	**0**	**0**	**591**	**1,034**	**2,838**	**104**
TMDL = WLA + LA + MOS								***3,357 lb/day***	

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

Calculation of the TMDL - Kilograms per day

Load description	WLA (kg O_2/day)	CBOD1 LA (kg O_2/day)	CBOD2 LA (kg O_2/day)	Organic-N LA (kg/day)	Ammonia-N LA (kg/day)	NBOD LA (kg O_2/day)	SOD LA (kg O_2/day)	LA (kg O_2/day)	MOS Load (kg O_2/day)
Point Source loads	188								47
Natural Nonpoint Loads		550	0	0	0	268	469	1,287	
Manmade Nonpoint Loads		0	0	0	0	0	0	0	0
SUB-TOTAL	**188**	**550**	**0**	**0**	**0**	**268**	**469**	**1,287**	**47**
TMDL = WLA + LA + MOS								***1,522 kg/day***	

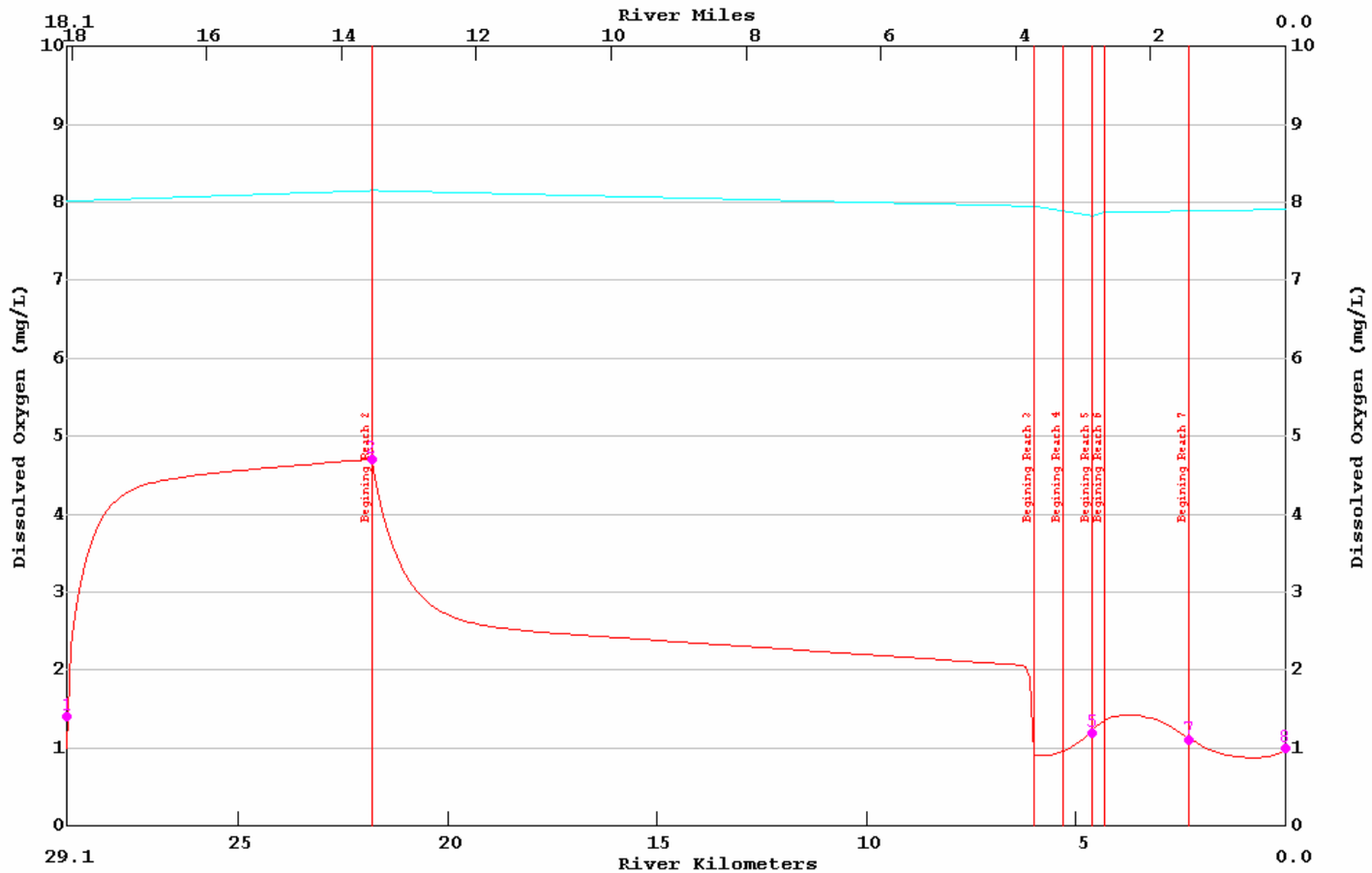
Calculation of the TMDL - Pounds per day

Load description	WLA (lbs O_2/day)	CBOD1 LA (lbs O_2/day)	CBOD2 LA (lbs O_2/day)	Organic-N LA (lbs/day)	Ammonia-N LA (lbs/day)	NBOD LA (lbs O_2/day)	SOD LA (lbs O_2/day)	LA (lbs O_2/day)	MOS Load (lbs O_2/day)
Point Source loads	415								104
Natural Nonpoint Loads		1,213	0	0	0	591	1,034	2,838	
Manmade Nonpoint Loads		0	0	0	0	0	0	0	0
SUB-TOTAL	**415**	**1,213**	**0**	**0**	**0**	**591**	**1,034**	**2,838**	**104**
TMDL = WLA + LA + MOS								***3,357 lb/day***	

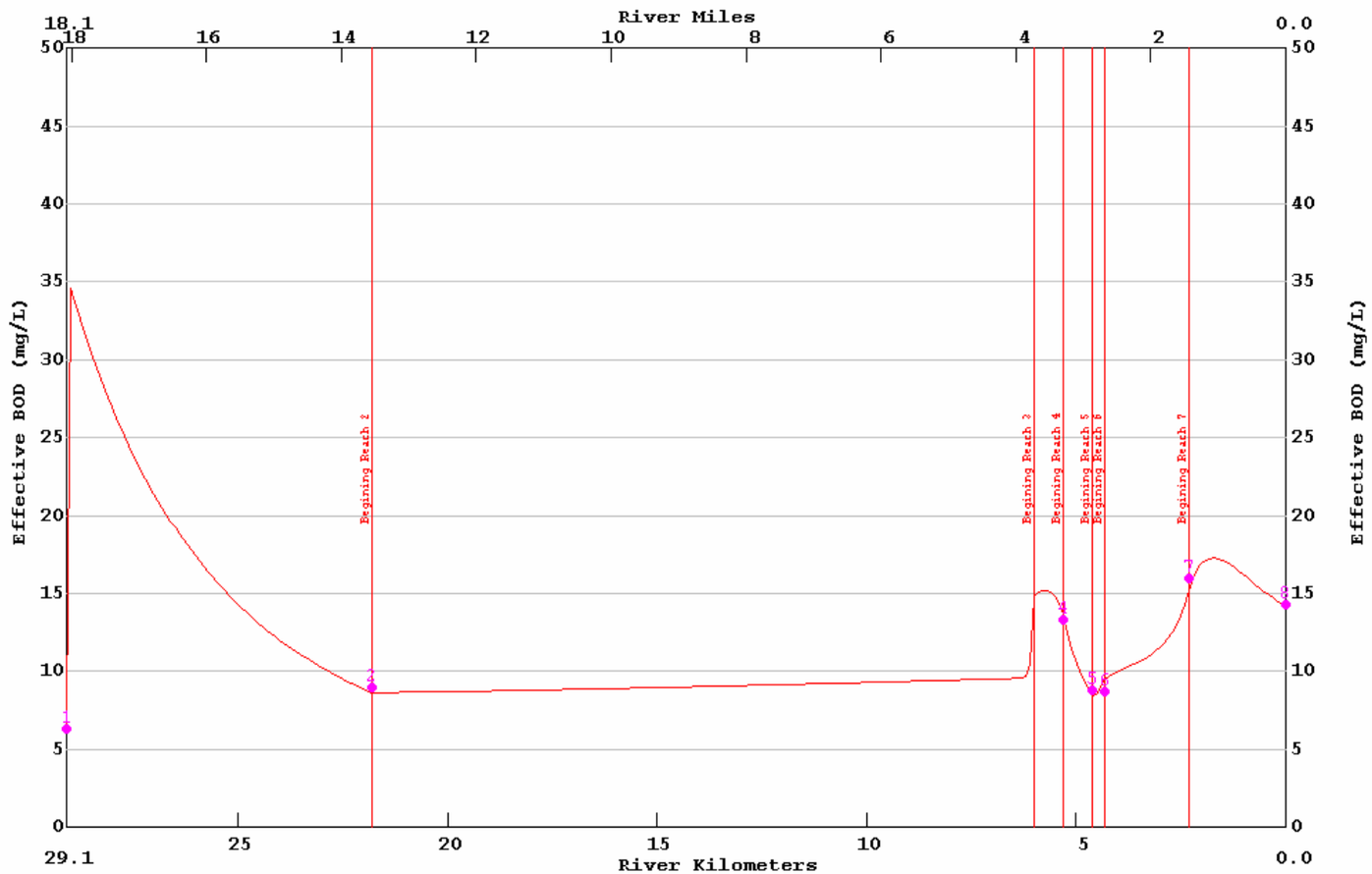
Appendix B – Calibration Model Input and Output Data Sets

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

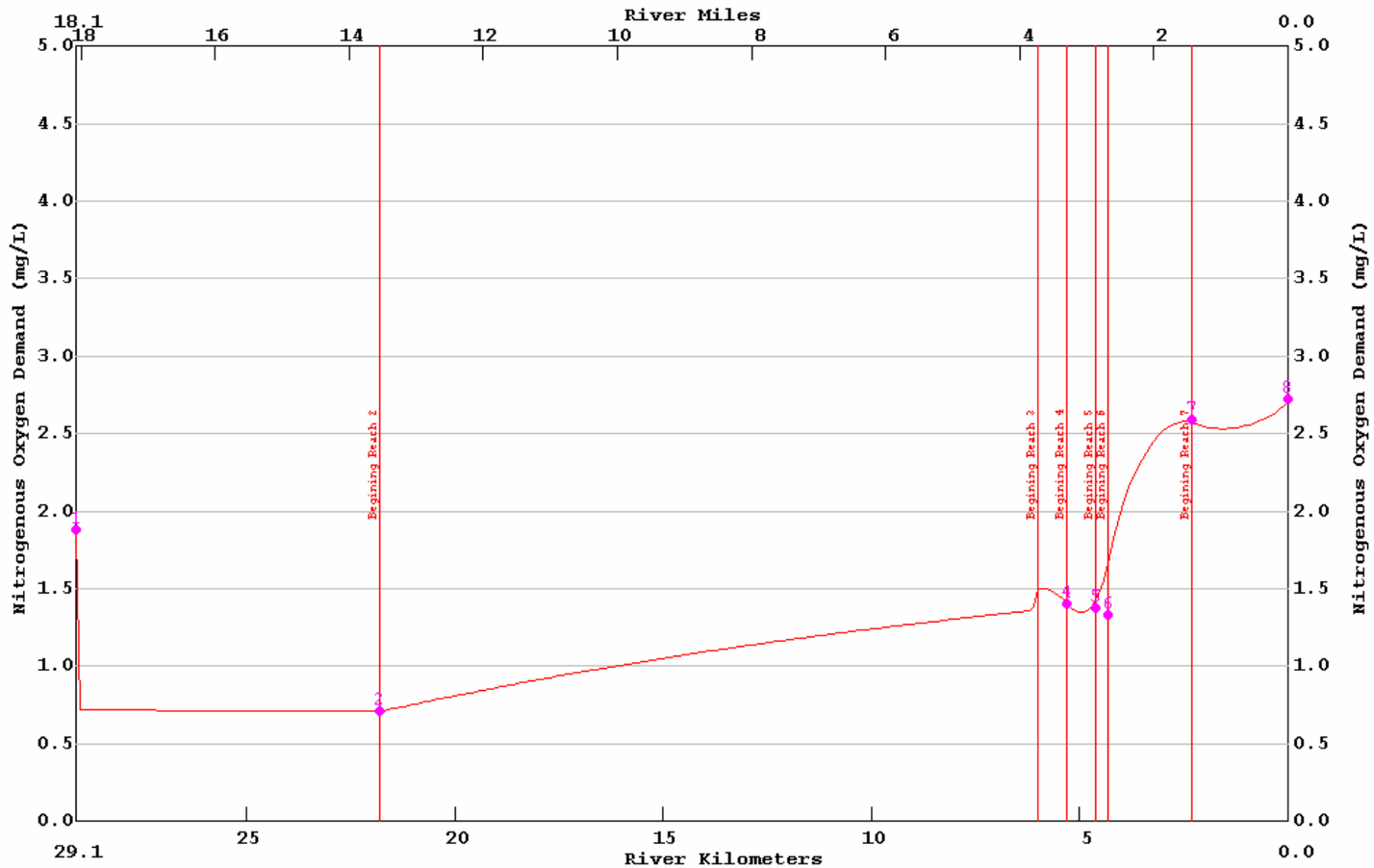
LA-QUAL Version 8.00 Run at 07:22 on 05/24/2007 File O:\Personal_Folders\Karen\Smithport Lake and Lake Edwards\2005\In
SMITHPORTLAKE CALIBRATION RUN min= 0.88 max= 4.70
MAINSTEM



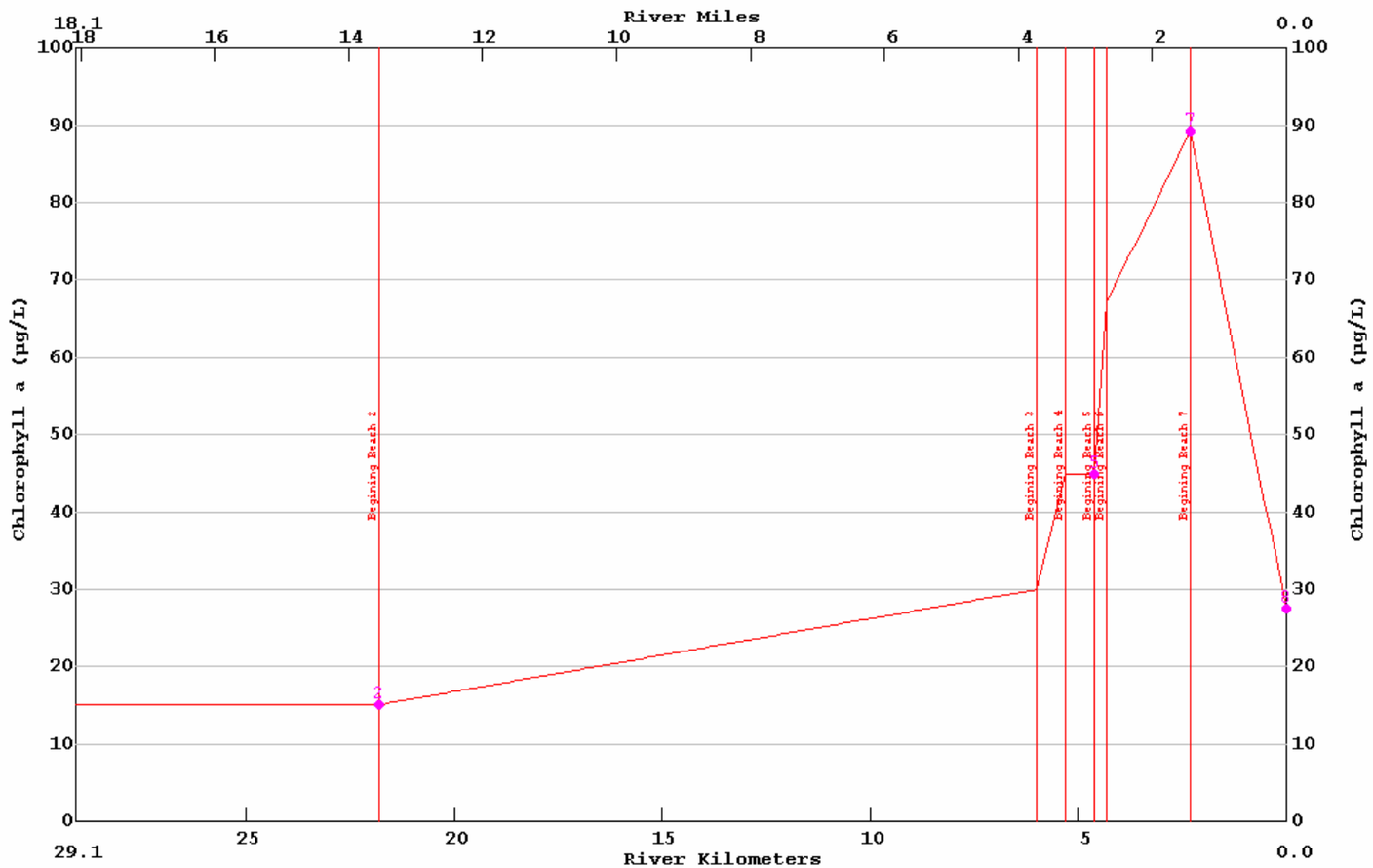
LA-QUAL Version 8.00 Run at 07:22 on 05/24/2007 File O:\Personal_Folders\Karen\Smithport Lake and Lake Edwards\2005\In
SMITHPORTLAKE CALIBRATION RUN min= 6.28 max= 34.62
MAINSTEM



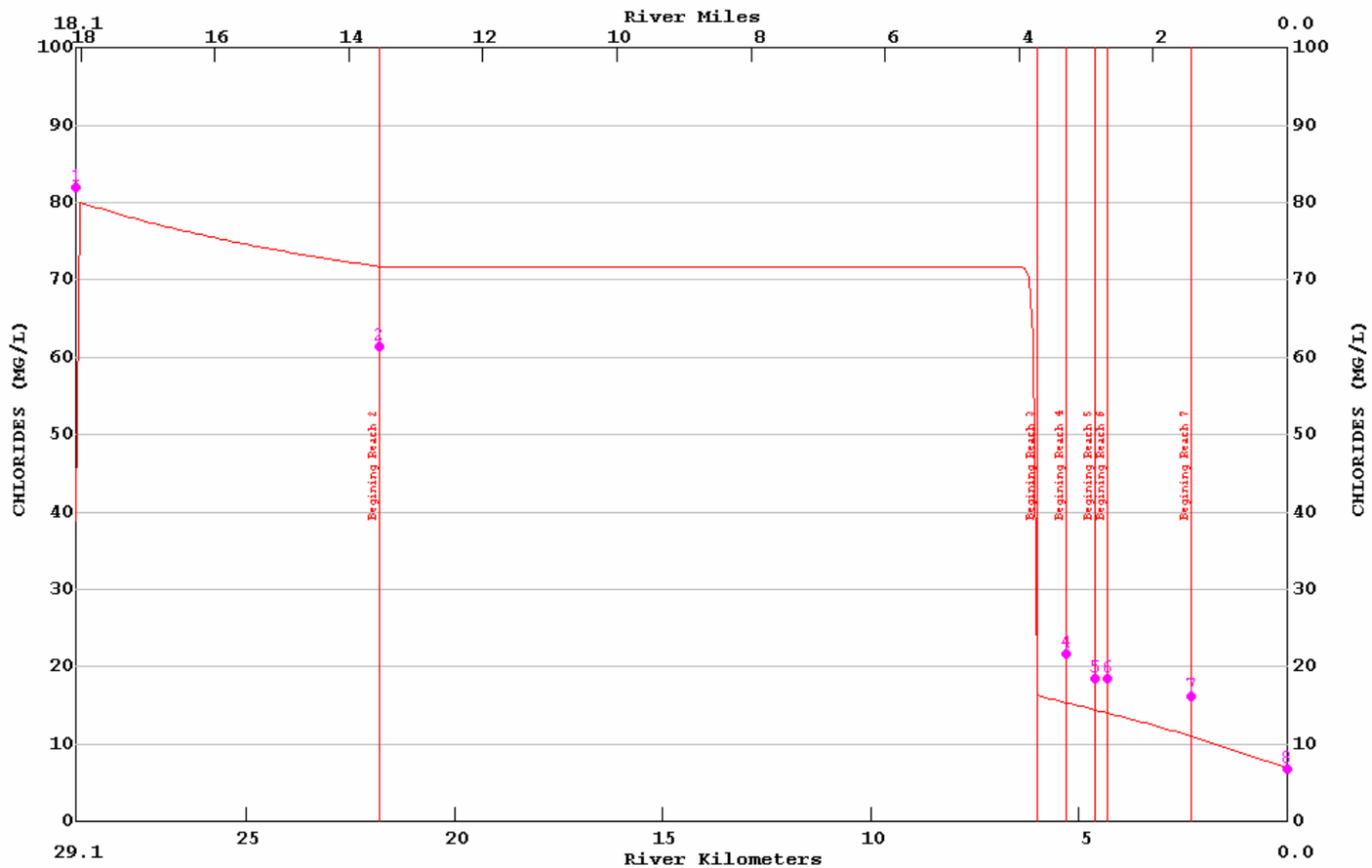
LA-QUAL Version 8.00 Run at 07:22 on 05/24/2007 File O:\Personal_Folders\Karen\Smithport Lake and Lake Edwards\2005\In
SMITHPORTLAKE CALIBRATION RUN min= 0.71 max= 2.71
MAINSTEM

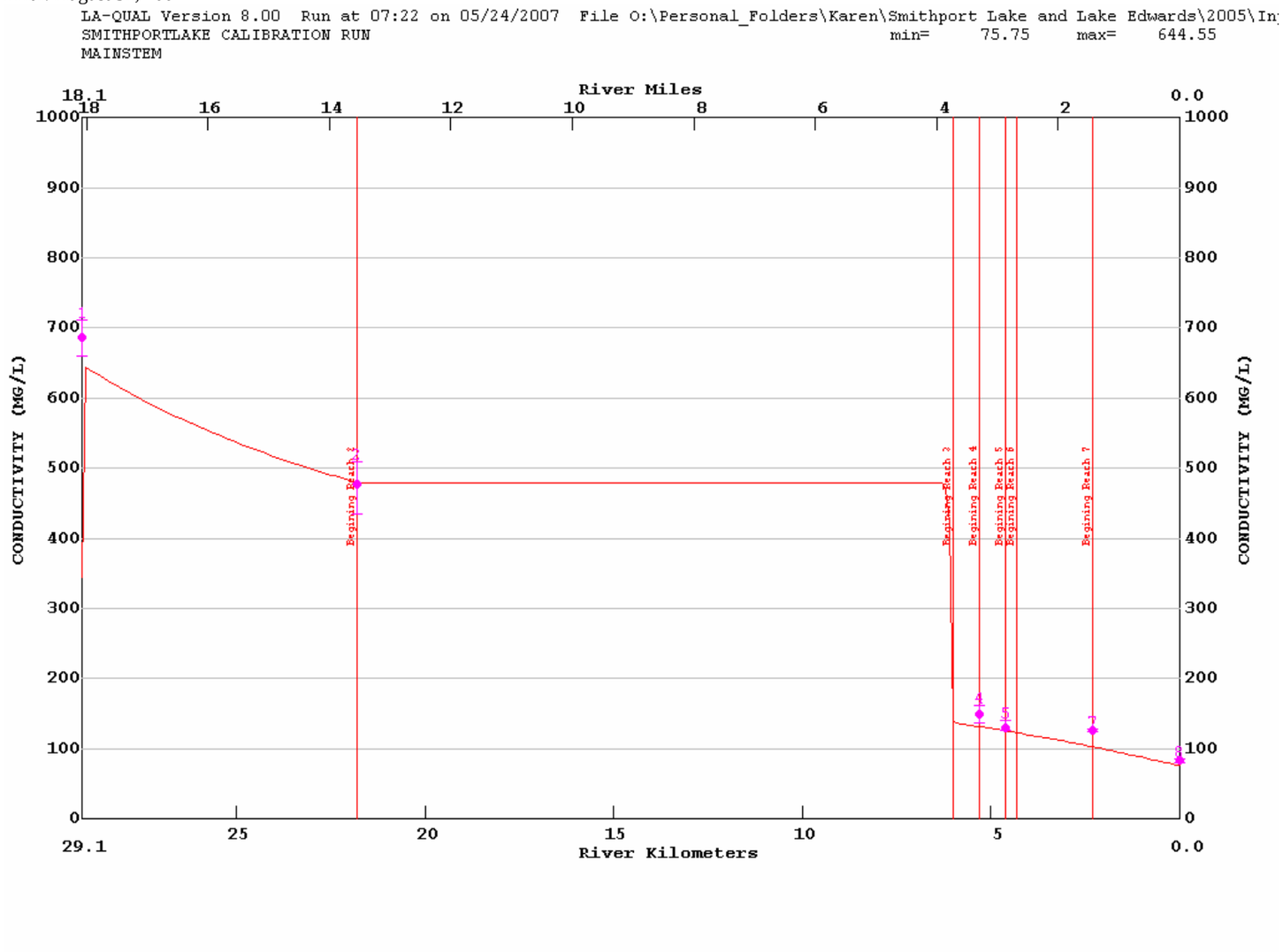


LA-QUAL Version 8.00 Run at 07:22 on 05/24/2007 File O:\Personal_Folders\Karen\Smithport Lake and Lake Edwards\2005\In
SMITHPORTLAKE CALIBRATION RUN min= 15.10 max= 89.30
MAINSTEM

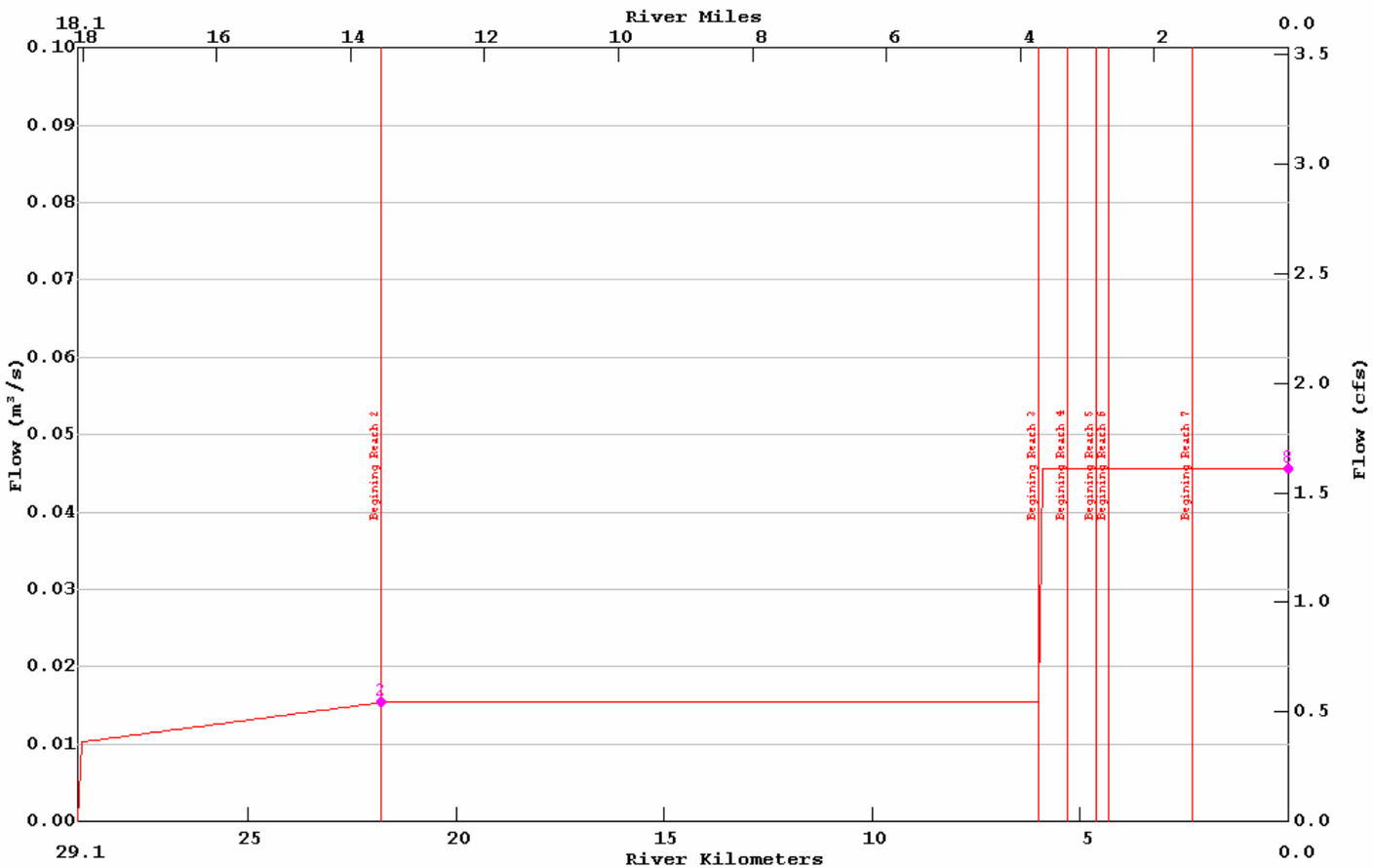


LA-QUAL Version 8.00 Run at 07:22 on 05/24/2007 File O:\Personal_Folders\Karen\Smithport Lake and Lake Edwards\2005\In
SMITHPORTLAKE CALIBRATION RUN min= 6.90 max= 80.05
MAINSTEM

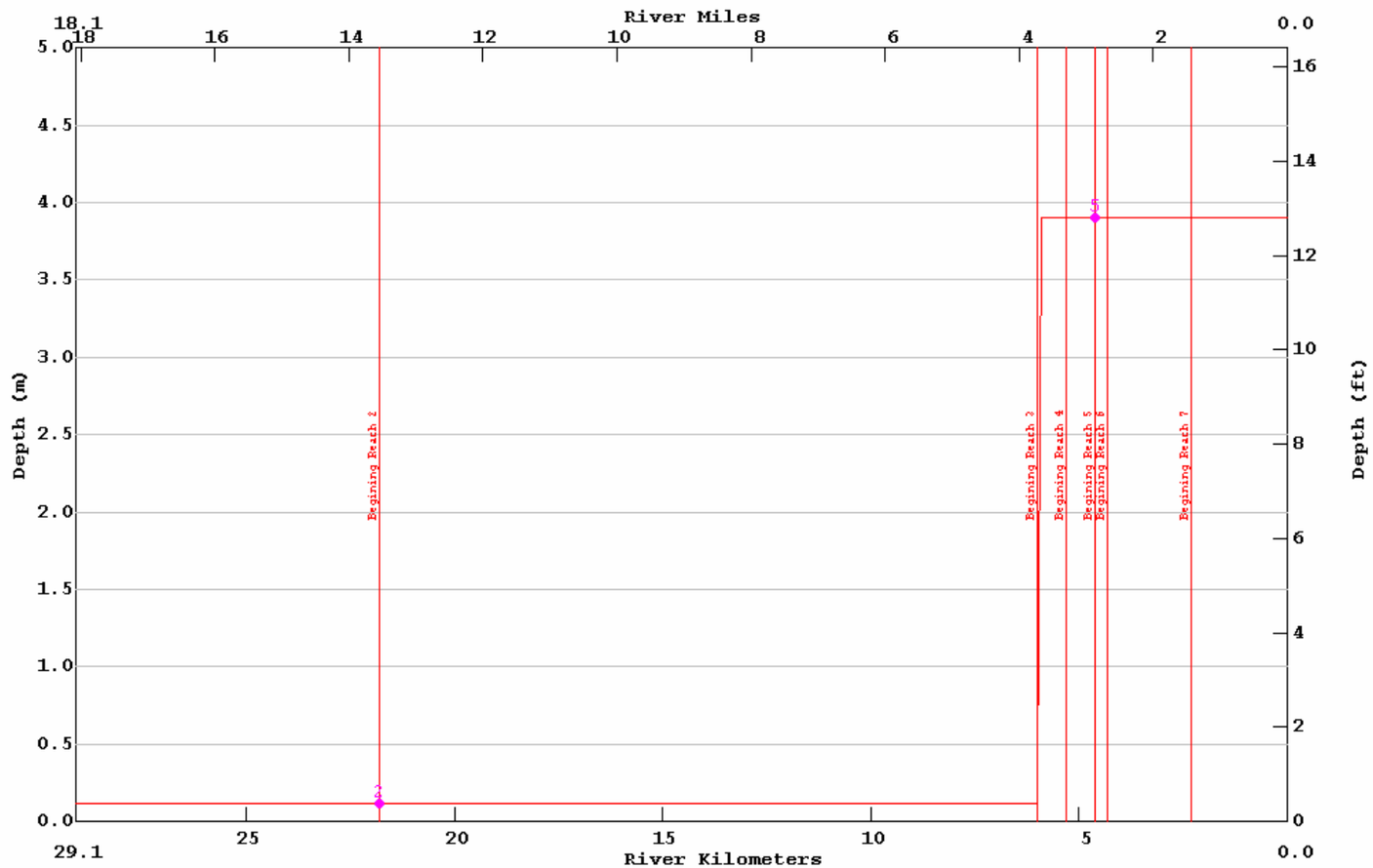



LA-QUAL Version 8.00 Run at 07:22 on 05/24/2007 File O:\Personal_Folders\Karen\Smithport Lake and Lake Edwards\2005\In
SMITHPORTLAKE CALIBRATION RUN
min= 75.75 max= 644.55
MAINSTEM
River Miles
18.1
18
16
14
12
10
8
6
4
2
0.0
CONDUCTIVITY (MG/L)
1000
900
800
700
600
500
400
300
200
100
0
29.1
25
20
15
10
5
0.0
River Kilometers

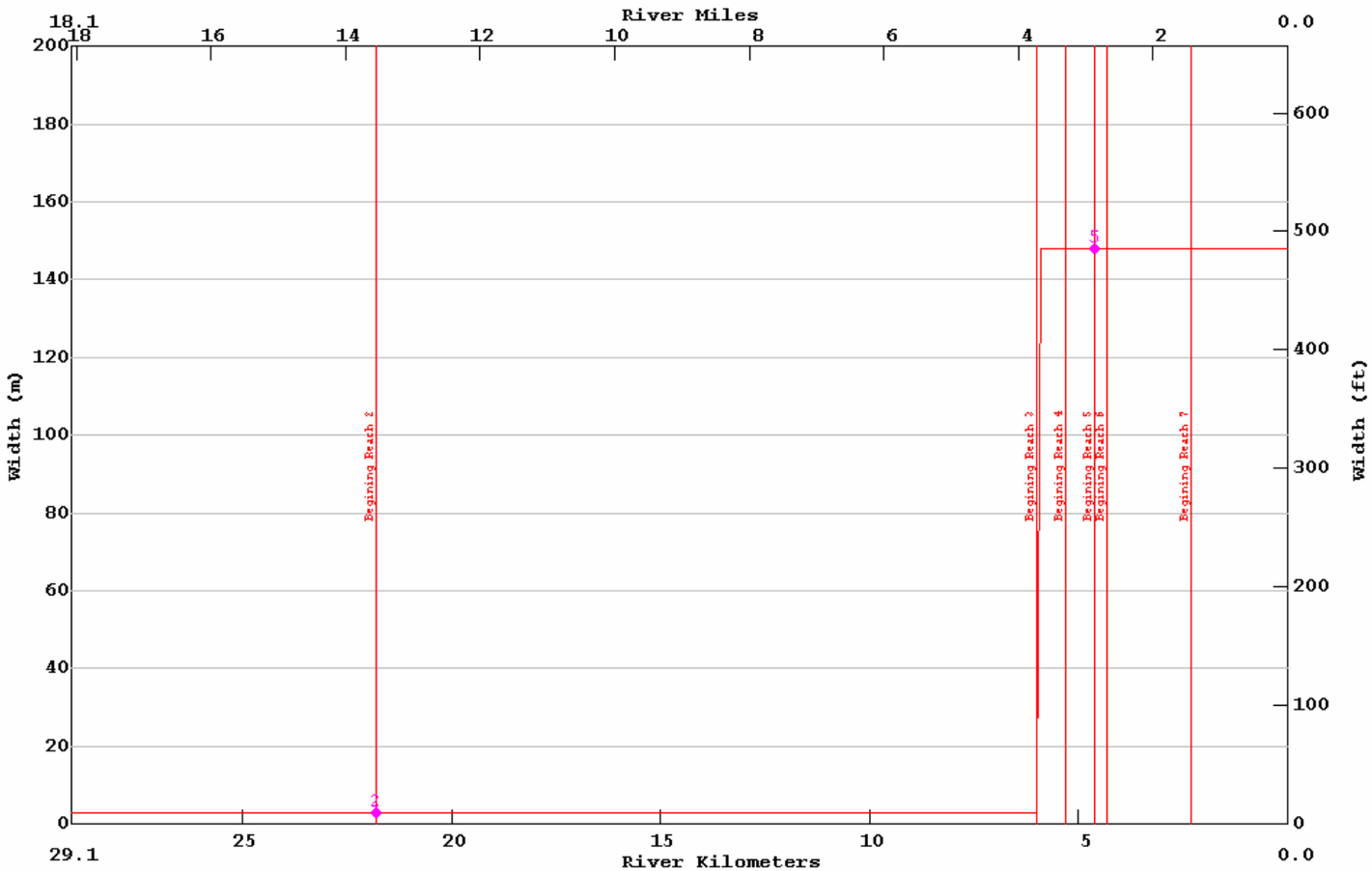
LA-QUAL Version 8.00 Run at 07:22 on 05/24/2007 File O:\Personal_Folders\Karen\Smithport Lake and Lake Edwards\2005\In
SMITHPORTLAKE CALIBRATION RUN min= 0.00 max= 0.05
MAINSTEM



LA-QUAL Version 8.00 Run at 07:22 on 05/24/2007 File O:\Personal_Folders\Karen\Smithport Lake and Lake Edwards\2005\In
SMITHPORTLAKE CALIBRATION RUN min= 0.11 max= 3.90
MAINSTEM



LA-QUAL Version 8.00 Run at 07:22 on 05/24/2007 File O:\Personal_Folders\Karen\Smithport Lake and Lake Edwards\2005\In
SMITHPORTLAKE CALIBRATION RUN min= 2.74 max= 147.83
MAINSTEM



Lake Edwards/Smithport Lake Calibration Input File

```
CNTROL01     SMITHPORT LAKE WATERSHED MODEL
CNTROL02     SMITHPORTLAKE CALIBRATION RUN
CNTROL04 YES METRIC UNITS
ENDATA01
MODOPT01  NO TEMPERATURE
MODOPT02  NO SALINITY
MODOPT03 YES CONSERVATIVE MATERIAL  I = CHLORIDES                 IN MG/L
MODOPT04 YES CONSERVATIVE MATERIAL II = CONDUCTIVITY              IN MG/L
MODOPT05 YES DISSOLVED OXYGEN
MODOPT06 YES BOD1 BIOCHEMICAL OXYGEN DEMAND
MODOPT07  NO BOD2 BIOCHEMICAL OXYGEN DEMAND
MODOPT08 YES NBOD OXYGEN DEMAND
MODOPT10  NO PHOSPHORUS
MODOPT11  NO CHLOROPHYLL A
MODOPT12  NO MACROPHYTES
MODOPT13  NO COLIFORM
ENDATA02
PROGRAM  KL MINIMUM                        =     0.7
PROGRAM  INHIBITION CONTROL VALUE          =     3.
PROGRAM  K2 MAXIMUM                        =     25.0
PROGRAM  HYDRAULIC CALCULATION METHOD      =     2.
PROGRAM  SETTLING RATE UNITS               =     2.
PROGRAM  ALGAE OXYGEN PROD                 =     0.
PROGRAM  EFFECTIVE BOD DUE TO ALGAE        =     0.10
ENDATA03
!Temperature Correction Constants
!--------1---------2---------3---------4---------5---------6---------7---------8
!23456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
!        ******** ********
ENDATA04
ENDATA05
ENDATA06
ENDATA07
!Reach Identification Data
!--------1---------2---------3---------4---------5---------6---------7---------8
!23456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
!         ***  -- ******************************----------*********----------
!          R#  ID   SITE NAME                          RKM        RKM    LENGTH
```

```
REACH ID    1  SL   NBB03C TO NBB02                    29.1       21.8      0.1
REACH ID    2  SL   NBB02 TO RB01                      21.8        6.0      0.1
REACH ID    3  SL   RB01 TO CLK02                       6.0        5.3      0.1
REACH ID    4  SL   CLK02 TO CLK01                      5.3        4.6      0.1
REACH ID    5  SL   CLK01 TO SL04                       4.6        4.3      0.1
REACH ID    6  SL   SL04 TO SL03                       4.3        2.3      0.1
REACH ID    7  SL   SL03 TO SL01                       2.3        0.0      0.1
ENDATA08
!Advective Hydraulic Coefficients
!--------1---------2---------3---------4---------5---------6---------7---------8
!23456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
!         ***  -------*******-------*******-------*******-------*******
!                a      b       c     d      e        f
!               WIDTH  WIDTH   WIDTH DEPTH  DEPTH   DEPTH
!          R#   COEFF   EXP    CONST COEFF   EXP    CONST SLOPE MANNING
HYDR-1      1   0.00   0.10    2.743  0.00   0.10   0.113
HYDR-1      2   0.00   0.10    2.743  0.00   0.10   0.113
HYDR-1      3   0.00   0.10  147.828  0.00   0.10   3.901
HYDR-1      4   0.00   0.10  147.828  0.00   0.10   3.901
HYDR-1      5   0.00   0.10  147.828  0.00   0.10   3.901
HYDR-1      6   0.00   0.10  147.828  0.00   0.10   3.901
HYDR-1      7   0.00   0.10  147.828  0.00   0.10   3.901
ENDATA09
!Dispersive Hydraulic Coefficients
!--------1---------2---------3---------4---------5---------6---------7---------8
!23456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
!         ***  -----**********----------**********----------
!              TIDAL
!          R#  RANGE    a          b         c         d
HYDR-2      1   0.0   1.00        0.0       0.0       0.0
HYDR-2      2   0.0   1.00        0.0       0.0       0.0
HYDR-2      3   0.0   1.00        0.0       0.0       0.0
HYDR-2      4   0.0   1.00        0.0       0.0       0.0
HYDR-2      5   0.0   1.00        0.0       0.0       0.0
HYDR-2      6   0.0   1.00        0.0       0.0       0.0
HYDR-2      7   0.0   1.00        0.0       0.0       0.0
ENDATA10
!Initial Conditions
!--------1---------2---------3---------4---------5---------6---------7---------8
!23456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
!         ***  --------********--------********--------********--------********
```

```
!          R#    TEMP  SALINITY   DO     NH3 N  NIT NIT  PHOS   CHL A   MACROPHYTES
INITIAL     1    26.58  0.30     3.05                           15.1
INITIAL     2    25.66  0.24     4.70                           15.1
INITIAL     3    27.10  0.09     1.10                           30.0
INITIAL     4    27.55  0.09     1.15                           44.9
INITIAL     5    27.99  0.08     1.20                           44.9
INITIAL     6    27.66  0.07     1.10                           67.1
INITIAL     7    27.54  0.05     1.05                           89.3
ENDATA11
!Reaeration, Sediment Oxygen Demand and BOD Coefficients
!--------1---------2---------3---------4---------5---------6---------7---------8---------9
!234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
!         ***  -----****** ******-------*******-------*******-------*******-------***
!               REA    KL                     BOD 1  BOD 1               BOD 2    BOD 2
!          R#   EQ    MIN              SOD    DECAY  SETT                DECAY    SETT
COEF-1      1  11.00                   1.80   0.0284  0.50
COEF-1      2  11.00                   3.00   0.0302  0.50
COEF-1      3  11.00                   2.00   0.0915  0.50
COEF-1      4  11.00                   2.50   0.0866  0.50
COEF-1      5  11.00                   2.50   0.0743  0.50
COEF-1      6  11.00                   2.50   0.0816  0.50
COEF-1      7  11.00                   2.00   0.0941  0.50
ENDATA12
!Nitrogen and Phosphorus Coefficients
!--------1---------2---------3---------4---------5---------6---------7---------8
!234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
!         ***  -------******-------*******-------*******-------
!              NBOD     NBOD
!          R#  DECAY    SETT
COEF-2      1  0.0462   0.10
COEF-2      2  0.0875   0.10
COEF-2      3  0.1035   0.10
COEF-2      4  0.0889   0.10
COEF-2      5  0.0520   0.10
COEF-2      6  0.0414   0.10
COEF-2      7  0.0575   0.10
ENDATA13
ENDATA14
!Coliform and Nonconservative Cofficients
!--------1---------2---------3---------4---------5---------6---------7---------8
!234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
```

```
!          ***  -------******-------*******
ENDATA15
!Incremental Data for Flow, Temperature, Salinity, and Conservatives
!--------1---------2---------3---------4---------5---------6---------7---------8
!23456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
!          ***  ---------*********---------*********---------*********
!           R#   OUTFLOW   INFLOW  TEMP     SALINITY CHLORIDE  COND
INCR-1      1    0.0000   0.0052  26.580             55.00  148.00
INCR-1      2    0.0000   0.0000  25.660              0.00    0.00
INCR-1      3    0.0000   0.0000  27.100              0.00    0.00
INCR-1      4    0.0000   0.0000  27.550              0.00    0.00
INCR-1      5    0.0000   0.0000  27.990              0.00    0.00
INCR-1      6    0.0000   0.0000  27.660              0.00    0.00
INCR-1      7    0.0000   0.0000  27.540              0.00    0.00
ENDATA16
!Incremental Data for DO, BOD, and Nitrogen
!--------1---------2---------3---------4---------5---------6---------7---------8
!23456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
!          ***  ---------*********---------*********---------*********
!           R#      DO     BOD 1     NBOD    NH3 N   NIT NIT    BOD 2
INCR-2      1     2.00
INCR-2      2     2.00
INCR-2      3     2.00
INCR-2      4     2.00
INCR-2      5     2.00
INCR-2      6     2.00
INCR-2      7     2.00
ENDATA17
!Incremental Data for Phosphorus, Chlorophyll, Coliform and Nonconservatives
!--------1---------2---------3---------4---------5---------6---------7---------8
!23456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
!          ***  ---------*********---------*********
!           R#   PHOSPH    CHL A   COLIFORM NONCONSERVATIVE
INCR-3      1
INCR-3      2
INCR-3      3
INCR-3      4
INCR-3      5
INCR-3      6
INCR-3      7
ENDATA18
```

```
!Nonpoint Source Data
!--------1---------2---------3---------4---------5---------6---------7---------8
!23456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
!          ***  ---------********---------********---------********
!          R#     BOD 1    NBOD   COLIFORM NONCONS    DO      BOD 2
NONPOINT    1     1.50     0.59
NONPOINT    2    20.00     2.00
NONPOINT    3  3500.00    90.00
NONPOINT    4  1200.00    30.00
NONPOINT    5    50.00     1.00
NONPOINT    6  2300.00   425.00
NONPOINT    7  9500.00   400.00
ENDATA19
!Headwater Data for Flow, Temperature, Salinity, and Conservatives
!--------1---------2---------3---------4---------5---------6---------7---------8
!23456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
!        ****  -------------------- *** --------********--------********--------
!         E#    NAME                       FLOW    TEMP  SALIN   CHLORIDE   COND
HDWTR-1     1  HEADWATER - NBB03A         0.0001  23.89  0.17    38.8     344.4
ENDATA20
!Headwater Data for DO, BOD, and Nitrogen
!--------1---------2---------3---------4---------5---------6---------7---------8
!23456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
!        ****  ---------********---------********---------********
!          E#      DO      BOD 1    NBOD    NH3 N    NIT NIT  BOD 2
HDWTR-2     1      1.00   6.2784   1.8781
ENDATA21
!Headwater Data for Phosphorus, Chlorophyll, Coliform, and Nonconservatives
!--------1---------2---------3---------4---------5---------6---------7---------8
!23456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
!        ****  ---------********---------********
!          E#  PHOSPHOR   CHL A   COLIFORM  NONCONSERVATIVE
HDWTR-3     1              28.5
ENDATA22
ENDATA23
!Wasteload Data for Flow, Temperature, Salinity, and Conservatives
!--------1---------2---------3---------4---------5---------6---------7---------8
!23456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
!        ****  --------------------********---------********---------********
!          E#     NAME               FLOW      TEMP   SALINITY CHLORIDE  COND
WSTLD-1     1   MANSFIELD STP         0.0101    28.28     0.43  106.0    836.3
```

```
WSTLD-1   232   RAMBIN BAYOU          0.0302    24.85     0.50   11.3    116.8
ENDATA24
!Wasteload Data for DO, BOD, and Nitrogen
!--------1---------2---------3---------4---------5---------6---------7---------8
!234567890123456789012345678901234567890123456789012345678901234567890123456789 0
!        ****  ---------********-----********---------*****---------********
!          E#       DO    BOD 1         NBOD    NH3 N          NIT NIT  BOD 2
WSTLD-2     1      2.49   52.000        0.000
WSTLD-2   232      2.13    9.244        1.687
ENDATA25
!Wasteload Data for Phosphorus, Chlorophyll, Coliform, and Nonconservatives
!--------1---------2---------3---------4---------5---------6---------7---------8
!234567890123456789012345678901234567890123456789012345678901234567890123456789 0
!        ****  ---------********---------********
!          E#  PHOSPHOR  CHL A    COLIFORM NONCONSERVATIVE
WSTLD-3     1
WSTLD-3   232
ENDATA26
LOWER BC TEMPERATURE                        =  27.41
LOWER BC SALINITY                           =   0.02
LOWER BC CONSERVATIVE MATERIAL I            =   6.8
LOWER BC CONSERVATIVE MATERIAL II           =  75.1
LOWER BC DISSOLVED OXYGEN                   =   1.00
LOWER BC BOD1 BIOCHEMICAL OXYGEN DEMAND     =  14.299
LOWER BC CHLOROPHYLL A                      =  27.6
LOWER BC NBOD                               =   2.725
ENDATA27
!Dam Data
!--------1---------2---------3---------4---------5---------6---------7---------8
!234567890123456789012345678901234567890123456789012345678901234567890123456789 0
!        ****  ******************** ** ******** ******** ********
ENDATA28
ENDATA29
!--------1---------2---------3---------4---------5---------6---------7---------8
!234567890123456789012345678901234567890123456789012345678901234567890123456789 0
!        ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** **
NUMBER OF PLOTS = 1
NUMBER OF REACHES IN PLOT 1 =  07                       INCREMENT = 0.1
PLOT RCH  1  2  3  4  5  6  7
ENDATA30
OVERLAY 1 SLKovl.txt                      :MAINSTEM
```

ENDATA31

LAKE EDWARDS/SMITHPORT LAKE 100605 CALIBRATION OVERLAY DATA SET

```
STATION  1  KILOMETER  29 .1
 3               82.0
 4   660.00     687.42    712.00
 5                1.40
 6                6.2784
18                1.878
STATION  2  KILOMETER  21.8
 3               61.4
 4   434.00     477.73    509.00
 5                4.70
 6                9.0016
13               15.1
18                0.708
31                0.0154
33                0.113
34                2.743
STATION  4  KILOMETER   5.3
 3               21.7
 4   137.70     148.63    160.90
 6               13.3435
18                1.405
STATION  5  KILOMETER   4.6
 3               18.4
 4   126.00     129.94    140.00
 5                1.20
 6                8.7616
13               44.9
18                1.378
33                3.901
34              147.828
STATION  6  KILOMETER   4.3
 3               18.4
 6                8.7270
18                1.332
STATION  7  KILOMETER   2.3
 3               16.1
 4   123.90     125.55    127.20
 5                1.1
 6               15.9522
```

```
13                89.3
18                 2.595
STATION  8  KILOMETER   0.0
 3                 6.8
 4    80.90       82.86     85.40
 5                 1.00
 6                14.2987
13                27.6
18                 2.725
31                 0.0456
MRK 21.8         Begining Reach 2
MRK  6.0         Begining Reach 3
MRK  5.3         Begining Reach 4
MRK  4.6         Begining Reach 5
MRK  4.3         Begining Reach 6
MRK  2.3         Begining Reach 7
END
```

LAKE EDWARDS/SMITHPORT LAKE 100605 CALIBRATION OUTPUT DATA SET

```
LA-QUAL Version 8.00
Louisiana Department of Environmental Quality

Input file is O:\Personal_Folders\Karen\Smithport Lake and Lake Edwards\2005\Input Files\SLKCalb.txt
Output produced at 07:22 on 05/24/2007

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

CARD TYPE       CONTROL TITLES

TITLE01         SMITHPORT LAKE WATERSHED MODEL
TITLE02         SMITHPORTLAKE CALIBRATION RUN
CNTROL04  YES   METRIC UNITS
ENDATA01

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

CARD TYPE       MODEL OPTION

MODOPT01   NO   TEMPERATURE
MODOPT02   NO   SALINITY
MODOPT03  YES   CONSERVATIVE MATERIAL  I = CHLORIDES                  IN MG/L
MODOPT04  YES   CONSERVATIVE MATERIAL II = CONDUCTIVITY               IN MG/L
MODOPT05  YES   DISSOLVED OXYGEN
MODOPT06  YES   BOD1 BIOCHEMICAL OXYGEN DEMAND
MODOPT07   NO   BOD2 BIOCHEMICAL OXYGEN DEMAND
MODOPT08  YES   NBOD OXYGEN DEMAND
MODOPT10   NO   PHOSPHORUS
MODOPT11   NO   CHLOROPHYLL A
MODOPT12   NO   MACROPHYTES
MODOPT13   NO   COLIFORM
ENDATA02

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

CARD TYPE       DESCRIPTION OF CONSTANT                       VALUE

PROGRAM         KL MINIMUM                        =         0.70000 meters/day
PROGRAM         INHIBITION CONTROL VALUE          =         3.00000 (inhibit all rates but SOD)
PROGRAM         K2 MAXIMUM                        =        25.00000 per day
PROGRAM         HYDRAULIC CALCULATION METHOD      =         2.00000 (widths and depths)
PROGRAM         SETTLING RATE UNITS               =         2.00000 (values entered as per day)
PROGRAM         ALGAE OXYGEN PROD                 =         0.00000 mg O/ug chl a/day
PROGRAM         EFFECTIVE BOD DUE TO ALGAE        =         0.10000 mg/L BOD per ug/L chl a
ENDATA03

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

 CARD TYPE     RATE CODE     THETA VALUE

ENDATA04

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

```
CARD TYPE       DESCRIPTION OF CONSTANT                         VALUE

ENDATA05

$$$ DATA TYPE 6 (ALGAE CONSTANTS) $$$

CARD TYPE       DESCRIPTION OF CONSTANT                         VALUE

ENDATA06

$$$ DATA TYPE 7 (MACROPHYTE CONSTANTS) $$$

CARD TYPE       DESCRIPTION OF CONSTANT                         VALUE

ENDATA07

$$$ DATA TYPE 8 (REACH IDENTIFICATION DATA) $$$
                                                      BEGIN        END     ELEM    REACH     ELEMS   BEGIN    END
CARD TYPE  REACH  ID  NAME                            REACH       REACH   LENGTH   LENGTH    PER RCH   ELEM   ELEM
                                                        km          km       km       km                NUM    NUM

REACH ID      1   SL    NBB03C TO NBB02               29.10  TO   21.80   0.1000     7.30      73       1     73
REACH ID      2   SL    NBB02 TO RB01                 21.80  TO    6.00   0.1000    15.80     158      74    231
REACH ID      3   SL    RB01 TO CLK02                  6.00  TO    5.30   0.1000     0.70       7     232    238
REACH ID      4   SL    CLK02 TO CLK01                 5.30  TO    4.60   0.1000     0.70       7     239    245
REACH ID      5   SL    CLK01 TO SL04                  4.60  TO    4.30   0.1000     0.30       3     246    248
REACH ID      6   SL    SL04 TO SL03                   4.30  TO    2.30   0.1000     2.00      20     249    268
REACH ID      7   SL    SL03 TO SL01                   2.30  TO    0.00   0.1000     2.30      23     269    291
ENDATA08

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

CARD TYPE  REACH  ID       WIDTH       WIDTH       WIDTH       DEPTH       DEPTH       DEPTH      SLOPE    MANNINGS
                            "A"         "B"         "C"         "D"         "E"         "F"                  "N"

HYDR-1        1   SL       0.000       0.100       2.743       0.000       0.100       0.113     0.00000   0.000
HYDR-1        2   SL       0.000       0.100       2.743       0.000       0.100       0.113     0.00000   0.000
HYDR-1        3   SL       0.000       0.100     147.828       0.000       0.100       3.901     0.00000   0.000
HYDR-1        4   SL       0.000       0.100     147.828       0.000       0.100       3.901     0.00000   0.000
HYDR-1        5   SL       0.000       0.100     147.828       0.000       0.100       3.901     0.00000   0.000
HYDR-1        6   SL       0.000       0.100     147.828       0.000       0.100       3.901     0.00000   0.000
HYDR-1        7   SL       0.000       0.100     147.828       0.000       0.100       3.901     0.00000   0.000
ENDATA09

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

CARD TYPE  REACH  ID     TIDAL     DISPERSION     DISPERSION     DISPERSION     DISPERSION
                        RANGE        "A"            "B"            "C"            "D"

HYDR          1   SL      0.00        1.000          0.000          0.000          0.000
HYDR          2   SL      0.00        1.000          0.000          0.000          0.000
HYDR          3   SL      0.00        1.000          0.000          0.000          0.000
HYDR          4   SL      0.00        1.000          0.000          0.000          0.000
HYDR          5   SL      0.00        1.000          0.000          0.000          0.000
HYDR          6   SL      0.00        1.000          0.000          0.000          0.000
HYDR          7   SL      0.00        1.000          0.000          0.000          0.000
ENDATA10
```

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

CARD TYPE      REACH  ID        TEMP     SALIN        DO       NH3     NO3+2      PHOS     CHL A     MACRO

INITIAL          1   SL       26.58      0.30      3.05      0.00      0.00      0.00     15.10      0.00
INITIAL          2   SL       25.66      0.24      4.70      0.00      0.00      0.00     15.10      0.00
INITIAL          3   SL       27.10      0.09      1.10      0.00      0.00      0.00     30.00      0.00
INITIAL          4   SL       27.55      0.09      1.15      0.00      0.00      0.00     44.90      0.00
INITIAL          5   SL       27.99      0.08      1.20      0.00      0.00      0.00     44.90      0.00
INITIAL          6   SL       27.66      0.07      1.10      0.00      0.00      0.00     67.10      0.00
INITIAL          7   SL       27.54      0.05      1.05      0.00      0.00      0.00     89.30      0.00
ENDATA11

$$$ DATA TYPE 12 (REAERATION, SEDIMENT OXYGEN DEMAND, BOD COEFFICIENTS) $$$
                                                                                                  BOD     ANAER                          BOD2     ANAER
CARD     RCH  RCH  K2                    K2        K2        K2    BKGRND      BOD       BOD     CONV      BOD2      BOD2      BOD2     CONV      BOD2
TYPE     NUM   ID  OPT                   "A"       "B"       "C"       SOD    DECAY      SETT   TO SOD     DECAY     DECAY      SETT   TO SOD     DECAY
                                                                    g/m²/d   per day       m/d             per day   per day       m/d             per day

COEF-1     1   SL  11 TEXAS            0.000     0.000     0.000     1.800     0.028     0.500     0.000     0.000     0.000     0.000     0.000     0.000
COEF-1     2   SL  11 TEXAS            0.000     0.000     0.000     3.000     0.030     0.500     0.000     0.000     0.000     0.000     0.000     0.000
COEF-1     3   SL  11 TEXAS            0.000     0.000     0.000     2.000     0.091     0.500     0.000     0.000     0.000     0.000     0.000     0.000
COEF-1     4   SL  11 TEXAS            0.000     0.000     0.000     2.500     0.087     0.500     0.000     0.000     0.000     0.000     0.000     0.000
COEF-1     5   SL  11 TEXAS            0.000     0.000     0.000     2.500     0.074     0.500     0.000     0.000     0.000     0.000     0.000     0.000
COEF-1     6   SL  11 TEXAS            0.000     0.000     0.000     2.500     0.082     0.500     0.000     0.000     0.000     0.000     0.000     0.000
COEF-1     7   SL  11 TEXAS            0.000     0.000     0.000     2.000     0.094     0.500     0.000     0.000     0.000     0.000     0.000     0.000
ENDATA12

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

CARD TYPE      REACH  ID        NBOD      NBOD   ORGN CONV       NH3       NH3      PHOS     DENIT
                                 DECA      SETT  TO NH3 SRCE     DECA      SRCE      SRCE      RATE

COEF-2           1   SL       0.046     0.100     0.000       0.000     0.000     0.000     0.000
COEF-2           2   SL       0.087     0.100     0.000       0.000     0.000     0.000     0.000
COEF-2           3   SL       0.104     0.100     0.000       0.000     0.000     0.000     0.000
COEF-2           4   SL       0.089     0.100     0.000       0.000     0.000     0.000     0.000
COEF-2           5   SL       0.052     0.100     0.000       0.000     0.000     0.000     0.000
COEF-2           6   SL       0.041     0.100     0.000       0.000     0.000     0.000     0.000
COEF-2           7   SL       0.058     0.100     0.000       0.000     0.000     0.000     0.000
ENDATA13

$$$ DATA TYPE 14 (ALGAE AND MACROPHYTE COEFFICIENTS) $$$

CARD TYPE      REACH  ID       SECCHI    ALGAE:     ALGAE    ALG CONV     ALGAE     ALGAE     MACRO     MACRO
                                DEPTH     CHL A      SETT     TO SOD      GROW      RESP      GROW      RESP

ENDATA14

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

CARD TYPE      REACH  ID    COLIFORM       NCM       NCM    NCM CONV
                             DIE-OFF     DECAY      SETT     TO SOD

ENDATA15

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

CARD TYPE      REACH  ID       OUTFLOW      INFLOW      TEMP     SALIN      CM-I     CM-II   IN/DIST  OUT/DIST
```

```
INCR-1            1   SL       0.00000     0.00520     26.58      0.00     55.00    148.00   0.00071   0.00000
INCR-1            2   SL       0.00000     0.00000     25.66      0.00      0.00      0.00   0.00000   0.00000
INCR-1            3   SL       0.00000     0.00000     27.10      0.00      0.00      0.00   0.00000   0.00000
INCR-1            4   SL       0.00000     0.00000     27.55      0.00      0.00      0.00   0.00000   0.00000
INCR-1            5   SL       0.00000     0.00000     27.99      0.00      0.00      0.00   0.00000   0.00000
INCR-1            6   SL       0.00000     0.00000     27.66      0.00      0.00      0.00   0.00000   0.00000
INCR-1            7   SL       0.00000     0.00000     27.54      0.00      0.00      0.00   0.00000   0.00000
ENDATA16

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

CARD TYPE      REACH  ID          DO       BOD      NBOD                        BOD#2

INCR-2            1   SL        2.00      0.00      0.00      0.00      0.00      0.00
INCR-2            2   SL        2.00      0.00      0.00      0.00      0.00      0.00
INCR-2            3   SL        2.00      0.00      0.00      0.00      0.00      0.00
INCR-2            4   SL        2.00      0.00      0.00      0.00      0.00      0.00
INCR-2            5   SL        2.00      0.00      0.00      0.00      0.00      0.00
INCR-2            6   SL        2.00      0.00      0.00      0.00      0.00      0.00
INCR-2            7   SL        2.00      0.00      0.00      0.00      0.00      0.00
ENDATA17

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

 CARD TYPE      REACH  ID        PHOS     CHL A      COLI       NCM

INCR-3            1   SL        0.00      0.00      0.00      0.00
INCR-3            2   SL        0.00      0.00      0.00      0.00
INCR-3            3   SL        0.00      0.00      0.00      0.00
INCR-3            4   SL        0.00      0.00      0.00      0.00
INCR-3            5   SL        0.00      0.00      0.00      0.00
INCR-3            6   SL        0.00      0.00      0.00      0.00
INCR-3            7   SL        0.00      0.00      0.00      0.00
ENDATA18

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

CARD TYPE      REACH  ID       BOD#1     NBOD       COLI       NCM        DO     BOD#2

NONPOINT          1   SL        1.50      0.59      0.00      0.00      0.00      0.00
NONPOINT          2   SL       20.00      2.00      0.00      0.00      0.00      0.00
NONPOINT          3   SL     3500.00     90.00      0.00      0.00      0.00      0.00
NONPOINT          4   SL     1200.00     30.00      0.00      0.00      0.00      0.00
NONPOINT          5   SL       50.00      1.00      0.00      0.00      0.00      0.00
NONPOINT          6   SL     2300.00    425.00      0.00      0.00      0.00      0.00
NONPOINT          7   SL     9500.00    400.00      0.00      0.00      0.00      0.00
ENDATA19

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

CARD TYPE     ELEMENT   NAME                  UNIT     FLOW     FLOW    TEMP    SALIN      CM-I     CM-II
                                                        m³/s      cfs   deg C      ppt      MG/L      MG/L

HDWTR-1           1     HEADWATER - NBB03A      0   0.00010    0.004   23.89     0.17    38.800   344.400
ENDATA20

$$$ DATA TYPE 21 (HEADWATER DATA FOR DO, BOD, AND NITROGEN) $$$
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CARD TYPE     ELEMENT   NAME                          DO     BOD#1     NBOD                          BOD#2
                                                     mg/L     mg/L     mg/L      mg/L      mg/L      mg/L

HDWTR-2           1     HEADWATER - NBB03A          1.00      6.28      1.88      0.00      0.00      0.00
ENDATA21

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

CARD TYPE     ELEMENT   NAME                         PHOS     CHL A      COLI       NCM
                                                     mg/L      mg/L      mg/L      mg/L

HDWTR-3           1     HEADWATER - NBB03A           0.00     28.50      0.00      0.00
ENDATA22

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

CARD TYPE   JUNCTION   UPSTRM     RIVER     NAME
             ELEMENT  ELEMENT     KILOM

ENDATA23

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

CARD TYPE  ELEMENT    RKILO  NAME                     FLOW       FLOW     FLOW    TEMP    SALIN      CM-I     CM-II
                                                      m³/s        cfs      MGD   deg C      ppt      MG/L      MG/L

WSTLD-1        1      29.10   MANSFIELD STP         0.01010    0.35664    0.231   28.28     0.43   106.000   836.300
WSTLD-1      232       6.00   RAMBIN BAYOU          0.03020    1.06638    0.689   24.85     0.50    11.300   116.800
ENDATA24

$$$ DATA TYPE 25 (WASTELOAD DATA FOR DO, BOD, AND NITROGEN) $$$
                                                                % BOD                          %
CARD TYPE     ELEMENT   NAME                          DO       BOD      RMVL     NBOD                NITRIF                BOD#2
                                                     mg/L      mg/L                mg/L      mg/L                 mg/L      mg/L

WSTLD-2           1      MANSFIELD STP              2.49     52.00      0.00      0.00      0.00      0.00      0.00      0.00
WSTLD-2         232      RAMBIN BAYOU               2.13      9.24      0.00      1.69      0.00      0.00      0.00      0.00
ENDATA25

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

CARD TYPE     ELEMENT   NAME                         PHOS     CHL A      COLI       NCM
                                                     mg/L      mg/L      mg/L      mg/L

WSTLD-3           1      MANSFIELD STP              0.00      0.00      0.00      0.00
WSTLD-3         232      RAMBIN BAYOU               0.00      0.00      0.00      0.00
ENDATA26

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

CARD TYPE    CONSTITUENT                     CONCENTRATION

LOWER BC     TEMPERATURE                        =     27.410     deg C
LOWER BC     SALINITY                           =      0.020     ppt
LOWER BC     CONSERVATIVE MATERIAL I            =      6.800     MG/L
LOWER BC     CONSERVATIVE MATERIAL II           =     75.100     MG/L
LOWER BC     DISSOLVED OXYGEN                   =      1.000     mg/L
LOWER BC     BOD1 BIOCHEMICAL OXYGEN DEMAND     =     14.299     mg/L
LOWER BC     CHLOROPHYLL A                      =     27.600     µg/L
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LOWER BC     NBOD                              =      2.725     mg/L
ENDATA27

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

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

ENDATA28

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

CARD TYPE       PARAMETER     COL 1     COL 2     COL 3     COL 4     COL 5     COL 6     COL 7     COL 8

ENDATA29

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


NUMBER OF PLOTS =  1
NUMBER OF REACHES IN PLOT 1 =   7
PLOT RCH  1  2  3  4  5  6  7
ENDATA30

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


OVERLAY 1 SLKovl.txt                      :MAINSTEM
ENDATA31



     .....NO ERRORS DETECTED IN INPUT DATA
     .....HYDRAULIC CALCULATIONS COMPLETED
     .....TRIDIAGONAL MATRIX TERMS INITIALIZED
     .....OXYGEN DEPENDENT RATES CONVERGENT IN  11 ITERATIONS
     .....CONSTITUENT CALCULATIONS COMPLETED
     .....GRAPHICS DATA FOR PLOT 1 WRITTEN TO UNIT 11


FINAL REPORT    HEADWATER - NBB03A                              SMITHPORT LAKE WATERSHED MODEL
REACH NO.  1      NBB03C TO NBB02                               SMITHPORTLAKE CALIBRATION RUN


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

 ELEM  TYPE        FLOW     TEMP     SALN     CM-I    CM-II     DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN    NH3  NO3+2   PHOS  CHL A     COLI     NCM
 NO.                       deg C      ppt     MG/L     MG/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   µg/L  #/100mL

    1  HDWTR     0.00010   23.89     0.17    38.80   344.40   1.00   4.77   0.00   6.28   0.00   1.88   0.00   0.00   0.00  15.10     0.00    0.00
 EACH  INCR      0.00007   26.58     0.00    55.00   148.00   2.00   0.00   0.00                  0.00   0.00   0.00   0.00     0.00     0.00
    1  WSTLD     0.01010   28.28     0.43   106.00   836.30   2.49  52.00   0.00  52.00   0.00   0.00   0.00   0.00   0.00   0.00     0.00    0.00


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

 ELEM   BEGIN  ENDING       FLOW   PCT   ADVCTV    TRAVEL   DEPTH   WIDTH    VOLUME    SURFACE  X-SECT     TIDAL   TIDAL   DISPRSN    MEAN
  NO.    DIST    DIST              EFF     VELO      TIME                                  AREA    AREA     PRISM    VELO              VELO
          km      km        m³/s            m/s      days       m       m        m³         m²      m²        m³     m/s      m²/s     m/s
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1	29.10	29.00	0.01027	98.3	0.03314	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.033
2	29.00	28.90	0.01034	97.7	0.03337	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.033
3	28.90	28.80	0.01041	97.0	0.03360	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.034
4	28.80	28.70	0.01048	96.3	0.03383	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.034
5	28.70	28.60	0.01056	95.7	0.03406	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.034
6	28.60	28.50	0.01063	95.0	0.03429	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.034
7	28.50	28.40	0.01070	94.4	0.03452	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.035
8	28.40	28.30	0.01077	93.8	0.03475	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.035
9	28.30	28.20	0.01084	93.2	0.03498	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.035
10	28.20	28.10	0.01091	92.6	0.03521	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.035
11	28.10	28.00	0.01098	92.0	0.03544	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.035
12	28.00	27.90	0.01105	91.4	0.03567	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.036
13	27.90	27.80	0.01113	90.8	0.03590	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.036
14	27.80	27.70	0.01120	90.2	0.03612	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.036
15	27.70	27.60	0.01127	89.6	0.03635	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.036
16	27.60	27.50	0.01134	89.1	0.03658	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.037
17	27.50	27.40	0.01141	88.5	0.03681	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.037
18	27.40	27.30	0.01148	88.0	0.03704	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.037
19	27.30	27.20	0.01155	87.4	0.03727	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.037
20	27.20	27.10	0.01162	86.9	0.03750	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.038
21	27.10	27.00	0.01170	86.4	0.03773	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.038
22	27.00	26.90	0.01177	85.8	0.03796	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.038
23	26.90	26.80	0.01184	85.3	0.03819	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.038
24	26.80	26.70	0.01191	84.8	0.03842	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.038
25	26.70	26.60	0.01198	84.3	0.03865	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.039
26	26.60	26.50	0.01205	83.8	0.03888	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.039
27	26.50	26.40	0.01212	83.3	0.03911	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.039
28	26.40	26.30	0.01219	82.8	0.03934	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.039
29	26.30	26.20	0.01227	82.3	0.03957	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
30	26.20	26.10	0.01234	81.9	0.03980	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
31	26.10	26.00	0.01241	81.4	0.04003	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
32	26.00	25.90	0.01248	80.9	0.04026	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
33	25.90	25.80	0.01255	80.5	0.04049	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
34	25.80	25.70	0.01262	80.0	0.04072	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.041
35	25.70	25.60	0.01269	79.6	0.04095	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.041
36	25.60	25.50	0.01276	79.1	0.04118	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.041
37	25.50	25.40	0.01284	78.7	0.04141	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.041
38	25.40	25.30	0.01291	78.3	0.04164	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.042
39	25.30	25.20	0.01298	77.8	0.04187	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.042
40	25.20	25.10	0.01305	77.4	0.04210	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.042
41	25.10	25.00	0.01312	77.0	0.04233	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.042
42	25.00	24.90	0.01319	76.6	0.04256	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.043
43	24.90	24.80	0.01326	76.2	0.04279	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.043
44	24.80	24.70	0.01333	75.7	0.04302	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.043
45	24.70	24.60	0.01341	75.3	0.04325	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.043
46	24.60	24.50	0.01348	74.9	0.04348	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.043
47	24.50	24.40	0.01355	74.5	0.04371	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.044
48	24.40	24.30	0.01362	74.2	0.04394	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.044
49	24.30	24.20	0.01369	73.8	0.04417	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.044
50	24.20	24.10	0.01376	73.4	0.04440	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.044
51	24.10	24.00	0.01383	73.0	0.04463	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.045
52	24.00	23.90	0.01390	72.6	0.04486	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.045
53	23.90	23.80	0.01398	72.3	0.04509	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.045
54	23.80	23.70	0.01405	71.9	0.04532	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.045
55	23.70	23.60	0.01412	71.5	0.04555	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.046
56	23.60	23.50	0.01419	71.2	0.04578	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.046
57	23.50	23.40	0.01426	70.8	0.04601	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.046
58	23.40	23.30	0.01433	70.5	0.04624	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.046
59	23.30	23.20	0.01440	70.1	0.04647	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.046

60	23.20	23.10	0.01447	69.8	0.04670	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.047
61	23.10	23.00	0.01455	69.4	0.04693	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.047
62	23.00	22.90	0.01462	69.1	0.04716	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.047
63	22.90	22.80	0.01469	68.8	0.04739	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.047
64	22.80	22.70	0.01476	68.4	0.04762	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.048
65	22.70	22.60	0.01483	68.1	0.04785	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.048
66	22.60	22.50	0.01490	67.8	0.04808	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.048
67	22.50	22.40	0.01497	67.5	0.04831	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.048
68	22.40	22.30	0.01504	67.1	0.04853	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.049
69	22.30	22.20	0.01512	66.8	0.04876	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.049
70	22.20	22.10	0.01519	66.5	0.04899	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.049
71	22.10	22.00	0.01526	66.2	0.04922	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.049
72	22.00	21.90	0.01533	65.9	0.04945	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.049
73	21.90	21.80	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
TOT						2.07			2262.70	20023.90					
AVG					0.0408		0.11	2.74			0.31				
CUM						2.07									

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD#1 DECAY 1/da	BOD#1 SETT 1/da	ABOD#1 DECAY 1/da	BOD#2 DECAY 1/da	BOD#2 SETT 1/da	ABOD#2 DECAY 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORGN DECAY 1/da	ORGN SETT 1/da	NH3 DECAY 1/da	NH3 SRCE *	DENIT RATE 1/da	PO4 SRCE *	ALG PROD **	MAC PROD **	COLI DECAY 1/da	NCM DECAY 1/da	NCM SETT 1/da
1	29.000	8.02	7.01	0.04	0.58	0.00	0.00	0.00	0.00	2.72	2.72	2.72	0.05	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	28.900	8.02	7.01	0.04	0.58	0.00	0.00	0.00	0.00	2.72	2.72	2.72	0.05	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	28.800	8.02	7.01	0.04	0.58	0.00	0.00	0.00	0.00	2.72	2.72	2.72	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	28.700	8.02	7.01	0.04	0.58	0.00	0.00	0.00	0.00	2.72	2.72	2.72	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	28.600	8.02	7.01	0.04	0.58	0.00	0.00	0.00	0.00	2.71	2.71	2.71	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	28.500	8.03	7.01	0.04	0.58	0.00	0.00	0.00	0.00	2.71	2.71	2.71	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	28.400	8.03	7.00	0.04	0.58	0.00	0.00	0.00	0.00	2.71	2.71	2.71	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	28.300	8.03	7.00	0.04	0.58	0.00	0.00	0.00	0.00	2.71	2.71	2.71	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	28.200	8.03	7.00	0.04	0.58	0.00	0.00	0.00	0.00	2.70	2.70	2.70	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	28.100	8.03	7.00	0.04	0.58	0.00	0.00	0.00	0.00	2.70	2.70	2.70	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	28.000	8.04	7.00	0.04	0.58	0.00	0.00	0.00	0.00	2.70	2.70	2.70	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	27.900	8.04	7.00	0.04	0.58	0.00	0.00	0.00	0.00	2.70	2.70	2.70	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	27.800	8.04	6.99	0.04	0.58	0.00	0.00	0.00	0.00	2.70	2.70	2.70	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	27.700	8.04	6.99	0.04	0.58	0.00	0.00	0.00	0.00	2.69	2.69	2.69	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	27.600	8.04	6.99	0.04	0.58	0.00	0.00	0.00	0.00	2.69	2.69	2.69	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	27.500	8.04	6.99	0.04	0.58	0.00	0.00	0.00	0.00	2.69	2.69	2.69	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	27.400	8.05	6.99	0.04	0.58	0.00	0.00	0.00	0.00	2.69	2.69	2.69	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	27.300	8.05	6.99	0.04	0.58	0.00	0.00	0.00	0.00	2.69	2.69	2.69	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	27.200	8.05	6.98	0.04	0.58	0.00	0.00	0.00	0.00	2.68	2.68	2.68	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	27.100	8.05	6.98	0.04	0.58	0.00	0.00	0.00	0.00	2.68	2.68	2.68	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	27.000	8.05	6.98	0.04	0.58	0.00	0.00	0.00	0.00	2.68	2.68	2.68	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	26.900	8.06	6.98	0.04	0.58	0.00	0.00	0.00	0.00	2.68	2.68	2.68	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	26.800	8.06	6.98	0.04	0.58	0.00	0.00	0.00	0.00	2.67	2.67	2.67	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	26.700	8.06	6.98	0.04	0.58	0.00	0.00	0.00	0.00	2.67	2.67	2.67	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	26.600	8.06	6.97	0.04	0.58	0.00	0.00	0.00	0.00	2.67	2.67	2.67	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	26.500	8.06	6.97	0.04	0.58	0.00	0.00	0.00	0.00	2.67	2.67	2.67	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	26.400	8.07	6.97	0.04	0.58	0.00	0.00	0.00	0.00	2.67	2.67	2.67	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	26.300	8.07	6.97	0.04	0.58	0.00	0.00	0.00	0.00	2.66	2.66	2.66	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	26.200	8.07	6.97	0.04	0.58	0.00	0.00	0.00	0.00	2.66	2.66	2.66	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	26.100	8.07	6.97	0.04	0.58	0.00	0.00	0.00	0.00	2.66	2.66	2.66	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	26.000	8.07	6.97	0.04	0.58	0.00	0.00	0.00	0.00	2.66	2.66	2.66	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
32	25.900	8.07	6.96	0.04	0.58	0.00	0.00	0.00	0.00	2.66	2.66	2.66	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
33	25.800	8.08	6.96	0.04	0.58	0.00	0.00	0.00	0.00	2.65	2.65	2.65	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

34	25.700	8.08	6.96	0.04	0.58	0.00	0.00	0.00	0.00	2.65	2.65	2.65	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
35	25.600	8.08	6.96	0.04	0.58	0.00	0.00	0.00	0.00	2.65	2.65	2.65	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
36	25.500	8.08	6.96	0.04	0.58	0.00	0.00	0.00	0.00	2.65	2.65	2.65	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37	25.400	8.08	6.96	0.04	0.58	0.00	0.00	0.00	0.00	2.65	2.65	2.65	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
38	25.300	8.09	6.95	0.04	0.58	0.00	0.00	0.00	0.00	2.64	2.64	2.64	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
39	25.200	8.09	6.95	0.04	0.58	0.00	0.00	0.00	0.00	2.64	2.64	2.64	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
40	25.100	8.09	6.95	0.04	0.58	0.00	0.00	0.00	0.00	2.64	2.64	2.64	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
41	25.000	8.09	6.95	0.04	0.58	0.00	0.00	0.00	0.00	2.64	2.64	2.64	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
42	24.900	8.09	6.95	0.04	0.58	0.00	0.00	0.00	0.00	2.63	2.63	2.63	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
43	24.800	8.10	6.95	0.04	0.58	0.00	0.00	0.00	0.00	2.63	2.63	2.63	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
44	24.700	8.10	6.94	0.04	0.58	0.00	0.00	0.00	0.00	2.63	2.63	2.63	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
45	24.600	8.10	6.94	0.04	0.58	0.00	0.00	0.00	0.00	2.63	2.63	2.63	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
46	24.500	8.10	6.94	0.04	0.58	0.00	0.00	0.00	0.00	2.63	2.63	2.63	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
47	24.400	8.10	6.94	0.04	0.58	0.00	0.00	0.00	0.00	2.62	2.62	2.62	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
48	24.300	8.11	6.94	0.04	0.58	0.00	0.00	0.00	0.00	2.62	2.62	2.62	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
49	24.200	8.11	6.94	0.04	0.58	0.00	0.00	0.00	0.00	2.62	2.62	2.62	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
50	24.100	8.11	6.94	0.04	0.58	0.00	0.00	0.00	0.00	2.62	2.62	2.62	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
51	24.000	8.11	6.93	0.04	0.58	0.00	0.00	0.00	0.00	2.62	2.62	2.62	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
52	23.900	8.11	6.93	0.04	0.58	0.00	0.00	0.00	0.00	2.61	2.61	2.61	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
53	23.800	8.11	6.93	0.04	0.58	0.00	0.00	0.00	0.00	2.61	2.61	2.61	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
54	23.700	8.12	6.93	0.04	0.58	0.00	0.00	0.00	0.00	2.61	2.61	2.61	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
55	23.600	8.12	6.93	0.04	0.57	0.00	0.00	0.00	0.00	2.61	2.61	2.61	0.06	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
56	23.500	8.12	6.93	0.04	0.57	0.00	0.00	0.00	0.00	2.61	2.61	2.61	0.06	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
57	23.400	8.12	6.92	0.04	0.57	0.00	0.00	0.00	0.00	2.60	2.60	2.60	0.06	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
58	23.300	8.12	6.92	0.04	0.57	0.00	0.00	0.00	0.00	2.60	2.60	2.60	0.06	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
59	23.200	8.13	6.92	0.04	0.57	0.00	0.00	0.00	0.00	2.60	2.60	2.60	0.06	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
60	23.100	8.13	6.92	0.04	0.57	0.00	0.00	0.00	0.00	2.60	2.60	2.60	0.06	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
61	23.000	8.13	6.92	0.04	0.57	0.00	0.00	0.00	0.00	2.60	2.60	2.60	0.06	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
62	22.900	8.13	6.92	0.04	0.57	0.00	0.00	0.00	0.00	2.59	2.59	2.59	0.06	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
63	22.800	8.13	6.91	0.04	0.57	0.00	0.00	0.00	0.00	2.59	2.59	2.59	0.06	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
64	22.700	8.14	6.91	0.04	0.57	0.00	0.00	0.00	0.00	2.59	2.59	2.59	0.06	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
65	22.600	8.14	6.91	0.04	0.57	0.00	0.00	0.00	0.00	2.59	2.59	2.59	0.06	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
66	22.500	8.14	6.91	0.04	0.57	0.00	0.00	0.00	0.00	2.59	2.59	2.59	0.06	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
67	22.400	8.14	6.91	0.04	0.57	0.00	0.00	0.00	0.00	2.58	2.58	2.58	0.06	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
68	22.300	8.14	6.91	0.04	0.57	0.00	0.00	0.00	0.00	2.58	2.58	2.58	0.06	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
69	22.200	8.15	6.90	0.04	0.57	0.00	0.00	0.00	0.00	2.58	2.58	2.58	0.06	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
70	22.100	8.15	6.90	0.04	0.57	0.00	0.00	0.00	0.00	2.58	2.58	2.58	0.06	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
71	22.000	8.15	6.90	0.04	0.57	0.00	0.00	0.00	0.00	2.57	2.57	2.57	0.06	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
72	21.900	8.15	6.90	0.04	0.57	0.00	0.00	0.00	0.00	2.57	2.57	2.57	0.06	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
73	21.800	8.15	6.90	0.04	0.57	0.00	0.00	0.00	0.00	2.57	2.57	2.57	0.06	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			6.19	0.03	0.50	0.00	0.00	0.00	0.00	1.80			0.05	0.10	0.00	0.00	0.00	0.00			0.00	0.00	0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I MG/L	CM-II MG/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO g/m³	COLI #/100mL	NCM
1	29.000	26.57	0.30	80.05	644.55	2.31	33.11	0.00	34.62	0.00	0.72	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
2	28.900	26.55	0.30	79.87	641.15	2.70	32.22	0.00	33.73	0.00	0.72	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
3	28.800	26.54	0.30	79.70	637.79	3.01	31.36	0.00	32.87	0.00	0.72	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
4	28.700	26.53	0.30	79.54	634.47	3.27	30.52	0.00	32.03	0.00	0.72	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
5	28.600	26.52	0.30	79.37	631.20	3.48	29.72	0.00	31.23	0.00	0.72	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
6	28.500	26.50	0.30	79.21	627.98	3.64	28.94	0.00	30.45	0.00	0.72	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
7	28.400	26.49	0.29	79.05	624.79	3.78	28.19	0.00	29.70	0.00	0.72	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
8	28.300	26.48	0.29	78.89	621.65	3.89	27.47	0.00	28.98	0.00	0.72	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00

9	28.200	26.47	0.29	78.73	618.55	3.99	26.77	0.00	28.28	0.00	0.72	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
10	28.100	26.45	0.29	78.58	615.49	4.06	26.09	0.00	27.60	0.00	0.72	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
11	28.000	26.44	0.29	78.43	612.47	4.13	25.43	0.00	26.94	0.00	0.72	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
12	27.900	26.43	0.29	78.28	609.49	4.18	24.79	0.00	26.30	0.00	0.72	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
13	27.800	26.42	0.29	78.13	606.54	4.22	24.18	0.00	25.69	0.00	0.72	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
14	27.700	26.40	0.29	77.98	603.64	4.26	23.58	0.00	25.09	0.00	0.72	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
15	27.600	26.39	0.29	77.84	600.77	4.29	23.00	0.00	24.51	0.00	0.72	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
16	27.500	26.38	0.29	77.69	597.93	4.32	22.45	0.00	23.96	0.00	0.72	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
17	27.400	26.37	0.29	77.55	595.13	4.34	21.90	0.00	23.41	0.00	0.72	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
18	27.300	26.35	0.29	77.41	592.37	4.36	21.38	0.00	22.89	0.00	0.72	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
19	27.200	26.34	0.28	77.28	589.64	4.38	20.87	0.00	22.38	0.00	0.72	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
20	27.100	26.33	0.28	77.14	586.94	4.40	20.38	0.00	21.89	0.00	0.72	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
21	27.000	26.32	0.28	77.01	584.27	4.41	19.90	0.00	21.41	0.00	0.72	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
22	26.900	26.30	0.28	76.87	581.64	4.42	19.44	0.00	20.95	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
23	26.800	26.29	0.28	76.74	579.04	4.43	18.99	0.00	20.50	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
24	26.700	26.28	0.28	76.61	576.47	4.44	18.55	0.00	20.06	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
25	26.600	26.26	0.28	76.48	573.93	4.45	18.13	0.00	19.64	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
26	26.500	26.25	0.28	76.36	571.42	4.46	17.72	0.00	19.23	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
27	26.400	26.24	0.28	76.23	568.94	4.47	17.32	0.00	18.83	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
28	26.300	26.23	0.28	76.11	566.49	4.48	16.94	0.00	18.45	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
29	26.200	26.21	0.28	75.99	564.06	4.48	16.56	0.00	18.07	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
30	26.100	26.20	0.28	75.87	561.67	4.49	16.20	0.00	17.71	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
31	26.000	26.19	0.27	75.75	559.30	4.50	15.84	0.00	17.35	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
32	25.900	26.18	0.27	75.63	556.96	4.51	15.50	0.00	17.01	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
33	25.800	26.16	0.27	75.51	554.64	4.51	15.17	0.00	16.68	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
34	25.700	26.15	0.27	75.40	552.36	4.52	14.84	0.00	16.35	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
35	25.600	26.14	0.27	75.28	550.09	4.52	14.53	0.00	16.04	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
36	25.500	26.13	0.27	75.17	547.86	4.53	14.22	0.00	15.73	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
37	25.400	26.11	0.27	75.06	545.64	4.54	13.92	0.00	15.43	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
38	25.300	26.10	0.27	74.95	543.45	4.54	13.63	0.00	15.14	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
39	25.200	26.09	0.27	74.84	541.29	4.55	13.35	0.00	14.86	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
40	25.100	26.08	0.27	74.73	539.15	4.55	13.08	0.00	14.59	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
41	25.000	26.06	0.27	74.62	537.03	4.56	12.81	0.00	14.32	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
42	24.900	26.05	0.27	74.52	534.93	4.56	12.55	0.00	14.06	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
43	24.800	26.04	0.26	74.41	532.86	4.57	12.30	0.00	13.81	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
44	24.700	26.03	0.26	74.31	530.81	4.57	12.05	0.00	13.56	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
45	24.600	26.01	0.26	74.21	528.78	4.58	11.81	0.00	13.32	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
46	24.500	26.00	0.26	74.11	526.77	4.58	11.58	0.00	13.09	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
47	24.400	25.99	0.26	74.01	524.79	4.59	11.35	0.00	12.86	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
48	24.300	25.98	0.26	73.91	522.82	4.59	11.13	0.00	12.64	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
49	24.200	25.96	0.26	73.81	520.87	4.60	10.92	0.00	12.43	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
50	24.100	25.95	0.26	73.71	518.95	4.60	10.71	0.00	12.22	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
51	24.000	25.94	0.26	73.61	517.04	4.61	10.51	0.00	12.02	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
52	23.900	25.92	0.26	73.52	515.16	4.61	10.31	0.00	11.82	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
53	23.800	25.91	0.26	73.43	513.29	4.62	10.11	0.00	11.62	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
54	23.700	25.90	0.26	73.33	511.44	4.62	9.93	0.00	11.44	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
55	23.600	25.89	0.25	73.24	509.61	4.63	9.74	0.00	11.25	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
56	23.500	25.87	0.25	73.15	507.80	4.63	9.56	0.00	11.07	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
57	23.400	25.86	0.25	73.06	506.01	4.64	9.39	0.00	10.90	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
58	23.300	25.85	0.25	72.97	504.23	4.64	9.22	0.00	10.73	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
59	23.200	25.84	0.25	72.88	502.47	4.64	9.05	0.00	10.56	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
60	23.100	25.82	0.25	72.79	500.73	4.65	8.89	0.00	10.40	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
61	23.000	25.81	0.25	72.71	499.01	4.65	8.73	0.00	10.24	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
62	22.900	25.80	0.25	72.62	497.30	4.66	8.58	0.00	10.09	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
63	22.800	25.79	0.25	72.53	495.61	4.66	8.43	0.00	9.94	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
64	22.700	25.77	0.25	72.45	493.94	4.67	8.28	0.00	9.79	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
65	22.600	25.76	0.25	72.37	492.28	4.67	8.14	0.00	9.65	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
66	22.500	25.75	0.25	72.28	490.64	4.68	8.00	0.00	9.51	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
67	22.400	25.74	0.24	72.20	489.01	4.68	7.86	0.00	9.37	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00

68	22.300	25.72	0.24	72.12	487.40	4.68	7.73	0.00	9.24	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
69	22.200	25.71	0.24	72.04	485.80	4.69	7.60	0.00	9.11	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
70	22.100	25.70	0.24	71.96	484.22	4.69	7.47	0.00	8.98	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
71	22.000	25.69	0.24	71.88	482.66	4.70	7.35	0.00	8.86	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
72	21.900	25.67	0.24	71.80	481.15	4.70	7.23	0.00	8.74	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
73	21.800	25.66	0.24	71.74	479.87	4.66	7.13	0.00	8.64	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00

FINAL REPORT HEADWATER - NBB03A SMITHPORT LAKE WATERSHED MODEL
REACH NO. 2 NBB02 TO RB01 SMITHPORTLAKE CALIBRATION RUN

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CM-I MG/L	CM-II MG/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM
74	UPR RCH	0.01540	25.66	0.24	71.74	479.87	4.66	7.13	0.00	8.64	0.00	0.71	0.00	0.00	0.00	15.10	0.00	0.00

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m^3/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	DEPTH m	WIDTH m	VOLUME m^3	SURFACE AREA m^2	X-SECT AREA m^2	TIDAL PRISM m^3	TIDAL VELO m/s	DISPRSN m^2/s	MEAN VELO m/s
74	21.80	21.70	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
75	21.70	21.60	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
76	21.60	21.50	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
77	21.50	21.40	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
78	21.40	21.30	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
79	21.30	21.20	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
80	21.20	21.10	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
81	21.10	21.00	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
82	21.00	20.90	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
83	20.90	20.80	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
84	20.80	20.70	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
85	20.70	20.60	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
86	20.60	20.50	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
87	20.50	20.40	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
88	20.40	20.30	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
89	20.30	20.20	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
90	20.20	20.10	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
91	20.10	20.00	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
92	20.00	19.90	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
93	19.90	19.80	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
94	19.80	19.70	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
95	19.70	19.60	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
96	19.60	19.50	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
97	19.50	19.40	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
98	19.40	19.30	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
99	19.30	19.20	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
100	19.20	19.10	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
101	19.10	19.00	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
102	19.00	18.90	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
103	18.90	18.80	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
104	18.80	18.70	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
105	18.70	18.60	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
106	18.60	18.50	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050

107	18.50	18.40	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
108	18.40	18.30	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
109	18.30	18.20	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
110	18.20	18.10	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
111	18.10	18.00	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
112	18.00	17.90	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
113	17.90	17.80	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
114	17.80	17.70	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
115	17.70	17.60	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
116	17.60	17.50	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
117	17.50	17.40	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
118	17.40	17.30	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
119	17.30	17.20	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
120	17.20	17.10	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
121	17.10	17.00	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
122	17.00	16.90	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
123	16.90	16.80	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
124	16.80	16.70	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
125	16.70	16.60	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
126	16.60	16.50	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
127	16.50	16.40	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
128	16.40	16.30	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
129	16.30	16.20	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
130	16.20	16.10	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
131	16.10	16.00	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
132	16.00	15.90	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
133	15.90	15.80	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
134	15.80	15.70	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
135	15.70	15.60	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
136	15.60	15.50	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
137	15.50	15.40	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
138	15.40	15.30	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
139	15.30	15.20	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
140	15.20	15.10	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
141	15.10	15.00	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
142	15.00	14.90	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
143	14.90	14.80	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
144	14.80	14.70	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
145	14.70	14.60	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
146	14.60	14.50	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
147	14.50	14.40	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
148	14.40	14.30	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
149	14.30	14.20	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
150	14.20	14.10	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
151	14.10	14.00	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
152	14.00	13.90	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
153	13.90	13.80	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
154	13.80	13.70	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
155	13.70	13.60	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
156	13.60	13.50	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
157	13.50	13.40	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
158	13.40	13.30	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
159	13.30	13.20	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
160	13.20	13.10	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
161	13.10	13.00	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
162	13.00	12.90	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
163	12.90	12.80	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
164	12.80	12.70	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
165	12.70	12.60	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050

166	12.60	12.50	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
167	12.50	12.40	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
168	12.40	12.30	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
169	12.30	12.20	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
170	12.20	12.10	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
171	12.10	12.00	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
172	12.00	11.90	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
173	11.90	11.80	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
174	11.80	11.70	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
175	11.70	11.60	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
176	11.60	11.50	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
177	11.50	11.40	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
178	11.40	11.30	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
179	11.30	11.20	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
180	11.20	11.10	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
181	11.10	11.00	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
182	11.00	10.90	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
183	10.90	10.80	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
184	10.80	10.70	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
185	10.70	10.60	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
186	10.60	10.50	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
187	10.50	10.40	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
188	10.40	10.30	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
189	10.30	10.20	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
190	10.20	10.10	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
191	10.10	10.00	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
192	10.00	9.90	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
193	9.90	9.80	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
194	9.80	9.70	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
195	9.70	9.60	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
196	9.60	9.50	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
197	9.50	9.40	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
198	9.40	9.30	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
199	9.30	9.20	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
200	9.20	9.10	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
201	9.10	9.00	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
202	9.00	8.90	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
203	8.90	8.80	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
204	8.80	8.70	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
205	8.70	8.60	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
206	8.60	8.50	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
207	8.50	8.40	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
208	8.40	8.30	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
209	8.30	8.20	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
210	8.20	8.10	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
211	8.10	8.00	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
212	8.00	7.90	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
213	7.90	7.80	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
214	7.80	7.70	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
215	7.70	7.60	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
216	7.60	7.50	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
217	7.50	7.40	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
218	7.40	7.30	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
219	7.30	7.20	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
220	7.20	7.10	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
221	7.10	7.00	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
222	7.00	6.90	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
223	6.90	6.80	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
224	6.80	6.70	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050

225	6.70	6.60	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
226	6.60	6.50	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
227	6.50	6.40	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
228	6.40	6.30	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
229	6.30	6.20	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
230	6.20	6.10	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
231	6.10	6.00	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
TOT						3.68			4897.35	43339.47					
AVG					0.0497		0.11	2.74			0.31				
CUM						5.75									

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD#1 DECAY 1/da	BOD#1 SETT 1/da	ABOD#1 DECAY 1/da	BOD#2 DECAY 1/da	BOD#2 SETT 1/da	ABOD#2 DECAY 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORGN DECAY 1/da	ORGN SETT 1/da	NH3 DECAY 1/da	NH3 SRCE *	DENIT RATE 1/da	PO4 SRCE *	ALG PROD **	MAC PROD **	COLI DECAY 1/da	NCM DECAY 1/da	NCM SETT 1/da
74	21.700	8.15	6.90	0.04	0.57	0.00	0.00	0.00	0.00	4.29	4.29	4.29	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
75	21.600	8.15	6.90	0.04	0.57	0.00	0.00	0.00	0.00	4.29	4.29	4.29	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
76	21.500	8.15	6.90	0.04	0.57	0.00	0.00	0.00	0.00	4.29	4.29	4.29	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
77	21.400	8.15	6.90	0.04	0.57	0.00	0.00	0.00	0.00	4.29	4.29	4.29	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
78	21.300	8.15	6.90	0.04	0.57	0.00	0.00	0.00	0.00	4.30	4.30	4.30	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
79	21.200	8.14	6.91	0.04	0.57	0.00	0.00	0.00	0.00	4.30	4.30	4.30	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
80	21.100	8.14	6.91	0.04	0.57	0.00	0.00	0.00	0.00	4.30	4.30	4.30	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
81	21.000	8.14	6.91	0.04	0.57	0.00	0.00	0.00	0.00	4.30	4.30	4.30	0.10	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
82	20.900	8.14	6.91	0.04	0.57	0.00	0.00	0.00	0.00	4.31	4.31	4.31	0.10	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
83	20.800	8.14	6.91	0.04	0.57	0.00	0.00	0.00	0.00	4.31	4.31	4.31	0.10	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
84	20.700	8.14	6.91	0.04	0.57	0.00	0.00	0.00	0.00	4.31	4.31	4.31	0.10	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
85	20.600	8.14	6.91	0.04	0.57	0.00	0.00	0.00	0.00	4.31	4.31	4.31	0.10	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
86	20.500	8.14	6.91	0.04	0.57	0.00	0.00	0.00	0.00	4.32	4.32	4.32	0.10	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
87	20.400	8.13	6.91	0.04	0.57	0.00	0.00	0.00	0.00	4.32	4.32	4.32	0.10	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
88	20.300	8.13	6.92	0.04	0.57	0.00	0.00	0.00	0.00	4.32	4.32	4.32	0.10	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
89	20.200	8.13	6.92	0.04	0.57	0.00	0.00	0.00	0.00	4.32	4.32	4.32	0.10	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90	20.100	8.13	6.92	0.04	0.57	0.00	0.00	0.00	0.00	4.33	4.33	4.33	0.10	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
91	20.000	8.13	6.92	0.04	0.57	0.00	0.00	0.00	0.00	4.33	4.33	4.33	0.10	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
92	19.900	8.13	6.92	0.04	0.57	0.00	0.00	0.00	0.00	4.33	4.33	4.33	0.10	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
93	19.800	8.13	6.92	0.04	0.57	0.00	0.00	0.00	0.00	4.33	4.33	4.33	0.10	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
94	19.700	8.13	6.92	0.04	0.57	0.00	0.00	0.00	0.00	4.34	4.34	4.34	0.10	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95	19.600	8.12	6.92	0.04	0.57	0.00	0.00	0.00	0.00	4.34	4.34	4.34	0.10	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
96	19.500	8.12	6.93	0.04	0.57	0.00	0.00	0.00	0.00	4.34	4.34	4.34	0.10	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
97	19.400	8.12	6.93	0.04	0.57	0.00	0.00	0.00	0.00	4.34	4.34	4.34	0.10	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
98	19.300	8.12	6.93	0.04	0.57	0.00	0.00	0.00	0.00	4.35	4.35	4.35	0.10	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
99	19.200	8.12	6.93	0.04	0.58	0.00	0.00	0.00	0.00	4.35	4.35	4.35	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100	19.100	8.12	6.93	0.04	0.58	0.00	0.00	0.00	0.00	4.35	4.35	4.35	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
101	19.000	8.12	6.93	0.04	0.58	0.00	0.00	0.00	0.00	4.35	4.35	4.35	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
102	18.900	8.11	6.93	0.04	0.58	0.00	0.00	0.00	0.00	4.36	4.36	4.36	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
103	18.800	8.11	6.93	0.04	0.58	0.00	0.00	0.00	0.00	4.36	4.36	4.36	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
104	18.700	8.11	6.93	0.04	0.58	0.00	0.00	0.00	0.00	4.36	4.36	4.36	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
105	18.600	8.11	6.94	0.04	0.58	0.00	0.00	0.00	0.00	4.36	4.36	4.36	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
106	18.500	8.11	6.94	0.04	0.58	0.00	0.00	0.00	0.00	4.37	4.37	4.37	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
107	18.400	8.11	6.94	0.04	0.58	0.00	0.00	0.00	0.00	4.37	4.37	4.37	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
108	18.300	8.11	6.94	0.04	0.58	0.00	0.00	0.00	0.00	4.37	4.37	4.37	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
109	18.200	8.11	6.94	0.04	0.58	0.00	0.00	0.00	0.00	4.37	4.37	4.37	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
110	18.100	8.10	6.94	0.04	0.58	0.00	0.00	0.00	0.00	4.38	4.38	4.38	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
111	18.000	8.10	6.94	0.04	0.58	0.00	0.00	0.00	0.00	4.38	4.38	4.38	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
112	17.900	8.10	6.94	0.04	0.58	0.00	0.00	0.00	0.00	4.38	4.38	4.38	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
113	17.800	8.10	6.94	0.04	0.58	0.00	0.00	0.00	0.00	4.38	4.38	4.38	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

114	17.700	8.10	6.95	0.04	0.58	0.00	0.00	0.00	0.00	4.39	4.39	4.39	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
115	17.600	8.10	6.95	0.04	0.58	0.00	0.00	0.00	0.00	4.39	4.39	4.39	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
116	17.500	8.10	6.95	0.04	0.58	0.00	0.00	0.00	0.00	4.39	4.39	4.39	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
117	17.400	8.10	6.95	0.04	0.58	0.00	0.00	0.00	0.00	4.39	4.39	4.39	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
118	17.300	8.09	6.95	0.04	0.58	0.00	0.00	0.00	0.00	4.40	4.40	4.40	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
119	17.200	8.09	6.95	0.04	0.58	0.00	0.00	0.00	0.00	4.40	4.40	4.40	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
120	17.100	8.09	6.95	0.04	0.58	0.00	0.00	0.00	0.00	4.40	4.40	4.40	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
121	17.000	8.09	6.95	0.04	0.58	0.00	0.00	0.00	0.00	4.40	4.40	4.40	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
122	16.900	8.09	6.95	0.04	0.58	0.00	0.00	0.00	0.00	4.41	4.41	4.41	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
123	16.800	8.09	6.96	0.04	0.58	0.00	0.00	0.00	0.00	4.41	4.41	4.41	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
124	16.700	8.09	6.96	0.04	0.58	0.00	0.00	0.00	0.00	4.41	4.41	4.41	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
125	16.600	8.08	6.96	0.04	0.58	0.00	0.00	0.00	0.00	4.41	4.41	4.41	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
126	16.500	8.08	6.96	0.04	0.58	0.00	0.00	0.00	0.00	4.42	4.42	4.42	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
127	16.400	8.08	6.96	0.04	0.58	0.00	0.00	0.00	0.00	4.42	4.42	4.42	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
128	16.300	8.08	6.96	0.04	0.58	0.00	0.00	0.00	0.00	4.42	4.42	4.42	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
129	16.200	8.08	6.96	0.04	0.58	0.00	0.00	0.00	0.00	4.42	4.42	4.42	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
130	16.100	8.08	6.96	0.04	0.58	0.00	0.00	0.00	0.00	4.43	4.43	4.43	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
131	16.000	8.08	6.97	0.04	0.58	0.00	0.00	0.00	0.00	4.43	4.43	4.43	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
132	15.900	8.08	6.97	0.04	0.58	0.00	0.00	0.00	0.00	4.43	4.43	4.43	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
133	15.800	8.07	6.97	0.04	0.58	0.00	0.00	0.00	0.00	4.43	4.43	4.43	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
134	15.700	8.07	6.97	0.04	0.58	0.00	0.00	0.00	0.00	4.44	4.44	4.44	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
135	15.600	8.07	6.97	0.04	0.58	0.00	0.00	0.00	0.00	4.44	4.44	4.44	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
136	15.500	8.07	6.97	0.04	0.58	0.00	0.00	0.00	0.00	4.44	4.44	4.44	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
137	15.400	8.07	6.97	0.04	0.58	0.00	0.00	0.00	0.00	4.45	4.45	4.45	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
138	15.300	8.07	6.97	0.04	0.58	0.00	0.00	0.00	0.00	4.45	4.45	4.45	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
139	15.200	8.07	6.97	0.04	0.58	0.00	0.00	0.00	0.00	4.45	4.45	4.45	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
140	15.100	8.07	6.98	0.04	0.58	0.00	0.00	0.00	0.00	4.45	4.45	4.45	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
141	15.000	8.06	6.98	0.04	0.58	0.00	0.00	0.00	0.00	4.46	4.46	4.46	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
142	14.900	8.06	6.98	0.04	0.58	0.00	0.00	0.00	0.00	4.46	4.46	4.46	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
143	14.800	8.06	6.98	0.04	0.58	0.00	0.00	0.00	0.00	4.46	4.46	4.46	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
144	14.700	8.06	6.98	0.04	0.58	0.00	0.00	0.00	0.00	4.46	4.46	4.46	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
145	14.600	8.06	6.98	0.04	0.58	0.00	0.00	0.00	0.00	4.47	4.47	4.47	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
146	14.500	8.06	6.98	0.04	0.58	0.00	0.00	0.00	0.00	4.47	4.47	4.47	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
147	14.400	8.06	6.98	0.04	0.58	0.00	0.00	0.00	0.00	4.47	4.47	4.47	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
148	14.300	8.06	6.99	0.04	0.58	0.00	0.00	0.00	0.00	4.47	4.47	4.47	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
149	14.200	8.05	6.99	0.04	0.58	0.00	0.00	0.00	0.00	4.48	4.48	4.48	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
150	14.100	8.05	6.99	0.04	0.58	0.00	0.00	0.00	0.00	4.48	4.48	4.48	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
151	14.000	8.05	6.99	0.04	0.58	0.00	0.00	0.00	0.00	4.48	4.48	4.48	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
152	13.900	8.05	6.99	0.04	0.58	0.00	0.00	0.00	0.00	4.48	4.48	4.48	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
153	13.800	8.05	6.99	0.04	0.58	0.00	0.00	0.00	0.00	4.49	4.49	4.49	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
154	13.700	8.05	6.99	0.04	0.58	0.00	0.00	0.00	0.00	4.49	4.49	4.49	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
155	13.600	8.05	6.99	0.04	0.58	0.00	0.00	0.00	0.00	4.49	4.49	4.49	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
156	13.500	8.04	6.99	0.04	0.58	0.00	0.00	0.00	0.00	4.49	4.49	4.49	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
157	13.400	8.04	7.00	0.04	0.58	0.00	0.00	0.00	0.00	4.50	4.50	4.50	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
158	13.300	8.04	7.00	0.04	0.58	0.00	0.00	0.00	0.00	4.50	4.50	4.50	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
159	13.200	8.04	7.00	0.04	0.58	0.00	0.00	0.00	0.00	4.50	4.50	4.50	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
160	13.100	8.04	7.00	0.04	0.58	0.00	0.00	0.00	0.00	4.50	4.50	4.50	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
161	13.000	8.04	7.00	0.04	0.58	0.00	0.00	0.00	0.00	4.51	4.51	4.51	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
162	12.900	8.04	7.00	0.04	0.58	0.00	0.00	0.00	0.00	4.51	4.51	4.51	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
163	12.800	8.04	7.00	0.04	0.58	0.00	0.00	0.00	0.00	4.51	4.51	4.51	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
164	12.700	8.03	7.00	0.04	0.58	0.00	0.00	0.00	0.00	4.51	4.51	4.51	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
165	12.600	8.03	7.00	0.04	0.58	0.00	0.00	0.00	0.00	4.52	4.52	4.52	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
166	12.500	8.03	7.01	0.04	0.58	0.00	0.00	0.00	0.00	4.52	4.52	4.52	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
167	12.400	8.03	7.01	0.04	0.58	0.00	0.00	0.00	0.00	4.52	4.52	4.52	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
168	12.300	8.03	7.01	0.04	0.58	0.00	0.00	0.00	0.00	4.52	4.52	4.52	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
169	12.200	8.03	7.01	0.04	0.58	0.00	0.00	0.00	0.00	4.53	4.53	4.53	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
170	12.100	8.03	7.01	0.04	0.58	0.00	0.00	0.00	0.00	4.53	4.53	4.53	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
171	12.000	8.03	7.01	0.04	0.58	0.00	0.00	0.00	0.00	4.53	4.53	4.53	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
172	11.900	8.02	7.01	0.04	0.58	0.00	0.00	0.00	0.00	4.54	4.54	4.54	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

173	11.800	8.02	7.01	0.04	0.58	0.00	0.00	0.00	0.00	4.54	4.54	4.54	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
174	11.700	8.02	7.01	0.04	0.58	0.00	0.00	0.00	0.00	4.54	4.54	4.54	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
175	11.600	8.02	7.02	0.04	0.58	0.00	0.00	0.00	0.00	4.54	4.54	4.54	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
176	11.500	8.02	7.02	0.04	0.58	0.00	0.00	0.00	0.00	4.55	4.55	4.55	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
177	11.400	8.02	7.02	0.04	0.58	0.00	0.00	0.00	0.00	4.55	4.55	4.55	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
178	11.300	8.02	7.02	0.04	0.58	0.00	0.00	0.00	0.00	4.55	4.55	4.55	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
179	11.200	8.02	7.02	0.04	0.59	0.00	0.00	0.00	0.00	4.55	4.55	4.55	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
180	11.100	8.01	7.02	0.04	0.59	0.00	0.00	0.00	0.00	4.56	4.56	4.56	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
181	11.000	8.01	7.02	0.04	0.59	0.00	0.00	0.00	0.00	4.56	4.56	4.56	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
182	10.900	8.01	7.02	0.04	0.59	0.00	0.00	0.00	0.00	4.56	4.56	4.56	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
183	10.800	8.01	7.03	0.04	0.59	0.00	0.00	0.00	0.00	4.56	4.56	4.56	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
184	10.700	8.01	7.03	0.04	0.59	0.00	0.00	0.00	0.00	4.57	4.57	4.57	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
185	10.600	8.01	7.03	0.04	0.59	0.00	0.00	0.00	0.00	4.57	4.57	4.57	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
186	10.500	8.01	7.03	0.04	0.59	0.00	0.00	0.00	0.00	4.57	4.57	4.57	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
187	10.400	8.01	7.03	0.04	0.59	0.00	0.00	0.00	0.00	4.57	4.57	4.57	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
188	10.300	8.00	7.03	0.04	0.59	0.00	0.00	0.00	0.00	4.58	4.58	4.58	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
189	10.200	8.00	7.03	0.04	0.59	0.00	0.00	0.00	0.00	4.58	4.58	4.58	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
190	10.100	8.00	7.03	0.04	0.59	0.00	0.00	0.00	0.00	4.58	4.58	4.58	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
191	10.000	8.00	7.03	0.04	0.59	0.00	0.00	0.00	0.00	4.58	4.58	4.58	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
192	9.900	8.00	7.04	0.04	0.59	0.00	0.00	0.00	0.00	4.59	4.59	4.59	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
193	9.800	8.00	7.04	0.04	0.59	0.00	0.00	0.00	0.00	4.59	4.59	4.59	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
194	9.700	8.00	7.04	0.04	0.59	0.00	0.00	0.00	0.00	4.59	4.59	4.59	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
195	9.600	8.00	7.04	0.04	0.59	0.00	0.00	0.00	0.00	4.60	4.60	4.60	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
196	9.500	7.99	7.04	0.04	0.59	0.00	0.00	0.00	0.00	4.60	4.60	4.60	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
197	9.400	7.99	7.04	0.04	0.59	0.00	0.00	0.00	0.00	4.60	4.60	4.60	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
198	9.300	7.99	7.04	0.04	0.59	0.00	0.00	0.00	0.00	4.60	4.60	4.60	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
199	9.200	7.99	7.04	0.04	0.59	0.00	0.00	0.00	0.00	4.61	4.61	4.61	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
200	9.100	7.99	7.05	0.04	0.59	0.00	0.00	0.00	0.00	4.61	4.61	4.61	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
201	9.000	7.99	7.05	0.04	0.59	0.00	0.00	0.00	0.00	4.61	4.61	4.61	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
202	8.900	7.99	7.05	0.04	0.59	0.00	0.00	0.00	0.00	4.61	4.61	4.61	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
203	8.800	7.99	7.05	0.04	0.59	0.00	0.00	0.00	0.00	4.62	4.62	4.62	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
204	8.700	7.98	7.05	0.04	0.59	0.00	0.00	0.00	0.00	4.62	4.62	4.62	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
205	8.600	7.98	7.05	0.04	0.59	0.00	0.00	0.00	0.00	4.62	4.62	4.62	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
206	8.500	7.98	7.05	0.04	0.59	0.00	0.00	0.00	0.00	4.62	4.62	4.62	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
207	8.400	7.98	7.05	0.04	0.59	0.00	0.00	0.00	0.00	4.63	4.63	4.63	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
208	8.300	7.98	7.05	0.04	0.59	0.00	0.00	0.00	0.00	4.63	4.63	4.63	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
209	8.200	7.98	7.06	0.04	0.59	0.00	0.00	0.00	0.00	4.63	4.63	4.63	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
210	8.100	7.98	7.06	0.04	0.59	0.00	0.00	0.00	0.00	4.64	4.64	4.64	0.09	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
211	8.000	7.98	7.06	0.04	0.59	0.00	0.00	0.00	0.00	4.64	4.64	4.64	0.09	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
212	7.900	7.97	7.06	0.04	0.59	0.00	0.00	0.00	0.00	4.64	4.64	4.64	0.09	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
213	7.800	7.97	7.06	0.04	0.59	0.00	0.00	0.00	0.00	4.64	4.64	4.64	0.09	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
214	7.700	7.97	7.06	0.04	0.59	0.00	0.00	0.00	0.00	4.65	4.65	4.65	0.09	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
215	7.600	7.97	7.06	0.04	0.59	0.00	0.00	0.00	0.00	4.65	4.65	4.65	0.09	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
216	7.500	7.97	7.06	0.04	0.59	0.00	0.00	0.00	0.00	4.65	4.65	4.65	0.09	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
217	7.400	7.97	7.06	0.04	0.59	0.00	0.00	0.00	0.00	4.65	4.65	4.65	0.09	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
218	7.300	7.97	7.07	0.04	0.59	0.00	0.00	0.00	0.00	4.66	4.66	4.66	0.09	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
219	7.200	7.97	7.07	0.04	0.59	0.00	0.00	0.00	0.00	4.66	4.66	4.66	0.09	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
220	7.100	7.96	7.07	0.04	0.59	0.00	0.00	0.00	0.00	4.66	4.66	4.66	0.09	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
221	7.000	7.96	7.07	0.04	0.59	0.00	0.00	0.00	0.00	4.66	4.66	4.66	0.09	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
222	6.900	7.96	7.07	0.04	0.59	0.00	0.00	0.00	0.00	4.67	4.67	4.67	0.09	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
223	6.800	7.96	7.07	0.04	0.59	0.00	0.00	0.00	0.00	4.67	4.67	4.67	0.09	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
224	6.700	7.96	7.07	0.04	0.59	0.00	0.00	0.00	0.00	4.67	4.67	4.67	0.09	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
225	6.600	7.96	7.07	0.04	0.59	0.00	0.00	0.00	0.00	4.68	4.68	4.68	0.09	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
226	6.500	7.96	7.08	0.04	0.59	0.00	0.00	0.00	0.00	4.68	4.68	4.68	0.09	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
227	6.400	7.95	7.08	0.04	0.59	0.00	0.00	0.00	0.00	4.68	4.68	4.68	0.09	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
228	6.300	7.95	7.08	0.04	0.59	0.00	0.00	0.00	0.00	4.68	4.68	4.68	0.09	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
229	6.200	7.95	7.08	0.04	0.59	0.00	0.00	0.00	0.00	4.69	4.69	4.69	0.09	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
230	6.100	7.95	7.08	0.04	0.59	0.00	0.00	0.00	0.00	4.69	4.69	4.69	0.08	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
231	6.000	7.95	7.08	0.02	0.59	0.00	0.00	0.00	0.00	4.69	4.69	4.69	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

AVG 20 DEG C RATE 6.19 0.03 0.50 0.00 0.00 0.00 0.00 3.00 0.09 0.10 0.00 0.00 0.00 0.00 0.00 0.00 0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I MG/L	CM-II MG/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO g/m³	COLI #/100mL	NCM
74	21.700	25.67	0.24	71.74	479.87	4.38	7.12	0.00	8.64	0.00	0.71	0.00	0.00	0.00	0.00	15.19	0.00	0.	0.00
75	21.600	25.68	0.24	71.74	479.87	4.14	7.12	0.00	8.65	0.00	0.72	0.00	0.00	0.00	0.00	15.29	0.00	0.	0.00
76	21.500	25.69	0.24	71.74	479.87	3.93	7.11	0.00	8.65	0.00	0.72	0.00	0.00	0.00	0.00	15.38	0.00	0.	0.00
77	21.400	25.70	0.24	71.74	479.87	3.75	7.11	0.00	8.65	0.00	0.73	0.00	0.00	0.00	0.00	15.48	0.00	0.	0.00
78	21.300	25.71	0.24	71.74	479.87	3.59	7.10	0.00	8.66	0.00	0.74	0.00	0.00	0.00	0.00	15.57	0.00	0.	0.00
79	21.200	25.71	0.23	71.74	479.87	3.45	7.09	0.00	8.66	0.00	0.74	0.00	0.00	0.00	0.00	15.67	0.00	0.	0.00
80	21.100	25.72	0.23	71.74	479.87	3.34	7.09	0.00	8.66	0.00	0.75	0.00	0.00	0.00	0.00	15.76	0.00	0.	0.00
81	21.000	25.73	0.23	71.74	479.87	3.23	7.08	0.00	8.67	0.00	0.75	0.00	0.00	0.00	0.00	15.85	0.00	0.	0.00
82	20.900	25.74	0.23	71.74	479.87	3.14	7.08	0.00	8.67	0.00	0.76	0.00	0.00	0.00	0.00	15.95	0.00	0.	0.00
83	20.800	25.75	0.23	71.74	479.87	3.07	7.07	0.00	8.67	0.00	0.76	0.00	0.00	0.00	0.00	16.04	0.00	0.	0.00
84	20.700	25.76	0.23	71.74	479.87	3.00	7.06	0.00	8.68	0.00	0.77	0.00	0.00	0.00	0.00	16.14	0.00	0.	0.00
85	20.600	25.77	0.23	71.74	479.87	2.94	7.06	0.00	8.68	0.00	0.78	0.00	0.00	0.00	0.00	16.23	0.00	0.	0.00
86	20.500	25.78	0.23	71.74	479.87	2.89	7.05	0.00	8.69	0.00	0.78	0.00	0.00	0.00	0.00	16.33	0.00	0.	0.00
87	20.400	25.79	0.23	71.74	479.87	2.84	7.05	0.00	8.69	0.00	0.79	0.00	0.00	0.00	0.00	16.42	0.00	0.	0.00
88	20.300	25.80	0.23	71.74	479.87	2.80	7.04	0.00	8.69	0.00	0.79	0.00	0.00	0.00	0.00	16.51	0.00	0.	0.00
89	20.200	25.81	0.22	71.74	479.87	2.77	7.04	0.00	8.70	0.00	0.80	0.00	0.00	0.00	0.00	16.61	0.00	0.	0.00
90	20.100	25.81	0.22	71.74	479.87	2.74	7.03	0.00	8.70	0.00	0.80	0.00	0.00	0.00	0.00	16.70	0.00	0.	0.00
91	20.000	25.82	0.22	71.74	479.87	2.71	7.03	0.00	8.71	0.00	0.81	0.00	0.00	0.00	0.00	16.80	0.00	0.	0.00
92	19.900	25.83	0.22	71.74	479.87	2.69	7.02	0.00	8.71	0.00	0.81	0.00	0.00	0.00	0.00	16.89	0.00	0.	0.00
93	19.800	25.84	0.22	71.74	479.87	2.67	7.02	0.00	8.71	0.00	0.82	0.00	0.00	0.00	0.00	16.99	0.00	0.	0.00
94	19.700	25.85	0.22	71.74	479.87	2.65	7.01	0.00	8.72	0.00	0.83	0.00	0.00	0.00	0.00	17.08	0.00	0.	0.00
95	19.600	25.86	0.22	71.74	479.87	2.63	7.01	0.00	8.72	0.00	0.83	0.00	0.00	0.00	0.00	17.17	0.00	0.	0.00
96	19.500	25.87	0.22	71.74	479.87	2.62	7.00	0.00	8.73	0.00	0.84	0.00	0.00	0.00	0.00	17.27	0.00	0.	0.00
97	19.400	25.88	0.22	71.74	479.87	2.60	7.00	0.00	8.73	0.00	0.84	0.00	0.00	0.00	0.00	17.36	0.00	0.	0.00
98	19.300	25.89	0.22	71.74	479.87	2.59	6.99	0.00	8.74	0.00	0.85	0.00	0.00	0.00	0.00	17.46	0.00	0.	0.00
99	19.200	25.90	0.22	71.74	479.87	2.58	6.99	0.00	8.74	0.00	0.85	0.00	0.00	0.00	0.00	17.55	0.00	0.	0.00
100	19.100	25.91	0.21	71.74	479.87	2.57	6.98	0.00	8.75	0.00	0.86	0.00	0.00	0.00	0.00	17.65	0.00	0.	0.00
101	19.000	25.92	0.21	71.74	479.87	2.56	6.98	0.00	8.75	0.00	0.86	0.00	0.00	0.00	0.00	17.74	0.00	0.	0.00
102	18.900	25.92	0.21	71.74	479.87	2.55	6.97	0.00	8.76	0.00	0.87	0.00	0.00	0.00	0.00	17.83	0.00	0.	0.00
103	18.800	25.93	0.21	71.74	479.87	2.55	6.97	0.00	8.76	0.00	0.87	0.00	0.00	0.00	0.00	17.93	0.00	0.	0.00
104	18.700	25.94	0.21	71.74	479.87	2.54	6.96	0.00	8.76	0.00	0.88	0.00	0.00	0.00	0.00	18.02	0.00	0.	0.00
105	18.600	25.95	0.21	71.74	479.87	2.53	6.96	0.00	8.77	0.00	0.88	0.00	0.00	0.00	0.00	18.12	0.00	0.	0.00
106	18.500	25.96	0.21	71.74	479.87	2.53	6.95	0.00	8.77	0.00	0.89	0.00	0.00	0.00	0.00	18.21	0.00	0.	0.00
107	18.400	25.97	0.21	71.74	479.87	2.52	6.95	0.00	8.78	0.00	0.89	0.00	0.00	0.00	0.00	18.31	0.00	0.	0.00
108	18.300	25.98	0.21	71.74	479.87	2.51	6.94	0.00	8.78	0.00	0.90	0.00	0.00	0.00	0.00	18.40	0.00	0.	0.00
109	18.200	25.99	0.21	71.74	479.87	2.51	6.94	0.00	8.79	0.00	0.90	0.00	0.00	0.00	0.00	18.49	0.00	0.	0.00
110	18.100	26.00	0.20	71.74	479.87	2.50	6.94	0.00	8.79	0.00	0.91	0.00	0.00	0.00	0.00	18.59	0.00	0.	0.00
111	18.000	26.01	0.20	71.74	479.87	2.50	6.93	0.00	8.80	0.00	0.91	0.00	0.00	0.00	0.00	18.68	0.00	0.	0.00
112	17.900	26.02	0.20	71.74	479.87	2.49	6.93	0.00	8.80	0.00	0.92	0.00	0.00	0.00	0.00	18.78	0.00	0.	0.00
113	17.800	26.02	0.20	71.74	479.87	2.49	6.92	0.00	8.81	0.00	0.92	0.00	0.00	0.00	0.00	18.87	0.00	0.	0.00
114	17.700	26.03	0.20	71.74	479.87	2.48	6.92	0.00	8.81	0.00	0.93	0.00	0.00	0.00	0.00	18.97	0.00	0.	0.00
115	17.600	26.04	0.20	71.74	479.87	2.48	6.91	0.00	8.82	0.00	0.93	0.00	0.00	0.00	0.00	19.06	0.00	0.	0.00
116	17.500	26.05	0.20	71.74	479.87	2.48	6.91	0.00	8.83	0.00	0.94	0.00	0.00	0.00	0.00	19.16	0.00	0.	0.00
117	17.400	26.06	0.20	71.74	479.87	2.47	6.91	0.00	8.83	0.00	0.94	0.00	0.00	0.00	0.00	19.25	0.00	0.	0.00
118	17.300	26.07	0.20	71.74	479.87	2.47	6.90	0.00	8.84	0.00	0.95	0.00	0.00	0.00	0.00	19.34	0.00	0.	0.00
119	17.200	26.08	0.20	71.74	479.87	2.46	6.90	0.00	8.84	0.00	0.95	0.00	0.00	0.00	0.00	19.44	0.00	0.	0.00
120	17.100	26.09	0.20	71.74	479.87	2.46	6.89	0.00	8.85	0.00	0.96	0.00	0.00	0.00	0.00	19.53	0.00	0.	0.00
121	17.000	26.10	0.19	71.74	479.87	2.46	6.89	0.00	8.85	0.00	0.96	0.00	0.00	0.00	0.00	19.63	0.00	0.	0.00

122	16.900	26.11	0.19	71.74	479.87	2.45	6.89	0.00	8.86	0.00	0.97	0.00	0.00	0.00	0.00	19.72	0.00	0.	0.00
123	16.800	26.12	0.19	71.74	479.87	2.45	6.88	0.00	8.86	0.00	0.97	0.00	0.00	0.00	0.00	19.82	0.00	0.	0.00
124	16.700	26.12	0.19	71.74	479.87	2.44	6.88	0.00	8.87	0.00	0.98	0.00	0.00	0.00	0.00	19.91	0.00	0.	0.00
125	16.600	26.13	0.19	71.74	479.87	2.44	6.87	0.00	8.87	0.00	0.98	0.00	0.00	0.00	0.00	20.00	0.00	0.	0.00
126	16.500	26.14	0.19	71.74	479.87	2.44	6.87	0.00	8.88	0.00	0.99	0.00	0.00	0.00	0.00	20.10	0.00	0.	0.00
127	16.400	26.15	0.19	71.74	479.87	2.43	6.87	0.00	8.89	0.00	0.99	0.00	0.00	0.00	0.00	20.19	0.00	0.	0.00
128	16.300	26.16	0.19	71.74	479.87	2.43	6.86	0.00	8.89	0.00	0.99	0.00	0.00	0.00	0.00	20.29	0.00	0.	0.00
129	16.200	26.17	0.19	71.74	479.87	2.43	6.86	0.00	8.90	0.00	1.00	0.00	0.00	0.00	0.00	20.38	0.00	0.	0.00
130	16.100	26.18	0.19	71.74	479.87	2.42	6.85	0.00	8.90	0.00	1.00	0.00	0.00	0.00	0.00	20.48	0.00	0.	0.00
131	16.000	26.19	0.18	71.74	479.87	2.42	6.85	0.00	8.91	0.00	1.01	0.00	0.00	0.00	0.00	20.57	0.00	0.	0.00
132	15.900	26.20	0.18	71.74	479.87	2.41	6.85	0.00	8.91	0.00	1.01	0.00	0.00	0.00	0.00	20.66	0.00	0.	0.00
133	15.800	26.21	0.18	71.74	479.87	2.41	6.84	0.00	8.92	0.00	1.02	0.00	0.00	0.00	0.00	20.76	0.00	0.	0.00
134	15.700	26.22	0.18	71.74	479.87	2.41	6.84	0.00	8.93	0.00	1.02	0.00	0.00	0.00	0.00	20.85	0.00	0.	0.00
135	15.600	26.23	0.18	71.74	479.87	2.40	6.84	0.00	8.93	0.00	1.03	0.00	0.00	0.00	0.00	20.95	0.00	0.	0.00
136	15.500	26.23	0.18	71.74	479.87	2.40	6.83	0.00	8.94	0.00	1.03	0.00	0.00	0.00	0.00	21.04	0.00	0.	0.00
137	15.400	26.24	0.18	71.74	479.87	2.40	6.83	0.00	8.94	0.00	1.03	0.00	0.00	0.00	0.00	21.14	0.00	0.	0.00
138	15.300	26.25	0.18	71.74	479.87	2.39	6.83	0.00	8.95	0.00	1.04	0.00	0.00	0.00	0.00	21.23	0.00	0.	0.00
139	15.200	26.26	0.18	71.74	479.87	2.39	6.82	0.00	8.96	0.00	1.04	0.00	0.00	0.00	0.00	21.32	0.00	0.	0.00
140	15.100	26.27	0.18	71.74	479.87	2.39	6.82	0.00	8.96	0.00	1.05	0.00	0.00	0.00	0.00	21.42	0.00	0.	0.00
141	15.000	26.28	0.18	71.74	479.87	2.38	6.82	0.00	8.97	0.00	1.05	0.00	0.00	0.00	0.00	21.51	0.00	0.	0.00
142	14.900	26.29	0.17	71.74	479.87	2.38	6.81	0.00	8.97	0.00	1.06	0.00	0.00	0.00	0.00	21.61	0.00	0.	0.00
143	14.800	26.30	0.17	71.74	479.87	2.37	6.81	0.00	8.98	0.00	1.06	0.00	0.00	0.00	0.00	21.70	0.00	0.	0.00
144	14.700	26.31	0.17	71.74	479.87	2.37	6.81	0.00	8.99	0.00	1.06	0.00	0.00	0.00	0.00	21.80	0.00	0.	0.00
145	14.600	26.32	0.17	71.74	479.87	2.37	6.80	0.00	8.99	0.00	1.07	0.00	0.00	0.00	0.00	21.89	0.00	0.	0.00
146	14.500	26.33	0.17	71.74	479.87	2.36	6.80	0.00	9.00	0.00	1.07	0.00	0.00	0.00	0.00	21.98	0.00	0.	0.00
147	14.400	26.33	0.17	71.74	479.87	2.36	6.80	0.00	9.00	0.00	1.08	0.00	0.00	0.00	0.00	22.08	0.00	0.	0.00
148	14.300	26.34	0.17	71.74	479.87	2.36	6.79	0.00	9.01	0.00	1.08	0.00	0.00	0.00	0.00	22.17	0.00	0.	0.00
149	14.200	26.35	0.17	71.74	479.87	2.35	6.79	0.00	9.02	0.00	1.09	0.00	0.00	0.00	0.00	22.27	0.00	0.	0.00
150	14.100	26.36	0.17	71.74	479.87	2.35	6.79	0.00	9.02	0.00	1.09	0.00	0.00	0.00	0.00	22.36	0.00	0.	0.00
151	14.000	26.37	0.17	71.74	479.87	2.35	6.78	0.00	9.03	0.00	1.09	0.00	0.00	0.00	0.00	22.46	0.00	0.	0.00
152	13.900	26.38	0.17	71.74	479.87	2.34	6.78	0.00	9.04	0.00	1.10	0.00	0.00	0.00	0.00	22.55	0.00	0.	0.00
153	13.800	26.39	0.16	71.74	479.87	2.34	6.78	0.00	9.04	0.00	1.10	0.00	0.00	0.00	0.00	22.64	0.00	0.	0.00
154	13.700	26.40	0.16	71.74	479.87	2.33	6.77	0.00	9.05	0.00	1.11	0.00	0.00	0.00	0.00	22.74	0.00	0.	0.00
155	13.600	26.41	0.16	71.74	479.87	2.33	6.77	0.00	9.05	0.00	1.11	0.00	0.00	0.00	0.00	22.83	0.00	0.	0.00
156	13.500	26.42	0.16	71.74	479.87	2.33	6.77	0.00	9.06	0.00	1.11	0.00	0.00	0.00	0.00	22.93	0.00	0.	0.00
157	13.400	26.43	0.16	71.74	479.87	2.32	6.76	0.00	9.07	0.00	1.12	0.00	0.00	0.00	0.00	23.02	0.00	0.	0.00
158	13.300	26.43	0.16	71.74	479.87	2.32	6.76	0.00	9.07	0.00	1.12	0.00	0.00	0.00	0.00	23.12	0.00	0.	0.00
159	13.200	26.44	0.16	71.74	479.87	2.32	6.76	0.00	9.08	0.00	1.13	0.00	0.00	0.00	0.00	23.21	0.00	0.	0.00
160	13.100	26.45	0.16	71.74	479.87	2.31	6.76	0.00	9.09	0.00	1.13	0.00	0.00	0.00	0.00	23.30	0.00	0.	0.00
161	13.000	26.46	0.16	71.74	479.87	2.31	6.75	0.00	9.09	0.00	1.13	0.00	0.00	0.00	0.00	23.40	0.00	0.	0.00
162	12.900	26.47	0.16	71.74	479.87	2.30	6.75	0.00	9.10	0.00	1.14	0.00	0.00	0.00	0.00	23.49	0.00	0.	0.00
163	12.800	26.48	0.15	71.74	479.87	2.30	6.75	0.00	9.11	0.00	1.14	0.00	0.00	0.00	0.00	23.59	0.00	0.	0.00
164	12.700	26.49	0.15	71.74	479.87	2.30	6.74	0.00	9.11	0.00	1.14	0.00	0.00	0.00	0.00	23.68	0.00	0.	0.00
165	12.600	26.50	0.15	71.74	479.87	2.29	6.74	0.00	9.12	0.00	1.15	0.00	0.00	0.00	0.00	23.78	0.00	0.	0.00
166	12.500	26.51	0.15	71.74	479.87	2.29	6.74	0.00	9.13	0.00	1.15	0.00	0.00	0.00	0.00	23.87	0.00	0.	0.00
167	12.400	26.52	0.15	71.74	479.87	2.29	6.74	0.00	9.13	0.00	1.16	0.00	0.00	0.00	0.00	23.96	0.00	0.	0.00
168	12.300	26.53	0.15	71.74	479.87	2.28	6.73	0.00	9.14	0.00	1.16	0.00	0.00	0.00	0.00	24.06	0.00	0.	0.00
169	12.200	26.53	0.15	71.74	479.87	2.28	6.73	0.00	9.15	0.00	1.16	0.00	0.00	0.00	0.00	24.15	0.00	0.	0.00
170	12.100	26.54	0.15	71.74	479.87	2.28	6.73	0.00	9.15	0.00	1.17	0.00	0.00	0.00	0.00	24.25	0.00	0.	0.00
171	12.000	26.55	0.15	71.74	479.87	2.27	6.72	0.00	9.16	0.00	1.17	0.00	0.00	0.00	0.00	24.34	0.00	0.	0.00
172	11.900	26.56	0.15	71.74	479.87	2.27	6.72	0.00	9.17	0.00	1.17	0.00	0.00	0.00	0.00	24.44	0.00	0.	0.00
173	11.800	26.57	0.15	71.74	479.87	2.26	6.72	0.00	9.17	0.00	1.18	0.00	0.00	0.00	0.00	24.53	0.00	0.	0.00
174	11.700	26.58	0.14	71.74	479.87	2.26	6.72	0.00	9.18	0.00	1.18	0.00	0.00	0.00	0.00	24.62	0.00	0.	0.00
175	11.600	26.59	0.14	71.74	479.87	2.26	6.71	0.00	9.19	0.00	1.18	0.00	0.00	0.00	0.00	24.72	0.00	0.	0.00
176	11.500	26.60	0.14	71.74	479.87	2.25	6.71	0.00	9.19	0.00	1.19	0.00	0.00	0.00	0.00	24.81	0.00	0.	0.00
177	11.400	26.61	0.14	71.74	479.87	2.25	6.71	0.00	9.20	0.00	1.19	0.00	0.00	0.00	0.00	24.91	0.00	0.	0.00
178	11.300	26.62	0.14	71.74	479.87	2.25	6.71	0.00	9.21	0.00	1.20	0.00	0.00	0.00	0.00	25.00	0.00	0.	0.00
179	11.200	26.63	0.14	71.74	479.87	2.24	6.70	0.00	9.21	0.00	1.20	0.00	0.00	0.00	0.00	25.10	0.00	0.	0.00
180	11.100	26.64	0.14	71.74	479.87	2.24	6.70	0.00	9.22	0.00	1.20	0.00	0.00	0.00	0.00	25.19	0.00	0.	0.00

181	11.000	26.64	0.14	71.74	479.87	2.24	6.70	0.00	9.23	0.00	1.21	0.00	0.00	0.00	0.00	25.28	0.00	0.	0.00
182	10.900	26.65	0.14	71.74	479.87	2.23	6.70	0.00	9.23	0.00	1.21	0.00	0.00	0.00	0.00	25.38	0.00	0.	0.00
183	10.800	26.66	0.14	71.74	479.87	2.23	6.69	0.00	9.24	0.00	1.21	0.00	0.00	0.00	0.00	25.47	0.00	0.	0.00
184	10.700	26.67	0.13	71.74	479.87	2.22	6.69	0.00	9.25	0.00	1.22	0.00	0.00	0.00	0.00	25.57	0.00	0.	0.00
185	10.600	26.68	0.13	71.74	479.87	2.22	6.69	0.00	9.25	0.00	1.22	0.00	0.00	0.00	0.00	25.66	0.00	0.	0.00
186	10.500	26.69	0.13	71.74	479.87	2.22	6.69	0.00	9.26	0.00	1.22	0.00	0.00	0.00	0.00	25.76	0.00	0.	0.00
187	10.400	26.70	0.13	71.74	479.87	2.21	6.68	0.00	9.27	0.00	1.23	0.00	0.00	0.00	0.00	25.85	0.00	0.	0.00
188	10.300	26.71	0.13	71.74	479.87	2.21	6.68	0.00	9.27	0.00	1.23	0.00	0.00	0.00	0.00	25.94	0.00	0.	0.00
189	10.200	26.72	0.13	71.74	479.87	2.21	6.68	0.00	9.28	0.00	1.23	0.00	0.00	0.00	0.00	26.04	0.00	0.	0.00
190	10.100	26.73	0.13	71.74	479.87	2.20	6.68	0.00	9.29	0.00	1.24	0.00	0.00	0.00	0.00	26.13	0.00	0.	0.00
191	10.000	26.74	0.13	71.74	479.87	2.20	6.67	0.00	9.30	0.00	1.24	0.00	0.00	0.00	0.00	26.23	0.00	0.	0.00
192	9.900	26.74	0.13	71.74	479.88	2.20	6.67	0.00	9.30	0.00	1.24	0.00	0.00	0.00	0.00	26.32	0.00	0.	0.00
193	9.800	26.75	0.13	71.74	479.88	2.19	6.67	0.00	9.31	0.00	1.25	0.00	0.00	0.00	0.00	26.42	0.00	0.	0.00
194	9.700	26.76	0.13	71.74	479.88	2.19	6.67	0.00	9.32	0.00	1.25	0.00	0.00	0.00	0.00	26.51	0.00	0.	0.00
195	9.600	26.77	0.12	71.74	479.88	2.18	6.66	0.00	9.32	0.00	1.25	0.00	0.00	0.00	0.00	26.61	0.00	0.	0.00
196	9.500	26.78	0.12	71.74	479.88	2.18	6.66	0.00	9.33	0.00	1.26	0.00	0.00	0.00	0.00	26.70	0.00	0.	0.00
197	9.400	26.79	0.12	71.74	479.88	2.18	6.66	0.00	9.34	0.00	1.26	0.00	0.00	0.00	0.00	26.79	0.00	0.	0.00
198	9.300	26.80	0.12	71.74	479.88	2.17	6.66	0.00	9.35	0.00	1.26	0.00	0.00	0.00	0.00	26.89	0.00	0.	0.00
199	9.200	26.81	0.12	71.74	479.88	2.17	6.65	0.00	9.35	0.00	1.27	0.00	0.00	0.00	0.00	26.98	0.00	0.	0.00
200	9.100	26.82	0.12	71.74	479.88	2.17	6.65	0.00	9.36	0.00	1.27	0.00	0.00	0.00	0.00	27.08	0.00	0.	0.00
201	9.000	26.83	0.12	71.74	479.88	2.16	6.65	0.00	9.37	0.00	1.27	0.00	0.00	0.00	0.00	27.17	0.00	0.	0.00
202	8.900	26.84	0.12	71.74	479.88	2.16	6.65	0.00	9.37	0.00	1.28	0.00	0.00	0.00	0.00	27.27	0.00	0.	0.00
203	8.800	26.84	0.12	71.74	479.88	2.15	6.64	0.00	9.38	0.00	1.28	0.00	0.00	0.00	0.00	27.36	0.00	0.	0.00
204	8.700	26.85	0.12	71.74	479.88	2.15	6.64	0.00	9.39	0.00	1.28	0.00	0.00	0.00	0.00	27.45	0.00	0.	0.00
205	8.600	26.86	0.11	71.74	479.88	2.15	6.64	0.00	9.40	0.00	1.29	0.00	0.00	0.00	0.00	27.55	0.00	0.	0.00
206	8.500	26.87	0.11	71.74	479.88	2.14	6.64	0.00	9.40	0.00	1.29	0.00	0.00	0.00	0.00	27.64	0.00	0.	0.00
207	8.400	26.88	0.11	71.74	479.88	2.14	6.64	0.00	9.41	0.00	1.29	0.00	0.00	0.00	0.00	27.74	0.00	0.	0.00
208	8.300	26.89	0.11	71.74	479.88	2.14	6.63	0.00	9.42	0.00	1.29	0.00	0.00	0.00	0.00	27.83	0.00	0.	0.00
209	8.200	26.90	0.11	71.74	479.88	2.13	6.63	0.00	9.42	0.00	1.30	0.00	0.00	0.00	0.00	27.93	0.00	0.	0.00
210	8.100	26.91	0.11	71.74	479.88	2.13	6.63	0.00	9.43	0.00	1.30	0.00	0.00	0.00	0.00	28.02	0.00	0.	0.00
211	8.000	26.92	0.11	71.74	479.88	2.13	6.63	0.00	9.44	0.00	1.30	0.00	0.00	0.00	0.00	28.11	0.00	0.	0.00
212	7.900	26.93	0.11	71.74	479.88	2.12	6.62	0.00	9.45	0.00	1.31	0.00	0.00	0.00	0.00	28.21	0.00	0.	0.00
213	7.800	26.94	0.11	71.74	479.88	2.12	6.62	0.00	9.45	0.00	1.31	0.00	0.00	0.00	0.00	28.30	0.00	0.	0.00
214	7.700	26.95	0.11	71.74	479.88	2.11	6.62	0.00	9.46	0.00	1.31	0.00	0.00	0.00	0.00	28.40	0.00	0.	0.00
215	7.600	26.95	0.11	71.74	479.88	2.11	6.62	0.00	9.47	0.00	1.32	0.00	0.00	0.00	0.00	28.49	0.00	0.	0.00
216	7.500	26.96	0.10	71.74	479.88	2.11	6.62	0.00	9.47	0.00	1.32	0.00	0.00	0.00	0.00	28.59	0.00	0.	0.00
217	7.400	26.97	0.10	71.74	479.88	2.10	6.61	0.00	9.48	0.00	1.32	0.00	0.00	0.00	0.00	28.68	0.00	0.	0.00
218	7.300	26.98	0.10	71.74	479.88	2.10	6.61	0.00	9.49	0.00	1.33	0.00	0.00	0.00	0.00	28.77	0.00	0.	0.00
219	7.200	26.99	0.10	71.74	479.88	2.10	6.61	0.00	9.50	0.00	1.33	0.00	0.00	0.00	0.00	28.87	0.00	0.	0.00
220	7.100	27.00	0.10	71.74	479.88	2.09	6.61	0.00	9.50	0.00	1.33	0.00	0.00	0.00	0.00	28.96	0.00	0.	0.00
221	7.000	27.01	0.10	71.74	479.88	2.09	6.61	0.00	9.51	0.00	1.33	0.00	0.00	0.00	0.00	29.06	0.00	0.	0.00
222	6.900	27.02	0.10	71.74	479.88	2.09	6.60	0.00	9.52	0.00	1.34	0.00	0.00	0.00	0.00	29.15	0.00	0.	0.00
223	6.800	27.03	0.10	71.74	479.88	2.08	6.60	0.00	9.53	0.00	1.34	0.00	0.00	0.00	0.00	29.25	0.00	0.	0.00
224	6.700	27.04	0.10	71.74	479.88	2.08	6.60	0.00	9.53	0.00	1.34	0.00	0.00	0.00	0.00	29.34	0.00	0.	0.00
225	6.600	27.05	0.10	71.74	479.87	2.07	6.60	0.00	9.54	0.00	1.35	0.00	0.00	0.00	0.00	29.43	0.00	0.	0.00
226	6.500	27.05	0.09	71.73	479.83	2.07	6.60	0.00	9.55	0.00	1.35	0.00	0.00	0.00	0.00	29.53	0.00	0.	0.00
227	6.400	27.06	0.09	71.70	479.61	2.07	6.60	0.00	9.56	0.00	1.35	0.00	0.00	0.00	0.00	29.62	0.00	0.	0.00
228	6.300	27.07	0.09	71.48	478.27	2.06	6.62	0.00	9.59	0.00	1.36	0.00	0.00	0.00	0.00	29.72	0.00	0.	0.00
229	6.200	27.08	0.09	70.19	470.29	2.04	6.73	0.00	9.71	0.00	1.36	0.00	0.00	0.00	0.00	29.81	0.00	0.	0.00
230	6.100	27.09	0.09	62.47	422.66	1.89	7.46	0.00	10.45	0.00	1.38	0.00	0.00	0.00	0.00	29.91	0.00	0.	0.00
231	6.000	27.10	0.09	16.42	138.40	0.92	11.84	0.00	14.84	0.00	1.50	0.00	0.00	0.00	0.00	30.00	0.00	0.	0.00

FINAL REPORT HEADWATER - NBB03A SMITHPORT LAKE WATERSHED MODEL
REACH NO. 3 RB01 TO CLK02 SMITHPORTLAKE CALIBRATION RUN

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CM-I MG/L	CM-II MG/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM
232	UPR RCH	0.01540	27.10	0.09	16.42	138.40	0.92	11.84	0.00	14.84	0.00	1.50	0.00	0.00	0.00	30.00	0.00	0.00
232	WSTLD	0.03020	24.85	0.50	11.30	116.80	2.13	9.24	0.00	9.24	0.00	1.69	0.00	0.00	0.00	0.00	0.00	0.00

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
232	6.00	5.90	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
233	5.90	5.80	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
234	5.80	5.70	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
235	5.70	5.60	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
236	5.60	5.50	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
237	5.50	5.40	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
238	5.40	5.30	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
TOT						102.46			403673.97	103479.59					
AVG					0.0001		3.90	147.83			576.68				
CUM						108.21									

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD#1 DECAY 1/da	BOD#1 SETT 1/da	ABOD#1 DECAY 1/da	BOD#2 DECAY 1/da	BOD#2 SETT 1/da	ABOD#2 DECAY 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORGN DECAY 1/da	ORGN SETT 1/da	NH3 DECAY 1/da	NH3 SRCE *	DENIT RATE 1/da	PO4 SRCE *	ALG PROD **	MAC PROD **	COLI DECAY 1/da	NCM DECAY 1/da	NCM SETT 1/da
232	5.900	7.94	0.21	0.06	0.59	0.00	0.00	0.00	0.00	3.14	3.14	3.14	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
233	5.800	7.93	0.21	0.06	0.59	0.00	0.00	0.00	0.00	3.15	3.15	3.15	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
234	5.700	7.92	0.21	0.06	0.59	0.00	0.00	0.00	0.00	3.17	3.17	3.17	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
235	5.600	7.91	0.21	0.06	0.60	0.00	0.00	0.00	0.00	3.18	3.18	3.18	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
236	5.500	7.90	0.21	0.06	0.60	0.00	0.00	0.00	0.00	3.19	3.19	3.19	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
237	5.400	7.90	0.21	0.06	0.60	0.00	0.00	0.00	0.00	3.20	3.20	3.20	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
238	5.300	7.89	0.21	0.06	0.60	0.00	0.00	0.00	0.00	3.22	3.22	3.22	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.18	0.09	0.50	0.00	0.00	0.00	0.00	2.00			0.10	0.10	0.00	0.00	0.00	0.00			0.00	0.00	0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I MG/L	CM-II MG/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO g/m³	COLI #/100mL	NCM
232	5.900	27.16	0.09	16.12	136.58	0.91	11.86	0.00	15.08	0.00	1.50	0.00	0.00	0.00	0.00	32.13	0.00	0.	0.00
233	5.800	27.23	0.09	16.00	135.77	0.91	11.78	0.00	15.21	0.00	1.50	0.00	0.00	0.00	0.00	34.26	0.00	0.	0.00
234	5.700	27.29	0.09	15.87	134.95	0.91	11.58	0.00	15.22	0.00	1.49	0.00	0.00	0.00	0.00	36.39	0.00	0.	0.00
235	5.600	27.36	0.09	15.75	134.12	0.92	11.25	0.00	15.11	0.00	1.48	0.00	0.00	0.00	0.00	38.51	0.00	0.	0.00
236	5.500	27.42	0.09	15.62	133.29	0.93	10.77	0.00	14.83	0.00	1.46	0.00	0.00	0.00	0.00	40.64	0.00	0.	0.00
237	5.400	27.49	0.09	15.49	132.45	0.95	10.10	0.00	14.37	0.00	1.44	0.00	0.00	0.00	0.00	42.77	0.00	0.	0.00
238	5.300	27.55	0.09	15.37	131.60	0.97	9.18	0.00	13.67	0.00	1.41	0.00	0.00	0.00	0.00	44.90	0.00	0.	0.00

FINAL REPORT HEADWATER - NBB03A SMITHPORT LAKE WATERSHED MODEL
REACH NO. 4 CLK02 TO CLK01 SMITHPORTLAKE CALIBRATION RUN

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CM-I MG/L	CM-II MG/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM
239	UPR RCH	0.04560	27.55	0.09	15.37	131.60	0.97	9.18	0.00	13.67	0.00	1.41	0.00	0.00	0.00	44.90	0.00	0.00

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m^3/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	DEPTH m	WIDTH m	VOLUME m^3	SURFACE AREA m^2	X-SECT AREA m^2	TIDAL PRISM m^3	TIDAL VELO m/s	DISPRSN m^2/s	MEAN VELO m/s
239	5.30	5.20	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
240	5.20	5.10	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
241	5.10	5.00	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
242	5.00	4.90	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
243	4.90	4.80	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
244	4.80	4.70	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
245	4.70	4.60	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
TOT						102.46			403673.97	103479.59					
AVG					0.0001		3.90	147.83			576.68				
CUM						210.67									

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD#1 DECAY 1/da	BOD#1 SETT 1/da	ABOD#1 DECAY 1/da	BOD#2 DECAY 1/da	BOD#2 SETT 1/da	ABOD#2 DECAY 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORGN DECAY 1/da	ORGN SETT 1/da	NH3 DECAY 1/da	NH3 SRCE *	DENIT RATE 1/da	PO4 SRCE *	ALG PROD **	MAC PROD **	COLI DECAY 1/da	NCM DECAY 1/da	NCM SETT 1/da
239	5.200	7.88	0.21	0.06	0.60	0.00	0.00	0.00	0.00	4.04	4.04	4.04	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
240	5.100	7.87	0.21	0.06	0.60	0.00	0.00	0.00	0.00	4.05	4.05	4.05	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
241	5.000	7.86	0.21	0.06	0.60	0.00	0.00	0.00	0.00	4.07	4.07	4.07	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
242	4.900	7.85	0.21	0.07	0.60	0.00	0.00	0.00	0.00	4.09	4.09	4.09	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
243	4.800	7.84	0.21	0.07	0.60	0.00	0.00	0.00	0.00	4.10	4.10	4.10	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
244	4.700	7.83	0.21	0.07	0.60	0.00	0.00	0.00	0.00	4.12	4.12	4.12	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
245	4.600	7.83	0.21	0.08	0.60	0.00	0.00	0.00	0.00	4.13	4.13	4.13	0.02	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.18	0.09	0.50	0.00	0.00	0.00	0.00	2.50			0.09	0.10	0.00	0.00	0.00	0.00			0.00	0.00	0.00

* $g/m^2/d$ ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I MG/L	CM-II MG/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO g/m^3	COLI #/100mL	NCM
239	5.200	27.61	0.09	15.24	130.75	0.98	7.96	0.00	12.45	0.00	1.38	0.00	0.00	0.00	0.00	44.90	0.00	0.	0.00
240	5.100	27.68	0.09	15.11	129.89	1.01	7.00	0.00	11.49	0.00	1.36	0.00	0.00	0.00	0.00	44.90	0.00	0.	0.00
241	5.000	27.74	0.09	14.98	129.03	1.04	6.21	0.00	10.70	0.00	1.35	0.00	0.00	0.00	0.00	44.90	0.00	0.	0.00
242	4.900	27.80	0.08	14.84	128.15	1.08	5.56	0.00	10.05	0.00	1.35	0.00	0.00	0.00	0.00	44.90	0.00	0.	0.00

243	4.800	27.86	0.08	14.71	127.27	1.13	4.98	0.00	9.47	0.00	1.36	0.00	0.00	0.00	0.00	44.90	0.00	0.	0.00
244	4.700	27.93	0.08	14.58	126.39	1.18	4.45	0.00	8.94	0.00	1.39	0.00	0.00	0.00	0.00	44.90	0.00	0.	0.00
245	4.600	27.99	0.08	14.44	125.49	1.23	3.92	0.00	8.41	0.00	1.43	0.00	0.00	0.00	0.00	44.90	0.00	0.	0.00

FINAL REPORT HEADWATER - NBB03A SMITHPORT LAKE WATERSHED MODEL
REACH NO. 5 CLK01 TO SL04 SMITHPORTLAKE CALIBRATION RUN

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CM-I MG/L	CM-II MG/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM
246	UPR RCH	0.04560	27.99	0.08	14.44	125.49	1.23	3.92	0.00	8.41	0.00	1.43	0.00	0.00	0.00	44.90	0.00	0.00

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m^3/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	DEPTH m	WIDTH m	VOLUME m^3	SURFACE AREA m^2	X-SECT AREA m^2	TIDAL PRISM m^3	TIDAL VELO m/s	DISPRSN m^2/s	MEAN VELO m/s
246	4.60	4.50	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
247	4.50	4.40	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
248	4.40	4.30	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
TOT						43.91			173003.12	44348.40					
AVG					0.0001		3.90	147.83			576.68				
CUM						254.58									

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD#1 DECAY 1/da	BOD#1 SETT 1/da	ABOD#1 DECAY 1/da	BOD#2 DECAY 1/da	BOD#2 SETT 1/da	ABOD#2 DECAY 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORGN DECAY 1/da	ORGN SETT 1/da	NH3 DECAY 1/da	NH3 SRCE *	DENIT RATE 1/da	PO4 SRCE *	ALG PROD **	MAC PROD **	COLI DECAY 1/da	NCM DECAY 1/da	NCM SETT 1/da
246	4.500	7.84	0.21	0.07	0.60	0.00	0.00	0.00	0.00	4.11	4.11	4.11	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
247	4.400	7.86	0.21	0.07	0.60	0.00	0.00	0.00	0.00	4.08	4.08	4.08	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
248	4.300	7.87	0.21	0.07	0.60	0.00	0.00	0.00	0.00	4.05	4.05	4.05	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.18	0.07	0.50	0.00	0.00	0.00	0.00	2.50			0.05	0.10	0.00	0.00	0.00	0.00			0.00	0.00	0.00

* $g/m^2/d$ ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I MG/L	CM-II MG/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO g/m^3	COLI #/100mL	NCM
246	4.500	27.88	0.08	14.30	124.59	1.28	3.34	0.00	8.57	0.00	1.48	0.00	0.00	0.00	0.00	52.30	0.00	0.	0.00
247	4.400	27.77	0.07	14.17	123.68	1.32	2.99	0.00	8.96	0.00	1.56	0.00	0.00	0.00	0.00	59.70	0.00	0.	0.00
248	4.300	27.66	0.07	14.03	122.77	1.35	2.84	0.00	9.55	0.00	1.66	0.00	0.00	0.00	0.00	67.10	0.00	0.	0.00

FINAL REPORT HEADWATER - NBB03A SMITHPORT LAKE WATERSHED MODEL
REACH NO. 6 SL04 TO SL03 SMITHPORTLAKE CALIBRATION RUN

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CM-I MG/L	CM-II MG/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM
249	UPR RCH	0.04560	27.66	0.07	14.03	122.77	1.35	2.84	0.00	9.55	0.00	1.66	0.00	0.00	0.00	67.10	0.00	0.00

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
249	4.30	4.20	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
250	4.20	4.10	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
251	4.10	4.00	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
252	4.00	3.90	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
253	3.90	3.80	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
254	3.80	3.70	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
255	3.70	3.60	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
256	3.60	3.50	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
257	3.50	3.40	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
258	3.40	3.30	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
259	3.30	3.20	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
260	3.20	3.10	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
261	3.10	3.00	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
262	3.00	2.90	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
263	2.90	2.80	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
264	2.80	2.70	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
265	2.70	2.60	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
266	2.60	2.50	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
267	2.50	2.40	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
268	2.40	2.30	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
TOT						292.74			1153354.12	295656.00					
AVG					0.0001		3.90	147.83			576.68				
CUM						547.32									

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD#1 DECAY 1/da	BOD#1 SETT 1/da	ABOD#1 DECAY 1/da	BOD#2 DECAY 1/da	BOD#2 SETT 1/da	ABOD#2 DECAY 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORGN DECAY 1/da	ORGN SETT 1/da	NH3 DECAY 1/da	NH3 SRCE *	DENIT RATE 1/da	PO4 SRCE *	ALG PROD **	MAC PROD **	COLI DECAY 1/da	NCM DECAY 1/da	NCM SETT 1/da
249	4.200	7.87	0.21	0.08	0.60	0.00	0.00	0.00	0.00	4.05	4.05	4.05	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
250	4.100	7.87	0.21	0.08	0.60	0.00	0.00	0.00	0.00	4.05	4.05	4.05	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
251	4.000	7.87	0.21	0.08	0.60	0.00	0.00	0.00	0.00	4.05	4.05	4.05	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
252	3.900	7.88	0.21	0.08	0.60	0.00	0.00	0.00	0.00	4.04	4.04	4.04	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
253	3.800	7.88	0.21	0.08	0.60	0.00	0.00	0.00	0.00	4.04	4.04	4.04	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
254	3.700	7.88	0.21	0.08	0.60	0.00	0.00	0.00	0.00	4.04	4.04	4.04	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
255	3.600	7.88	0.21	0.08	0.60	0.00	0.00	0.00	0.00	4.04	4.04	4.04	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
256	3.500	7.88	0.21	0.08	0.60	0.00	0.00	0.00	0.00	4.04	4.04	4.04	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
257	3.400	7.88	0.21	0.08	0.60	0.00	0.00	0.00	0.00	4.04	4.04	4.04	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
258	3.300	7.88	0.21	0.08	0.60	0.00	0.00	0.00	0.00	4.03	4.03	4.03	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
259	3.200	7.88	0.21	0.08	0.60	0.00	0.00	0.00	0.00	4.03	4.03	4.03	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

260	3.100	7.88	0.21	0.08	0.60	0.00	0.00	0.00	0.00	4.03	4.03	4.03	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
261	3.000	7.88	0.21	0.08	0.60	0.00	0.00	0.00	0.00	4.03	4.03	4.03	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
262	2.900	7.88	0.21	0.08	0.60	0.00	0.00	0.00	0.00	4.03	4.03	4.03	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
263	2.800	7.88	0.21	0.07	0.60	0.00	0.00	0.00	0.00	4.03	4.03	4.03	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
264	2.700	7.89	0.21	0.07	0.60	0.00	0.00	0.00	0.00	4.03	4.03	4.03	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
265	2.600	7.89	0.21	0.07	0.60	0.00	0.00	0.00	0.00	4.02	4.02	4.02	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
266	2.500	7.89	0.21	0.07	0.60	0.00	0.00	0.00	0.00	4.02	4.02	4.02	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
267	2.400	7.89	0.21	0.07	0.60	0.00	0.00	0.00	0.00	4.02	4.02	4.02	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
268	2.300	7.89	0.21	0.06	0.60	0.00	0.00	0.00	0.00	4.02	4.02	4.02	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.18	0.08	0.50	0.00	0.00	0.00	0.00	2.50			0.04	0.10	0.00	0.00	0.00	0.00			0.00	0.00	0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I MG/L	CM-II MG/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO g/m³	COLI #/100mL	NCM
249	4.200	27.65	0.07	13.89	121.85	1.38	2.87	0.00	9.69	0.00	1.78	0.00	0.00	0.00	0.00	68.21	0.00	0.	0.00
250	4.100	27.65	0.07	13.75	120.92	1.40	2.89	0.00	9.82	0.00	1.89	0.00	0.00	0.00	0.00	69.32	0.00	0.	0.00
251	4.000	27.64	0.07	13.60	119.98	1.41	2.91	0.00	9.95	0.00	1.99	0.00	0.00	0.00	0.00	70.43	0.00	0.	0.00
252	3.900	27.64	0.07	13.46	119.03	1.42	2.93	0.00	10.09	0.00	2.08	0.00	0.00	0.00	0.00	71.54	0.00	0.	0.00
253	3.800	27.63	0.06	13.32	118.08	1.42	2.95	0.00	10.22	0.00	2.15	0.00	0.00	0.00	0.00	72.65	0.00	0.	0.00
254	3.700	27.62	0.06	13.17	117.12	1.42	2.98	0.00	10.35	0.00	2.22	0.00	0.00	0.00	0.00	73.76	0.00	0.	0.00
255	3.600	27.62	0.06	13.02	116.16	1.42	3.00	0.00	10.49	0.00	2.28	0.00	0.00	0.00	0.00	74.87	0.00	0.	0.00
256	3.500	27.61	0.06	12.88	115.18	1.41	3.04	0.00	10.63	0.00	2.33	0.00	0.00	0.00	0.00	75.98	0.00	0.	0.00
257	3.400	27.61	0.06	12.73	114.20	1.41	3.08	0.00	10.79	0.00	2.38	0.00	0.00	0.00	0.00	77.09	0.00	0.	0.00
258	3.300	27.60	0.06	12.58	113.21	1.39	3.13	0.00	10.95	0.00	2.42	0.00	0.00	0.00	0.00	78.20	0.00	0.	0.00
259	3.200	27.59	0.06	12.43	112.21	1.38	3.20	0.00	11.13	0.00	2.46	0.00	0.00	0.00	0.00	79.31	0.00	0.	0.00
260	3.100	27.59	0.06	12.27	111.20	1.36	3.29	0.00	11.33	0.00	2.49	0.00	0.00	0.00	0.00	80.42	0.00	0.	0.00
261	3.000	27.58	0.06	12.12	110.19	1.34	3.41	0.00	11.56	0.00	2.52	0.00	0.00	0.00	0.00	81.53	0.00	0.	0.00
262	2.900	27.58	0.06	11.97	109.17	1.32	3.57	0.00	11.83	0.00	2.54	0.00	0.00	0.00	0.00	82.64	0.00	0.	0.00
263	2.800	27.57	0.05	11.81	108.14	1.29	3.77	0.00	12.15	0.00	2.55	0.00	0.00	0.00	0.00	83.75	0.00	0.	0.00
264	2.700	27.56	0.05	11.65	107.10	1.26	4.04	0.00	12.53	0.00	2.57	0.00	0.00	0.00	0.00	84.86	0.00	0.	0.00
265	2.600	27.56	0.05	11.49	106.06	1.23	4.40	0.00	12.99	0.00	2.58	0.00	0.00	0.00	0.00	85.97	0.00	0.	0.00
266	2.500	27.55	0.05	11.33	105.00	1.19	4.86	0.00	13.57	0.00	2.58	0.00	0.00	0.00	0.00	87.08	0.00	0.	0.00
267	2.400	27.55	0.05	11.17	103.94	1.16	5.48	0.00	14.30	0.00	2.58	0.00	0.00	0.00	0.00	88.19	0.00	0.	0.00
268	2.300	27.54	0.05	11.01	102.87	1.12	6.29	0.00	15.22	0.00	2.57	0.00	0.00	0.00	0.00	89.30	0.00	0.	0.00

FINAL REPORT HEADWATER - NBB03A SMITHPORT LAKE WATERSHED MODEL
REACH NO. 7 SL03 TO SL01 SMITHPORTLAKE CALIBRATION RUN

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CM-I MG/L	CM-II MG/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM
269	UPR RCH	0.04560	27.54	0.05	11.01	102.87	1.12	6.29	0.00	15.22	0.00	2.57	0.00	0.00	0.00	89.30	0.00	0.00

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

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

269	2.30	2.20	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
270	2.20	2.10	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
271	2.10	2.00	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
272	2.00	1.90	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
273	1.90	1.80	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
274	1.80	1.70	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
275	1.70	1.60	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
276	1.60	1.50	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
277	1.50	1.40	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
278	1.40	1.30	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
279	1.30	1.20	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
280	1.20	1.10	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
281	1.10	1.00	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
282	1.00	0.90	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
283	0.90	0.80	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
284	0.80	0.70	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
285	0.70	0.60	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
286	0.60	0.50	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
287	0.50	0.40	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
288	0.40	0.30	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
289	0.30	0.20	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
290	0.20	0.10	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
291	0.10	0.00	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
TOT						336.65			1326357.38	340004.44					
AVG					0.0001		3.90	147.83			576.68				
CUM						883.97									

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD#1 DECAY 1/da	BOD#1 SETT 1/da	ABOD#1 DECAY 1/da	BOD#2 DECAY 1/da	BOD#2 SETT 1/da	ABOD#2 DECAY 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORGN DECAY 1/da	ORGN SETT 1/da	NH3 DECAY 1/da	NH3 SRCE *	DENIT RATE 1/da	PO4 SRCE *	ALG PROD **	MAC PROD **	COLI DECAY 1/da	NCM DECAY 1/da	NCM SETT 1/da
269	2.200	7.89	0.21	0.07	0.60	0.00	0.00	0.00	0.00	3.21	3.21	3.21	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
270	2.100	7.89	0.21	0.07	0.60	0.00	0.00	0.00	0.00	3.21	3.21	3.21	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
271	2.000	7.89	0.21	0.07	0.60	0.00	0.00	0.00	0.00	3.21	3.21	3.21	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
272	1.900	7.89	0.21	0.07	0.60	0.00	0.00	0.00	0.00	3.21	3.21	3.21	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
273	1.800	7.89	0.21	0.06	0.60	0.00	0.00	0.00	0.00	3.21	3.21	3.21	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
274	1.700	7.89	0.21	0.06	0.60	0.00	0.00	0.00	0.00	3.21	3.21	3.21	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
275	1.600	7.90	0.21	0.06	0.60	0.00	0.00	0.00	0.00	3.21	3.21	3.21	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
276	1.500	7.90	0.21	0.06	0.60	0.00	0.00	0.00	0.00	3.21	3.21	3.21	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
277	1.400	7.90	0.21	0.06	0.60	0.00	0.00	0.00	0.00	3.21	3.21	3.21	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
278	1.300	7.90	0.21	0.06	0.60	0.00	0.00	0.00	0.00	3.20	3.20	3.20	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
279	1.200	7.90	0.21	0.06	0.60	0.00	0.00	0.00	0.00	3.20	3.20	3.20	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
280	1.100	7.90	0.21	0.06	0.60	0.00	0.00	0.00	0.00	3.20	3.20	3.20	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
281	1.000	7.90	0.21	0.06	0.60	0.00	0.00	0.00	0.00	3.20	3.20	3.20	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
282	0.900	7.90	0.21	0.06	0.60	0.00	0.00	0.00	0.00	3.20	3.20	3.20	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
283	0.800	7.90	0.21	0.06	0.60	0.00	0.00	0.00	0.00	3.20	3.20	3.20	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
284	0.700	7.90	0.21	0.06	0.60	0.00	0.00	0.00	0.00	3.20	3.20	3.20	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
285	0.600	7.90	0.21	0.06	0.60	0.00	0.00	0.00	0.00	3.20	3.20	3.20	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
286	0.500	7.90	0.21	0.06	0.60	0.00	0.00	0.00	0.00	3.19	3.19	3.19	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
287	0.400	7.91	0.21	0.06	0.60	0.00	0.00	0.00	0.00	3.19	3.19	3.19	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
288	0.300	7.91	0.21	0.06	0.60	0.00	0.00	0.00	0.00	3.19	3.19	3.19	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
289	0.200	7.91	0.21	0.06	0.60	0.00	0.00	0.00	0.00	3.19	3.19	3.19	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
290	0.100	7.91	0.21	0.06	0.60	0.00	0.00	0.00	0.00	3.19	3.19	3.19	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
291	0.000	7.91	0.21	0.06	0.60	0.00	0.00	0.00	0.00	3.19	3.19	3.19	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

AVG 20 DEG C RATE 0.18 0.09 0.50 0.00 0.00 0.00 0.00 2.00 0.06 0.10 0.00 0.00 0.00 0.00 0.00 0.00 0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I MG/L	CM-II MG/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO g/m³	COLI #/100mL	NCM
269	2.200	27.53	0.05	10.85	101.79	1.09	7.36	0.00	16.02	0.00	2.56	0.00	0.00	0.00	0.00	86.62	0.00	0.	0.00
270	2.100	27.53	0.05	10.68	100.70	1.06	8.18	0.00	16.57	0.00	2.55	0.00	0.00	0.00	0.00	83.93	0.00	0.	0.00
271	2.000	27.52	0.05	10.51	99.60	1.03	8.81	0.00	16.93	0.00	2.54	0.00	0.00	0.00	0.00	81.25	0.00	0.	0.00
272	1.900	27.52	0.04	10.35	98.50	1.00	9.29	0.00	17.15	0.00	2.54	0.00	0.00	0.00	0.00	78.57	0.00	0.	0.00
273	1.800	27.51	0.04	10.18	97.38	0.98	9.67	0.00	17.26	0.00	2.54	0.00	0.00	0.00	0.00	75.89	0.00	0.	0.00
274	1.700	27.51	0.04	10.01	96.26	0.96	9.96	0.00	17.28	0.00	2.53	0.00	0.00	0.00	0.00	73.20	0.00	0.	0.00
275	1.600	27.50	0.04	9.84	95.13	0.94	10.18	0.00	17.23	0.00	2.53	0.00	0.00	0.00	0.00	70.52	0.00	0.	0.00
276	1.500	27.49	0.04	9.66	93.99	0.92	10.36	0.00	17.14	0.00	2.53	0.00	0.00	0.00	0.00	67.84	0.00	0.	0.00
277	1.400	27.49	0.04	9.49	92.84	0.91	10.49	0.00	17.01	0.00	2.53	0.00	0.00	0.00	0.00	65.16	0.00	0.	0.00
278	1.300	27.48	0.04	9.31	91.68	0.90	10.60	0.00	16.85	0.00	2.54	0.00	0.00	0.00	0.00	62.47	0.00	0.	0.00
279	1.200	27.48	0.04	9.14	90.51	0.89	10.68	0.00	16.66	0.00	2.54	0.00	0.00	0.00	0.00	59.79	0.00	0.	0.00
280	1.100	27.47	0.03	8.96	89.33	0.89	10.75	0.00	16.46	0.00	2.55	0.00	0.00	0.00	0.00	57.11	0.00	0.	0.00
281	1.000	27.47	0.03	8.78	88.14	0.88	10.81	0.00	16.25	0.00	2.55	0.00	0.00	0.00	0.00	54.43	0.00	0.	0.00
282	0.900	27.46	0.03	8.60	86.95	0.88	10.86	0.00	16.03	0.00	2.56	0.00	0.00	0.00	0.00	51.74	0.00	0.	0.00
283	0.800	27.46	0.03	8.41	85.74	0.88	10.90	0.00	15.80	0.00	2.57	0.00	0.00	0.00	0.00	49.06	0.00	0.	0.00
284	0.700	27.45	0.03	8.23	84.53	0.88	10.94	0.00	15.58	0.00	2.58	0.00	0.00	0.00	0.00	46.38	0.00	0.	0.00
285	0.600	27.44	0.03	8.04	83.30	0.88	10.98	0.00	15.35	0.00	2.59	0.00	0.00	0.00	0.00	43.70	0.00	0.	0.00
286	0.500	27.44	0.03	7.86	82.07	0.88	11.02	0.00	15.12	0.00	2.60	0.00	0.00	0.00	0.00	41.01	0.00	0.	0.00
287	0.400	27.43	0.03	7.67	80.82	0.89	11.07	0.00	14.90	0.00	2.62	0.00	0.00	0.00	0.00	38.33	0.00	0.	0.00
288	0.300	27.43	0.02	7.48	79.57	0.90	11.13	0.00	14.70	0.00	2.64	0.00	0.00	0.00	0.00	35.65	0.00	0.	0.00
289	0.200	27.42	0.02	7.29	78.31	0.92	11.21	0.00	14.51	0.00	2.66	0.00	0.00	0.00	0.00	32.97	0.00	0.	0.00
290	0.100	27.42	0.02	7.09	77.03	0.94	11.31	0.00	14.34	0.00	2.68	0.00	0.00	0.00	0.00	30.28	0.00	0.	0.00
291	0.000	27.41	0.02	6.90	75.75	0.97	11.45	0.00	14.21	0.00	2.71	0.00	0.00	0.00	0.00	27.60	0.00	0.	0.00

STREAM SUMMARY
HEADWATER - NBB03A

SMITHPORT LAKE WATERSHED MODEL
SMITHPORTLAKE CALIBRATION RUN

TRAVEL TIME = 883.97 DAYS

MAXIMUM EFFLUENT = 98.33 PERCENT

FLOW	=	0.01027	TO	0.04560	m³/s
DISPERSION	=	1.0000	TO	1.0000	m²/s
VELOCITY	=	0.00008	TO	0.04968	m/s
DEPTH	=	0.11	TO	3.90	m
WIDTH	=	2.74	TO	147.83	m
BOD DECAY	=	0.02	TO	0.08	per day
NH3 DECAY	=	0.00	TO	0.00	per day
SOD	=	2.57	TO	4.69	g/m²/d
NH3 SOURCE	=	0.00	TO	0.00	g/m²/d
REAERATION	=	0.21	TO	7.08	per day
BOD SETTLING	=	0.57	TO	0.60	per day
NBOD DECAY	=	0.00	TO	0.11	per day
NBOD SETTLING	=	0.11	TO	0.12	per day
TEMPERATURE	=	25.66	TO	27.99	deg C

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 DISSOLVED OXYGEN  =    0.88   TO    4.70      mg/L


     .....EXECUTION COMPLETED
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Appendix B2 – Calibration Justification

DATA TYPE 3 - PROGRAM CONSTANTS			
CONSTANT NAME	**VALUE**	**UNITS**	**DATA SOURCE**
KL MINIMUM	0.7	m/day	The minimum KL of 2.3 ft/day converted to 0.70 m/day.
INHIBITION CONTROL VALUE	3		The water column dissolved oxygen demand is assumed to come primarily from facultative bacteria under anoxic conditions and SOD is not influenced by modeled dissolved oxygen levels in the upper water column.
K2 MAXIMUM	25	1/day at 20 deg C	EPA Policy in the absence of a measured value.
HYDRAULIC CALCULATION METHOD	2		The low slopes in this waterbody cause a substantial amount of water to be present during critical flow conditions. This method allows the model to predict a more accurate depth and width during low flow conditions.
SETTLING RATE UNITS	2		LAQUAL Default
ALGAE OXYGEN PRODUCTION	0		Standard practice for steady state calibration to a wide variation in DO.
EFFECTIVE BOD DUE TO ALGAE	0.1		Standard practice for steady state calibration to a wide variation in DO.

DATA TYPE 8 - REACH IDENTIFICATION DATA					
Reach	**ID**	**Name**	**Upstream River Kilometer**	**Upstream River Kilometer**	**Element Length, meters**
1	SL	Bayou Na Bonchase at Mansfield STP Discharger to Bayou Na Bonchase at Hwy 175	29.1	21.8	0.1
2	SL	Bayou Na Bonchase at Hwy 175 to Rambin Bayou Intercept	21.8	6.0	0.1
3	SL	Rambin Bayou intercept to Center of Clear Lake	6.0	5.3	0.1
4	SL	Center of Clear Lake to Clear Lake north of Hwy 509	5.3	4.6	0.1
5	SL	Clear lake north of Hwy 509 to Smithport Lake south of Hwy 509	4.6	4.3	0.1
6	SL	Smithport Lake south of hwy 509 to Center of Smithport Lake	4.3	2.3	0.1
7	SL	Center of Smithport lake to Smithport Lake Dam	2.3	0.0	0.1

		DATA TYPE 9 - ADVECTIVE HYDRAULIC COEFFICIENTS			
Reach	**Name**	**Width Coeff. "a"**	**Width Exp. "b"**	**Width Const. "c"**	**Data Source**
1	Bayou Na Bonchase at Mansfield STP Discharger to Bayou Na Bonchase at Hwy 175	0.00	0.10	2.743	Constant - NBB02 and Coefficients and Exponent - calibration
2	Bayou Na Bonchase at Hwy 175 to Rambin Bayou Intercept	0.00	0.10	2.743	Constant - NBB02 and Coefficients and Exponent - calibration
3	Rambin Bayou intercept to Center of Clear Lake	0.00	0.10	147.828	Constant - CLK01 and Coefficients and Exponent - calibration
4	Center of Clear Lake to Clear Lake north of Hwy 509	0.00	0.10	147.828	Constant - CLK01 and Coefficients and Exponent - calibration
5	Clear lake north of Hwy 509 to Smithport Lake south of Hwy 509	0.00	0.10	147.828	Constant - CLK01 and Coefficients and Exponent - calibration
6	Smithport Lake south of hwy 509 to Center of Smithport Lake	0.00	0.10	147.828	Constant - CLK01 and Coefficients and Exponent - calibration
7	Center of Smithport lake to Smithport Lake Dam	0.00	0.10	147.828	Constant - CLK01 and Coefficients and Exponent - calibration

		DATA TYPE 9 - ADVECTIVE HYDRAULIC COEFFICIENTS			
Reach	**Name**	**Depth Coeff. "d"**	**Depth Exp. "e"**	**Depth Const. "f"**	**Data Source**
1	Bayou Na Bonchase at Mansfield STP Discharger to Bayou Na Bonchase at Hwy 175	0.00	0.10	0.113	Constant - NBB02 and Coefficients and Exponent - calibration
2	Bayou Na Bonchase at Hwy 175 to Rambin Bayou Intercept	0.00	0.10	0.113	Constant - NBB02 and Coefficients and Exponent - calibration
3	Rambin Bayou intercept to Center of Clear Lake	0.00	0.10	3.901	Constant - CLK01 and Coefficients and Exponent - calibration
4	Center of Clear Lake to Clear Lake north of Hwy 509	0.00	0.10	3.901	Constant - CLK01 and Coefficients and Exponent - calibration
5	Clear lake north of Hwy 509 to Smithport Lake south of Hwy 509	0.00	0.10	3.901	Constant - CLK01 and Coefficients and Exponent - calibration
6	Smithport Lake south of hwy 509 to Center of Smithport Lake	0.00	0.10	3.901	Constant - CLK01 and Coefficients and Exponent - calibration
7	Center of Smithport lake to Smithport Lake Dam	0.00	0.10	3.901	Constant - CLK01 and Coefficients and Exponent - calibration

DATA TYPE 10 - DISPERSIVE HYDRAULIC COEFFICIENTS			
Reach	**Name**	**Dispersion Coeff. "a"**	**Data Source**
1	Bayou Na Bonchase at Mansfield STP Discharger to Bayou Na Bonchase at Hwy 175	1.000	Best professional judgement
2	Bayou Na Bonchase at Hwy 175 to Rambin Bayou Intercept	1.000	Best professional judgement
3	Rambin Bayou intercept to Center of Clear Lake	1.000	Best professional judgement
4	Center of Clear Lake to Clear Lake north of Hwy 509	1.000	Best professional judgement
5	Clear lake north of Hwy 509 to Smithport Lake south of Hwy 509	1.000	Best professional judgement
6	Smithport Lake south of hwy 509 to Center of Smithport Lake	1.000	Best professional judgement
7	Center of Smithport lake to Smithport Lake Dam	1.000	Best professional judgement

DATA TYPE 11 - INITIAL CONDITIONS									
Reach	**Name**	**Temp, deg C**	**Data Source**	**SALINITY**	**Data Source**	**DO, mg/l**	**Data Source**	**Chl a**	**Data Source**
1	Bayou Na Bonchase at Mansfield STP Discharger to Bayou Na Bonchase at Hwy 175	26.58	Continuous Monitoring Data Average (NBB03C+NBB02)	0.30	Continuous Monitoring Data Average (NBB03C+NBB02)	3.05	Continuous Monitoring Data Min + 1 (NBB03C+NBB02)/2	15.10	NBB02
2	Bayou Na Bonchase at Hwy 175 to Rambin Bayou Intercept	25.66	NBB02 Continuous Monitoring Data Average	0.24	NBB02 Continuous Monitoring Data Average	4.70	NBB02 Continuous Monitoring Data Minimum +1	15.10	NBB02
3	Rambin Bayou intercept to Center of Clear Lake	27.10	CLK02 Continuous Monitoring Data Average	0.09	Continuous Monitoring Data Average (CLK02+CLK01)	1.10	CLK02 Continuous Monitoring Data Minimum +1	30.00	Average (NBB02 + CLK01)
4	Center of Clear Lake to Clear Lake north of Hwy 509	27.55	Continuous Monitoring Data Average (CLK02+CLK01)	0.09	Continuous Monitoring Data Average (CLK02+CLK01)	1.15	Continuous Monitoring Data Min +1 (CLK02+CLK01)/2	44.90	CLK01
5	Clear lake north of Hwy 509 to Smithport Lake south of Hwy 509	27.99	CLK01 Continuous Monitoring Data Average	0.08	CLK01 Continuous Monitoring Data Average	1.20	CLK01 Continuous Monitoring Data Minimum +1	44.90	CLK01
6	Smithport Lake south of hwy 509 to Center of Smithport Lake	27.66	SL03 Continuous Monitoring Data Average	0.07	SL03 Continuous Monitoring Data Average	1.10	SL03 Continuous Monitoring Data Minimum + 1	67.10	Average (CLK01 + SL03)
7	Center of Smithport lake to Smithport Lake Dam	27.54	Continuous Monitoring Data Average (SL03+SL02)	0.05	Continuous Monitoring Data Average (SL03+SL02)	1.05	Continuous Monitoring Data Min + 1 (SL03+SL02)/2	89.30	SL03

		DATA TYPE 12 - REAERATION, SEDIMENT OXYGEN DEMAND AND BOD COEFFICIENTS						
REACH	NAME	K_2 OPT	K_2 "A"	K_2 "B"	K_2 "C"	Data Source	BKGRND SOD, gmO_2/m^2/day at 20 deg C	Data Source
1	Bayou Na Bonchase at Mansfield STP Discharger to Bayou Na Bonchase at Hwy 175	11				Texas Equation	1.80	Calibration
2	Bayou Na Bonchase at Hwy 175 to Rambin Bayou Intercept	11				Texas Equation	3.00	Calibration
3	Rambin Bayou intercept to Center of Clear Lake	11				Texas Equation	2.00	Calibration
4	Center of Clear Lake to Clear Lake north of Hwy 509	11				Texas Equation	2.50	Calibration
5	Clear lake north of Hwy 509 to Smithport Lake south of Hwy 509	11				Texas Equation	2.50	Calibration
6	Smithport Lake south of hwy 509 to Center of Smithport Lake	11				Texas Equation	2.50	Calibration
7	Center of Smithport lake to Smithport Lake Dam	11				Texas Equation	2.00	Calibration

		DATA TYPE 12 - REAERATION, SEDIMENT OXYGEN DEMAND AND BOD COEFFICIENTS			
REACH	NAME	BOD1 Decay Rate (1/Day)	Data Source	BOD1 SETT RATE (1/day)	Data Source
1	Bayou Na Bonchase at Mansfield STP Discharger to Bayou Na Bonchase at Hwy 175	0.0284	Lab Data avg(NBB03c+NBB02)	0.5	Calibration
2	Bayou Na Bonchase at Hwy 175 to Rambin Bayou Intercept	0.0302	Lab Data NBB02	0.5	Calibration
3	Rambin Bayou intercept to Center of Clear Lake	0.0915	Lab Data CLK02	0.5	Calibration
4	Center of Clear Lake to Clear Lake north of Hwy 509	0.0866	Lab Data avg(CLK02+CLK01)	0.5	Calibration
5	Clear lake north of Hwy 509 to Smithport Lake south of Hwy 509	0.0743	Lab Data avg(CLK01+SL04)	0.5	Calibration
6	Smithport Lake south of hwy 509 to Center of Smithport Lake	0.0816	Lab Data avg(SL04+SL03)	0.5	Calibration
7	Center of Smithport lake to Smithport Lake Dam	0.0941	Lab Data avg(SL03+SL02)	0.5	Calibration

DATA TYPE 13 - NITROGEN AND PHOSPHORUS COEFFICIENTS					
Reach	**Name**	**NBOD decay rate, 1/day**	**Data Source**	**NBOD settling rate, 1/day**	**Data Source**
1	Bayou Na Bonchase at Mansfield STP Discharger to Bayou Na Bonchase at Hwy 175	0.0462	Lab Data avg(NBB03c+NBB02)	0.100	Calibration
2	Bayou Na Bonchase at Hwy 175 to Rambin Bayou Intercept	0.0875	Lab Data NBB02	0.100	Calibration
3	Rambin Bayou intercept to Center of Clear Lake	0.1035	Lab Data CLK02	0.100	Calibration
4	Center of Clear Lake to Clear Lake north of Hwy 509	0.0889	Lab Data avg(CLK02+CLK01)	0.100	Calibration
5	Clear lake north of Hwy 509 to Smithport Lake south of Hwy 509	0.0520	Lab Data avg(CLK01+SL04)	0.100	Calibration
6	Smithport Lake south of hwy 509 to Center of Smithport Lake	0.0414	Lab Data avg(SL04+SL03)	0.100	Calibration
7	Center of Smithport lake to Smithport Lake Dam	0.0575	Lab Data avg(SL03+SL02)	0.100	Calibration

YPES 16 - INCREMENTAL DATA FOR TEMP AND CONS **DATA TYPES 16 - INCREMENTAL DATA FOR TEMP AND CONS**

Reach Name	Incr. Ouflow, m3	Incr. Inflow, m3	Data Source	Temp, deg C	Data Source	Chl	Cond	Data Source
Bayou Na Bonchase at Mansfield STP Discharger to Bayou Na Bonchase at Hwy 175	0.0000	0.0052	Flow Balance Calculation	26.580	Continuous Monitoring Data Average (NBB03C+NBB02)	55	148	Calibration
Bayou Na Bonchase at Hwy 175 to Rambin Bayou Intercept	0.0000	0.0000	Flow Balance Calculation	25.660	NBB02 Continuous Monitoring Data Average	0	0	Calibration
Rambin Bayou intercept to Center of Clear Lake	0.0000	0.0000	Flow Balance Calculation	27.100	CLK02 Continuous Monitoring Data Average	0	0	Calibration
Center of Clear Lake to Clear Lake north of Hwy 509	0.0000	0.0000	Flow Balance Calculation	27.550	Continuous Monitoring Data Average (CLK02+CLK01)	0	0	Calibration
Clear lake north of Hwy 509 to Smithport Lake south of Hwy 509	0.0000	0.0000	Flow Balance Calculation	27.990	CLK01 Continuous Monitoring Data Average	0	0	Calibration
Smithport Lake south of hwy 509 to Center of Smithport Lake	0.0000	0.0000	Flow Balance Calculation	27.66	SL03 Continuous Monitoring Data Average	0	0	Calibration
Center of Smithport lake to Smithport Lake Dam	0.0000	0.0000	Flow Balance Calculation	27.54	Continuous Monitoring Data Average (SL03+SL02)	0	0	Calibration

DATA TYPES 17 - INCREMENTAL DATA FOR DO, BOD, AND NITROGEN			
Reach	**Reach Name**	**DO, mg/l**	**Data Source**
1	Bayou Na Bonchase at Mansfield STP Discharger to Bayou Na Bonchase at Hwy 175	2	Normal Groundwater DO
2	Bayou Na Bonchase at Hwy 175 to Rambin Bayou Intercept	2	Normal Groundwater DO
3	Rambin Bayou intercept to Center of Clear Lake	2	Normal Groundwater DO
4	Center of Clear Lake to Clear Lake north of Hwy 509	2	Normal Groundwater DO
5	Center of Clear Lake to Clear Lake north of Hwy 509	2	Normal Groundwater DO
6	Clear lake north of Hwy 509 to Smithport Lake south of Hwy 509	2	Normal Groundwater DO
7	Smithport Lake south of hwy 509 to Center of Smithport Lake	2	Normal Groundwater DO

DATA TYPE 19 - NONPOINT SOURCES					
Reach	**Reach Name**	**Length of Reach, km**	**CBOD, kg/day**	**NBOD, kg/day**	**Data Source**
1	Bayou Na Bonchase at Mansfield STP Discharger to Bayou Na Bonchase at Hwy 175	7.3	1.5	0.59	Calibration
2	Bayou Na Bonchase at Hwy 175 to Rambin Bayou Intercept	15.8	20.0	2.00	Calibration
3	Rambin Bayou intercept to Center of Clear Lake	0.7	3500.0	90.00	Calibration
4	Center of Clear Lake to Clear Lake north of Hwy 509	0.7	1200.0	30.00	Calibration
5	Clear lake north of Hwy 509 to Smithport Lake south of Hwy 509	0.3	50.0	1.00	Calibration
6	Smithport Lake south of hwy 509 to Center of Smithport Lake	2.0	2300.0	425.00	Calibration
7	Center of Smithport lake to Smithport Lake Dam	2.3	9500.0	400.00	Calibration

DATA TYPES 20 - HEADWATER DATA FOR FLOW, TEMPERATURE, SALINITY, AND CONSERVATIVES

Headwater Name	Element No.	Headwater Flow, cms	Temp, deg C	Salinity	Chlorides	Conductivity	Data Source
Bayou Na Bonchase Headwater upstream from Mansfield STP	1	0.0001	23.89	0.17	38.8	344.4	NBB03A Continuous Monitoring - Temp Lab Data - Chlorides Insitu - Salinity and Conductivity Minimum Flow Measurement

Datatype 21				
Headwater Name	**Dissolved Oxygen, mg/L**	**UCBOD1, mg/l**	**NBOD, mg/l**	**Data Source**
Bayou Na Bonchase Headwater upstream from Mansfield STP	1	6.2784	1.8781	NBB03A Continuous Monitoring Minimum +1 - DO NBB03A BOD - Lab Data

Alabama Bayou 010401 Calibration Justification

DATA TYPES 22 - HEADWATER DATA FOR PHOSPHORUS, CHLOROPHYLL, COLIFORM, AND NONCONSERVATIVES

Headwater Name	Chlorophyll a, ug/L	Date Source			
Headwater 1	28.5	NBB03A - Lab Data			

DATA TYPES 24 - WASTELOAD DATA FOR FLOW, TEMPERATURE, SALINITY, AND CONSERVATIVES

Wasteload / Withdrawal Name	EL #	Flow, cms	Data Source	Temperature, deg C	Salinity	Conductivity	Data Source	Chlorides	Data Source
Mansfield STP	1	0.010100	August 2005 DMR	28.28	0.43	836.3	Insitu Data at NBB03B	106.0	Lab Data at NBB03B
Rambin Bayou intercept	232	0.0302	RB01 Calculated Flow	25.85	0.50	116.8	Insitu Data at RB01	11.3	Lab Data at RB01

DATA TYPES 25 - WASTELOAD DATA FOR DO, BOD, AND NITROGEN

Wasteload / Withdrawal Name	EL #	DO, mg/l	Data Source	UCBOD, mg/l	UNBOD, mg/l	Data Source
Mansfield STP	1	2.49	Continuous Monitor data at NBB03B	52.000	0.000	Lab Data at NBB03B
Rambin Bayou intercept	232	1.70	Continuous Monitor Data at RB01	9.244	1.687	Lab Data at RB01

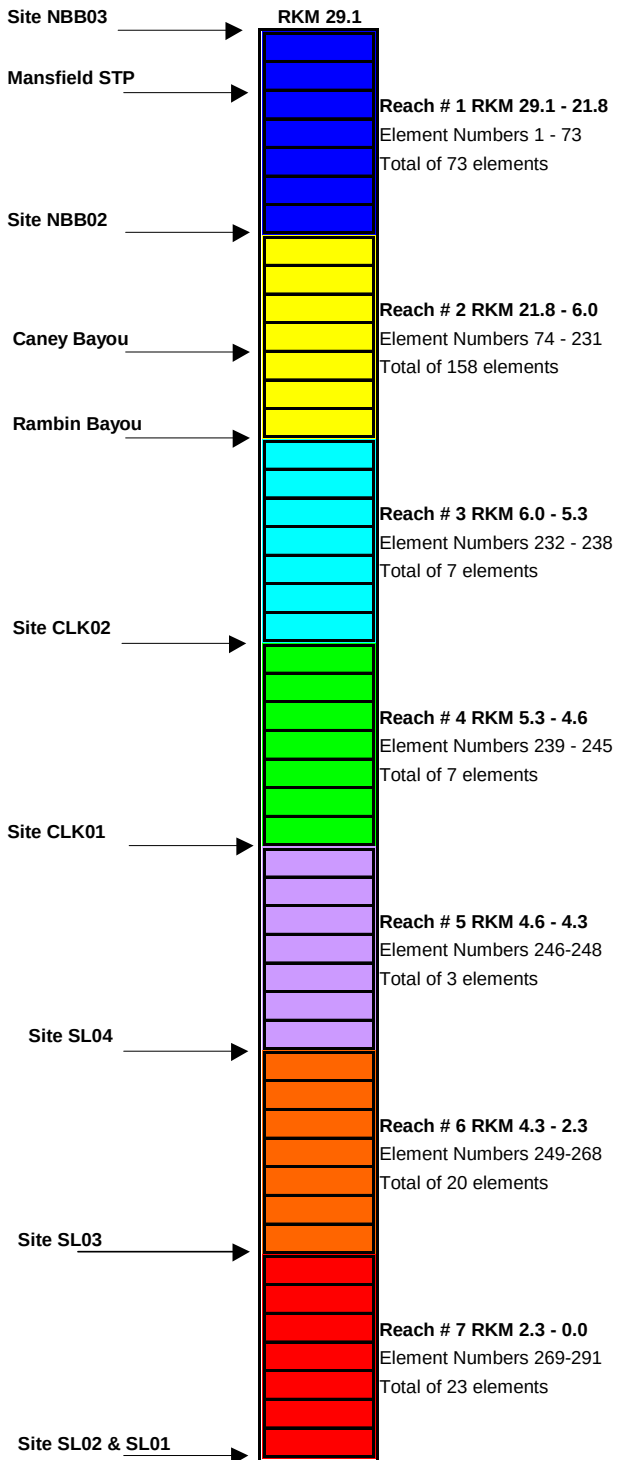
DATA TYPES 27 - LOWER BOUNDARY CONDITIONS

Parameter	Value	Units	Data Source
TEMPERATURE	27.410	^{O}C	SL02 Continuous Monitor
SALINITY	0.020	mg/L	SL02 Insitu
CHLORIDES	6.800	ppm	SL02 Lab Data
CONDUCTIVITY	75.100	umhos/cm	SL02 Insitu
DISSOLVED OXYGEN	1.000	mg/L	SL02 Continuous Monitor
CBOD1	14.299	mg/L	SL02 BOD Calculation
NBOD	2.725	mg/L	SL02 BOD Calculation
CHLOROPHYLL A	27.600	ug/L	SL02 Lab Data

Appendix C - Calibration Model Development

Appendix C1 – Vector Diagram

Lake Edwards and Smithport Lake Model Layout Subsegment 100605



Appendix C2 – Reach Setup

Lake Edwards and Smithport Lake Subsegment 100605					Modeled Length	Element Length				
Reach #	Description	Headwater Yes/No	Starting modeled Kilometer	Ending modeled Kilometer	kilometers	kilometers	Element Count	Cumulative Elements	Begin Element #	End Element #
1	NBB03A to NBB02	Yes	29.1	21.8	7.30	0.100	73	73	1	73
2	NBB02 to RB01	No	21.8	6	15.80	0.100	158	231	74	231
3	RB01 to CLK02	No	6	5.3	0.70	0.100	7	238	232	238
4	CLK02 to CLK01	No	5.3	4.6	0.70	0.100	7	245	239	245
5	CLK01 to SL04	No	4.6	4.3	0.30	0.100	3	248	246	248
6	SL04 to SL03	No	4.3	2.3	2.00	0.100	20	268	249	268
7	SL03 to SL01	No	2.3	0	2.30	0.100	23	291	269	291

Appendix C3 – Calibration Loading

Lake Edwards/Smithport Lake Watershed TMDL
Subsegment 100605
Originated: June 13, 2007
Final: August 31, 2007

Calibration Model Non-Point Load Equivalent Calculations:

Modeled stream or water body: **LAKE EDWARDS SMITHPORT LAKE (Subsegment 100605)**

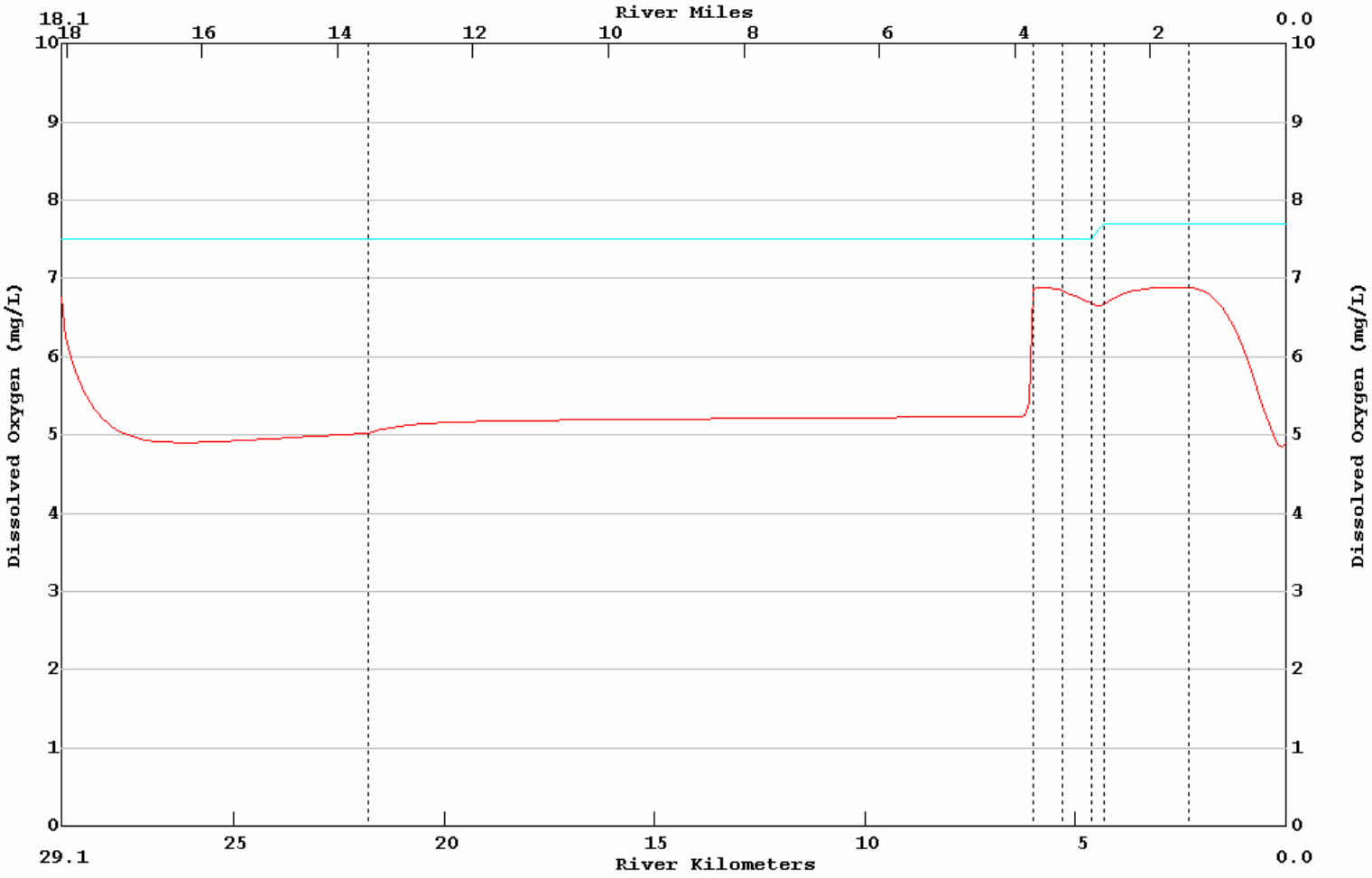
Shaded cells are input values for calculations. If modeling the nitrogen series, be sure that column "I" is clear of all values.

REACH NUMBER & DESCRIPTION	Calibration Model Reach Length	Calibration Model Average Reach Width	Calibration Model UCBOD1 Nonpoint loading	Calibration Model UCBOD2 Nonpoint loading	Calibration Model Total UCBOD Nonpoint loading	Calibration Model Organic-N Nonpoint loading	Calibration Model Benthic Source Rate for Ammonia	Calibration Model UNBOD Nonpoint loading	Calibration Model Total UNBOD Nonpoint loading	Calibration Model UCBOD1 Nonpoint loading	Calibration Model UCBOD2 Nonpoint loading	Calibration Model Total UCBOD Nonpoint loading	Calibration Model Total Organic-N Nonpoint loading	Calibration Model Benthic Source Rate for Ammonia	Calibration Model Total UNBOD Nonpoint loading	Calibration Model SOD	Calibration Model TOTAL Benthic Load
	km	meters	kg O_2/day	kg O_2/day	kg O_2/day	kg/day	kg/day	kg O_2/day	kg O_2/day	g O_2 / [(m^2)(day)]	g O_2 / [(m^2)(day)]	g O_2 / [(m^2)(day)]	g / [(m^2)(day)]	g / [(m^2)(day)]	g O_2 / [(m^2)(day)]	g O_2 / [(m^2)(day)]	g O_2 / [(m^2)(day)]
REACH 1: NBB03c (downstream Bayou Na Bonchase from Mansfield STP) - NBB02 (Bayou Na Bonchase @ State Hwy 175)	7.30	2.743	0.50		0.50		0.00	0.59	0.59	0.025	0.000	0.025		0.00	0.029	1.80	**1.85**
REACH 2: NBB02 (Bayou Na Bonchase at State Hwy 175) - RB01 intersect (Inflow of Rambin Bayou)	15.80	2.743	10.00		10.00		0.00	2.00	2.00	0.231	0.000	0.231		0.00	0.046	2.00	**2.28**
REACH 3: RB01 intersects (In flow of Rambin Bayou) - CLK02 (Center of Clear lake)	0.70	147.828	1200.00		1200.00		0.00	98.00	98.00	11.596	0.000	11.596		0.00	0.947	2.00	**14.54**
REACH 4: CLK02 (Center of Clear Lake) - CLK01 (Clear lake north of Hwy 509)	0.70	147.828	200.00		200.00		0.00	11.00	11.00	1.933	0.000	1.933		0.00	0.106	2.00	**4.04**
REACH 5: CLK01 (Clear Lake North of Hwy 509) - SL04 (Smithport lake south of Hwy 509)	0.30	147.828	50.00		50.00		0.00	10.00	10.00	1.127	0.000	1.127		0.00	0.225	2.00	**3.35**
REACH 6: SL04 (Smithport Lake south of Hwy 509) - SL03 (Center of Smithport Lake)	2.00	147.828	1800.00		1800.00		0.00	440.00	440.00	6.088	0.000	6.088		0.00	1.488	2.00	**9.58**
REACH 7: SL03 (Center of Smithport Lake) SL01 (Smithport Lake Dam)	2.30	147.828	100.00		100.00		0.00	500.00	500.00	0.294	0.000	0.294		0.00	1.471	2.0	**3.76**

Appendix D – Projection Model Input and Output Data Sets

Appendix D1 –Summer Output Graphs and Input and Output Files

LA-QUAL Version 8.00 Run at 07:41 on 05/24/2007 File O:\Personal_Folders\Karen\Smithport Lake and Lake Edwards\2005\In
SMITHPORT LAKE SUMMER 100% MAN-MADE AND 40% BACKGROUND min= 4.84 max= 6.89
SMITHPORT LAKE WATERSHED MODEL



LAKE EDWARDS/SMITHPORT LAKE 100605 SUMMER PROJECTION INPUT DATA SET

```
CNTROL01     SMITHPORT LAKE WATERSHED MODEL
CNTROL02     SMITHPORT LAKE SUMMER 100% MAN-MADE AND 40% BACKGROUND
CNTROL04 YES METRIC UNITS
ENDATA01
MODOPT01  NO TEMPERATURE
MODOPT02  NO SALINITY
MODOPT03 YES CONSERVATIVE MATERIAL  I = CHLORIDES                  IN MG/L
MODOPT04 YES CONSERVATIVE MATERIAL II = CONDUCTIVITY               IN MG/L
MODOPT05 YES DISSOLVED OXYGEN
MODOPT06 YES BOD1 BIOCHEMICAL OXYGEN DEMAND
MODOPT07  NO BOD2 BIOCHEMICAL OXYGEN DEMAND
MODOPT08 YES NBOD OXYGEN DEMAND
MODOPT10  NO PHOSPHORUS
MODOPT11  NO CHLOROPHYLL A
MODOPT12  NO MACROPHYTES
MODOPT13  NO COLIFORM
ENDATA02
PROGRAM  KL MINIMUM                        =     0.7
PROGRAM  INHIBITION CONTROL VALUE          =     3.
PROGRAM  K2 MAXIMUM                        =     25.0
PROGRAM  HYDRAULIC CALCULATION METHOD      =     2.
PROGRAM  SETTLING RATE UNITS               =     2.
PROGRAM  ALGAE OXYGEN PROD                 =     0.
PROGRAM  EFFECTIVE BOD DUE TO ALGAE        =     0.10
ENDATA03
!Temperature Correction Constants
!--------1---------2---------3---------4---------5---------6---------7---------8
!23456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
!        ******** ********
ENDATA04
ENDATA05
ENDATA06
ENDATA07
!Reach Identification Data
!--------1---------2---------3---------4---------5---------6---------7---------8
!23456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
!         ***  -- ******************************----------*********----------
!          R#  ID   SITE NAME                          RKM        RKM    LENGTH
REACH ID    1  SL   NBB03C TO NBB02                   29.1       21.8      0.1
```

```
REACH ID    2  SL   NBB02 TO RB01                      21.8        6.0      0.1
REACH ID    3  SL   RB01 TO CLK02                       6.0        5.3      0.1
REACH ID    4  SL   CLK02 TO CLK01                     5.3        4.6      0.1
REACH ID    5  SL   CLK01 TO SL04                      4.6        4.3      0.1
REACH ID    6  SL   SL04 TO SL03                       4.3        2.3      0.1
REACH ID    7  SL   SL03 TO SL01                       2.3        0.0      0.1
ENDATA08
!Advective Hydraulic Coefficients
!--------1---------2---------3---------4---------5---------6---------7---------8
!234567890123456789012345678901234567890123456789012345678901234567890123456789 0
!         ***  -------*******-------*******-------*******-------*******
!                a      b       c     d      e        f
!               WIDTH  WIDTH   WIDTH DEPTH  DEPTH   DEPTH
!          R#   COEFF   EXP    CONST COEFF   EXP    CONST SLOPE MANNING
HYDR-1      1   0.00   0.10    2.743  0.00   0.10   0.113
HYDR-1      2   0.00   0.10    2.743  0.00   0.10   0.113
HYDR-1      3   0.00   0.10  147.828  0.00   0.10   3.901
HYDR-1      4   0.00   0.10  147.828  0.00   0.10   3.901
HYDR-1      5   0.00   0.10  147.828  0.00   0.10   3.901
HYDR-1      6   0.00   0.10  147.828  0.00   0.10   3.901
HYDR-1      7   0.00   0.10  147.828  0.00   0.10   3.901
ENDATA09
!Dispersive Hydraulic Coefficients
!--------1---------2---------3---------4---------5---------6---------7---------8
!234567890123456789012345678901234567890123456789012345678901234567890123456789 0
!         ***  -----*********----------*********----------
!              TIDAL
!          R#  RANGE    a          b         c         d
HYDR-2      1   0.0   1.00        0.0       0.0       0.0
HYDR-2      2   0.0   1.00        0.0       0.0       0.0
HYDR-2      3   0.0   1.00        0.0       0.0       0.0
HYDR-2      4   0.0   1.00        0.0       0.0       0.0
HYDR-2      5   0.0   1.00        0.0       0.0       0.0
HYDR-2      6   0.0   1.00        0.0       0.0       0.0
HYDR-2      7   0.0   1.00        0.0       0.0       0.0
ENDATA10
!Initial Conditions
!--------1---------2---------3---------4---------5---------6---------7---------8
!234567890123456789012345678901234567890123456789012345678901234567890123456789 0
!         ***  --------********--------********--------********--------********
!          R#    TEMP  SALINITY   DO     NH3 N  NIT NIT  PHOS   CHL A   MACROPHYTES
```

```
INITIAL     1    30.36  0.30     5.00                            5.0
INITIAL     2    30.36  0.24     5.00                            5.0
INITIAL     3    30.36  0.09     5.00                            5.0
INITIAL     4    30.36  0.09     5.00                            5.0
INITIAL     5    30.36  0.08     5.00                            5.0
INITIAL     6    28.89  0.07     5.00                            5.0
INITIAL     7    28.89  0.05     5.00                            5.0
ENDATA11
!Reaeration, Sediment Oxygen Demand and BOD Coefficients
!--------1---------2---------3---------4---------5---------6---------7---------8---------9
!234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
!         ***  -----******----- ******-------*******-------*******-------*******-------***
!               REA    KL                     BOD 1  BOD 1               BOD 2    BOD 2
!          R#   EQ    MIN              SOD    DECAY  SETT                DECAY    SETT
COEF-1      1  11.00                   1.08   0.0284  0.50
COEF-1      2  11.00                   1.03   0.0302  0.50
COEF-1      3  11.00                   0.07   0.0915  0.50
COEF-1      4  11.00                   0.21   0.0866  0.50
COEF-1      5  11.00                   0.82   0.0743  0.50
COEF-1      6  11.00                   0.26   0.0816  0.50
COEF-1      7  11.00                   0.08   0.0941  0.50
ENDATA12
!Nitrogen and Phosphorus Coefficients
!--------1---------2---------3---------4---------5---------6---------7---------8
!234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
!         ***  -------*******-------*******-------*******-------
!              NBOD     NBOD
!          R#  DECAY    SETT
COEF-2      1  0.0462   0.10
COEF-2      2  0.0875   0.10
COEF-2      3  0.1035   0.10
COEF-2      4  0.0889   0.10
COEF-2      5  0.0520   0.10
COEF-2      6  0.0414   0.10
COEF-2      7  0.0575   0.10
ENDATA13
ENDATA14
!Coliform and Nonconservative Cofficients
!--------1---------2---------3---------4---------5---------6---------7---------8
!234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
!         ***  -------*******-------*******
```

```
ENDATA15
!Incremental Data for Flow, Temperature, Salinity, and Conservatives
!--------1---------2---------3---------4---------5---------6---------7---------8
!23456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
!         ***  ---------********---------********---------********
!          R#   OUTFLOW   INFLOW  TEMP     SALINITY CHLORIDE  COND
INCR-1      1    0.0000   0.0052  30.360             55.00  148.00
INCR-1      2    0.0000   0.0000  30.360              0.00    0.00
INCR-1      3    0.0000   0.0000  30.360              0.00    0.00
INCR-1      4    0.0000   0.0000  30.360              0.00    0.00
INCR-1      5    0.0000   0.0000  30.360              0.00    0.00
INCR-1      6    0.0000   0.0000  28.890              0.00    0.00
INCR-1      7    0.0000   0.0000  28.890              0.00    0.00
ENDATA16
!Incremental Data for DO, BOD, and Nitrogen
!--------1---------2---------3---------4---------5---------6---------7---------8
!23456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
!         ***  ---------********---------********---------********
!          R#      DO     BOD 1     NBOD    NH3 N   NIT NIT    BOD 2
INCR-2      1     2.00
INCR-2      2     2.00
INCR-2      3     2.00
INCR-2      4     2.00
INCR-2      5     2.00
INCR-2      6     2.00
INCR-2      7     2.00
ENDATA17
!Incremental Data for Phosphorus, Chlorophyll, Coliform and Nonconservatives
!--------1---------2---------3---------4---------5---------6---------7---------8
!23456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
!         ***  ---------********---------********
!          R#   PHOSPH    CHL A   COLIFORM NONCONSERVATIVE
INCR-3      1
INCR-3      2
INCR-3      3
INCR-3      4
INCR-3      5
INCR-3      6
INCR-3      7
ENDATA18
!Nonpoint Source Data
```

```
!--------1---------2---------3---------4---------5---------6---------7---------8
!234567890123456789012345678901234567890123456789012345678901234567890123456789 0
!         ***  ---------********---------********---------********
!          R#     BOD 1    NBOD   COLIFORM NONCONS    DO      BOD 2
NONPOINT    1     0.30     0.35
NONPOINT    2     6.84     0.68
NONPOINT    3   114.46     2.94
NONPOINT    4   100.09     2.50
NONPOINT    5    16.44     0.33
NONPOINT    6   235.56    43.53
NONPOINT    7   366.36    15.43
ENDATA19
!Headwater Data for Flow, Temperature, Salinity, and Conservatives
!--------1---------2---------3---------4---------5---------6---------7---------8
!234567890123456789012345678901234567890123456789012345678901234567890123456789 0
!        ****  -------------------- *** --------********--------********--------
!         E#    NAME                       FLOW    TEMP  SALIN   CHLORIDE   COND
HDWTR-1     1  HEADWATER - NBB03A         0.0071  30.36  0.17    38.8     344.4
ENDATA20
!Headwater Data for DO, BOD, and Nitrogen
!--------1---------2---------3---------4---------5---------6---------7---------8
!234567890123456789012345678901234567890123456789012345678901234567890123456789 0
!        ****  ---------********---------********---------********
!          E#      DO      BOD 1    NBOD    NH3 N    NIT NIT  BOD 2
HDWTR-2     1      6.76   2.84     0.69
ENDATA21
!Headwater Data for Phosphorus, Chlorophyll, Coliform, and Nonconservatives
!--------1---------2---------3---------4---------5---------6---------7---------8
!234567890123456789012345678901234567890123456789012345678901234567890123456789 0
!        ****  ---------********---------********
!          E#  PHOSPHOR   CHL A   COLIFORM  NONCONSERVATIVE
HDWTR-3     1               5.0
ENDATA22
ENDATA23
!Wasteload Data for Flow, Temperature, Salinity, and Conservatives
!--------1---------2---------3---------4---------5---------6---------7---------8
!234567890123456789012345678901234567890123456789012345678901234567890123456789 0
!        ****  --------------------********---------********---------********
!          E#     NAME                FLOW      TEMP   SALINITY CHLORIDE  COND
WSTLD-1     1  MANSFIELD STP          0.0101    30.36     0.43   82.0     836.3
WSTLD-1   232  RAMBIN BAYOU           0.0028    30.36     0.50   11.3     116.8
```

```
ENDATA24
!Wasteload Data for DO, BOD, and Nitrogen
!--------1---------2---------3---------4---------5---------6---------7---------8
!234567890123456789012345678901234567890123456789012345678901234567890123456789 0
!        ****  ---------********-----********---------*****---------********
!          E#       DO    BOD 1         NBOD    NH3 N          NIT NIT  BOD 2
WSTLD-2     1      6.00   23.000       21.500
WSTLD-2   232      5.00    3.02         0.51
ENDATA25
!Wasteload Data for Phosphorus, Chlorophyll, Coliform, and Nonconservatives
!--------1---------2---------3---------4---------5---------6---------7---------8
!234567890123456789012345678901234567890123456789012345678901234567890123456789 0
!        ****  ---------********---------********
!          E#  PHOSPHOR  CHL A    COLIFORM NONCONSERVATIVE
WSTLD-3     1
WSTLD-3   232
ENDATA26
LOWER BC TEMPERATURE                        =  28.89
LOWER BC SALINITY                           =   0.02
LOWER BC CONSERVATIVE MATERIAL I            =   6.8
LOWER BC CONSERVATIVE MATERIAL II           =  75.1
LOWER BC DISSOLVED OXYGEN                   =   5.00
LOWER BC BOD1 BIOCHEMICAL OXYGEN DEMAND     =  14.299
LOWER BC CHLOROPHYLL A                      =   5.0
LOWER BC NBOD                               =   2.725
ENDATA27
!Dam Data
!--------1---------2---------3---------4---------5---------6---------7---------8
!234567890123456789012345678901234567890123456789012345678901234567890123456789 0
!        ****  ******************** ** ******** ******** ********
ENDATA28
ENDATA29
!--------1---------2---------3---------4---------5---------6---------7---------8
!234567890123456789012345678901234567890123456789012345678901234567890123456789 0
!        ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** **
NUMBER OF PLOTS = 1
NUMBER OF REACHES IN PLOT 1 =  07                        INCREMENT = 0.1
PLOT RCH  1  2  3  4  5  6  7
ENDATA30
ENDATA31
```

LAKE EDWARDS/SMITHPORT LAKE 100605 SUMMER PROJECTION OUTPUT DATA SET

```
LA-QUAL Version 8.00
Louisiana Department of Environmental Quality

Input file is O:\Personal_Folders\Karen\Smithport Lake and Lake Edwards\2005\Input Files\SLKsum140.txt
Output produced at 07:41 on 05/24/2007

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

CARD TYPE       CONTROL TITLES

TITLE01         SMITHPORT LAKE WATERSHED MODEL
TITLE02         SMITHPORT LAKE SUMMER 100% MAN-MADE AND 40% BACKGROUND
CNTROL04  YES   METRIC UNITS
ENDATA01

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

CARD TYPE       MODEL OPTION

MODOPT01   NO   TEMPERATURE
MODOPT02   NO   SALINITY
MODOPT03  YES   CONSERVATIVE MATERIAL  I = CHLORIDES                 IN MG/L
MODOPT04  YES   CONSERVATIVE MATERIAL II = CONDUCTIVITY               IN MG/L
MODOPT05  YES   DISSOLVED OXYGEN
MODOPT06  YES   BOD1 BIOCHEMICAL OXYGEN DEMAND
MODOPT07   NO   BOD2 BIOCHEMICAL OXYGEN DEMAND
MODOPT08  YES   NBOD OXYGEN DEMAND
MODOPT10   NO   PHOSPHORUS
MODOPT11   NO   CHLOROPHYLL A
MODOPT12   NO   MACROPHYTES
MODOPT13   NO   COLIFORM
ENDATA02

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

CARD TYPE       DESCRIPTION OF CONSTANT                       VALUE

PROGRAM         KL MINIMUM                        =         0.70000 meters/day
PROGRAM         INHIBITION CONTROL VALUE          =         3.00000 (inhibit all rates but SOD)
PROGRAM         K2 MAXIMUM                        =        25.00000 per day
PROGRAM         HYDRAULIC CALCULATION METHOD      =         2.00000 (widths and depths)
PROGRAM         SETTLING RATE UNITS               =         2.00000 (values entered as per day)
PROGRAM         ALGAE OXYGEN PROD                 =         0.00000 mg O/ug chl a/day
PROGRAM         EFFECTIVE BOD DUE TO ALGAE        =         0.10000 mg/L BOD per ug/L chl a
ENDATA03

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

 CARD TYPE     RATE CODE     THETA VALUE

ENDATA04

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

CARD TYPE       DESCRIPTION OF CONSTANT                       VALUE
```

```
ENDATA05

$$$ DATA TYPE 6 (ALGAE CONSTANTS) $$$

CARD TYPE       DESCRIPTION OF CONSTANT                        VALUE

ENDATA06

$$$ DATA TYPE 7 (MACROPHYTE CONSTANTS) $$$

CARD TYPE       DESCRIPTION OF CONSTANT                        VALUE

ENDATA07

$$$ DATA TYPE 8 (REACH IDENTIFICATION DATA) $$$
                                                      BEGIN        END     ELEM    REACH     ELEMS   BEGIN    END
CARD TYPE  REACH  ID  NAME                            REACH       REACH   LENGTH   LENGTH    PER RCH   ELEM   ELEM
                                                         km          km       km       km               NUM    NUM

REACH ID      1   SL    NBB03C TO NBB02               29.10  TO   21.80   0.1000     7.30      73        1     73
REACH ID      2   SL    NBB02 TO RB01                 21.80  TO    6.00   0.1000    15.80     158       74    231
REACH ID      3   SL    RB01 TO CLK02                  6.00  TO    5.30   0.1000     0.70       7      232    238
REACH ID      4   SL    CLK02 TO CLK01                 5.30  TO    4.60   0.1000     0.70       7      239    245
REACH ID      5   SL    CLK01 TO SL04                  4.60  TO    4.30   0.1000     0.30       3      246    248
REACH ID      6   SL    SL04 TO SL03                   4.30  TO    2.30   0.1000     2.00      20      249    268
REACH ID      7   SL    SL03 TO SL01                   2.30  TO    0.00   0.1000     2.30      23      269    291
ENDATA08

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

CARD TYPE  REACH  ID       WIDTH       WIDTH       WIDTH       DEPTH       DEPTH       DEPTH      SLOPE    MANNINGS
                            "A"         "B"         "C"         "D"         "E"         "F"                  "N"

HYDR-1        1   SL       0.000       0.100       2.743       0.000       0.100       0.113     0.00000   0.000
HYDR-1        2   SL       0.000       0.100       2.743       0.000       0.100       0.113     0.00000   0.000
HYDR-1        3   SL       0.000       0.100     147.828       0.000       0.100       3.901     0.00000   0.000
HYDR-1        4   SL       0.000       0.100     147.828       0.000       0.100       3.901     0.00000   0.000
HYDR-1        5   SL       0.000       0.100     147.828       0.000       0.100       3.901     0.00000   0.000
HYDR-1        6   SL       0.000       0.100     147.828       0.000       0.100       3.901     0.00000   0.000
HYDR-1        7   SL       0.000       0.100     147.828       0.000       0.100       3.901     0.00000   0.000
ENDATA09

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

CARD TYPE  REACH  ID     TIDAL     DISPERSION     DISPERSION     DISPERSION     DISPERSION
                         RANGE        "A"            "B"            "C"            "D"

HYDR          1   SL      0.00        1.000          0.000          0.000          0.000
HYDR          2   SL      0.00        1.000          0.000          0.000          0.000
HYDR          3   SL      0.00        1.000          0.000          0.000          0.000
HYDR          4   SL      0.00        1.000          0.000          0.000          0.000
HYDR          5   SL      0.00        1.000          0.000          0.000          0.000
HYDR          6   SL      0.00        1.000          0.000          0.000          0.000
HYDR          7   SL      0.00        1.000          0.000          0.000          0.000
ENDATA10

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

CARD TYPE	REACH	ID	TEMP	SALIN	DO	NH3	NO3+2	PHOS	CHL A	MACRO
INITIAL	1	SL	30.36	0.30	5.00	0.00	0.00	0.00	5.00	0.00
INITIAL	2	SL	30.36	0.24	5.00	0.00	0.00	0.00	5.00	0.00
INITIAL	3	SL	30.36	0.09	5.00	0.00	0.00	0.00	5.00	0.00
INITIAL	4	SL	30.36	0.09	5.00	0.00	0.00	0.00	5.00	0.00
INITIAL	5	SL	30.36	0.08	5.00	0.00	0.00	0.00	5.00	0.00
INITIAL	6	SL	28.89	0.07	5.00	0.00	0.00	0.00	5.00	0.00
INITIAL	7	SL	28.89	0.05	5.00	0.00	0.00	0.00	5.00	0.00

ENDATA11

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

CARD TYPE	RCH NUM	RCH ID	K2 OPT	K2 "A"	K2 "B"	K2 "C"	BKGRND SOD g/m²/d	BOD DECAY per day	BOD SETT m/d	BOD CONV TO SOD	ANAER BOD2 DECAY per day	BOD2 DECAY per day	BOD2 SETT m/d	BOD2 CONV TO SOD	ANAER BOD2 DECAY per day
COEF-1	1	SL	11 TEXAS	0.000	0.000	0.000	1.080	0.028	0.500	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	2	SL	11 TEXAS	0.000	0.000	0.000	1.030	0.030	0.500	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	3	SL	11 TEXAS	0.000	0.000	0.000	0.070	0.091	0.500	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	4	SL	11 TEXAS	0.000	0.000	0.000	0.210	0.087	0.500	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	5	SL	11 TEXAS	0.000	0.000	0.000	0.820	0.074	0.500	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	6	SL	11 TEXAS	0.000	0.000	0.000	0.260	0.082	0.500	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	7	SL	11 TEXAS	0.000	0.000	0.000	0.080	0.094	0.500	0.000	0.000	0.000	0.000	0.000	0.000

ENDATA12

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

CARD TYPE	REACH	ID	NBOD DECA	NBOD SETT	ORGN CONV TO NH3 SRCE	NH3 DECA	NH3 SRCE	PHOS SRCE	DENIT RATE
COEF-2	1	SL	0.046	0.100	0.000	0.000	0.000	0.000	0.000
COEF-2	2	SL	0.087	0.100	0.000	0.000	0.000	0.000	0.000
COEF-2	3	SL	0.104	0.100	0.000	0.000	0.000	0.000	0.000
COEF-2	4	SL	0.089	0.100	0.000	0.000	0.000	0.000	0.000
COEF-2	5	SL	0.052	0.100	0.000	0.000	0.000	0.000	0.000
COEF-2	6	SL	0.041	0.100	0.000	0.000	0.000	0.000	0.000
COEF-2	7	SL	0.058	0.100	0.000	0.000	0.000	0.000	0.000

ENDATA13

$$$ DATA TYPE 14 (ALGAE AND MACROPHYTE COEFFICIENTS) $$$

CARD TYPE	REACH	ID	SECCHI DEPTH	ALGAE: CHL A	ALGAE SETT	ALG CONV TO SOD	ALGAE GROW	ALGAE RESP	MACRO GROW	MACRO RESP

ENDATA14

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

CARD TYPE	REACH	ID	COLIFORM DIE-OFF	NCM DECAY	NCM SETT	NCM CONV TO SOD

ENDATA15

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

CARD TYPE	REACH	ID	OUTFLOW	INFLOW	TEMP	SALIN	CM-I	CM-II	IN/DIST	OUT/DIST
INCR-1	1	SL	0.00000	0.00520	30.36	0.00	55.00	148.00	0.00071	0.00000

```
INCR-1            2   SL       0.00000     0.00000     30.36      0.00      0.00      0.00   0.00000   0.00000
INCR-1            3   SL       0.00000     0.00000     30.36      0.00      0.00      0.00   0.00000   0.00000
INCR-1            4   SL       0.00000     0.00000     30.36      0.00      0.00      0.00   0.00000   0.00000
INCR-1            5   SL       0.00000     0.00000     30.36      0.00      0.00      0.00   0.00000   0.00000
INCR-1            6   SL       0.00000     0.00000     28.89      0.00      0.00      0.00   0.00000   0.00000
INCR-1            7   SL       0.00000     0.00000     28.89      0.00      0.00      0.00   0.00000   0.00000
ENDATA16

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

CARD TYPE      REACH  ID          DO       BOD      NBOD                        BOD#2

INCR-2            1   SL        2.00      0.00      0.00      0.00      0.00      0.00
INCR-2            2   SL        2.00      0.00      0.00      0.00      0.00      0.00
INCR-2            3   SL        2.00      0.00      0.00      0.00      0.00      0.00
INCR-2            4   SL        2.00      0.00      0.00      0.00      0.00      0.00
INCR-2            5   SL        2.00      0.00      0.00      0.00      0.00      0.00
INCR-2            6   SL        2.00      0.00      0.00      0.00      0.00      0.00
INCR-2            7   SL        2.00      0.00      0.00      0.00      0.00      0.00
ENDATA17

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

 CARD TYPE      REACH  ID        PHOS     CHL A      COLI       NCM

INCR-3            1   SL        0.00      0.00      0.00      0.00
INCR-3            2   SL        0.00      0.00      0.00      0.00
INCR-3            3   SL        0.00      0.00      0.00      0.00
INCR-3            4   SL        0.00      0.00      0.00      0.00
INCR-3            5   SL        0.00      0.00      0.00      0.00
INCR-3            6   SL        0.00      0.00      0.00      0.00
INCR-3            7   SL        0.00      0.00      0.00      0.00
ENDATA18

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

CARD TYPE      REACH  ID       BOD#1     NBOD       COLI       NCM        DO     BOD#2

NONPOINT          1   SL        0.30      0.35      0.00      0.00      0.00      0.00
NONPOINT          2   SL        6.84      0.68      0.00      0.00      0.00      0.00
NONPOINT          3   SL      114.46      2.94      0.00      0.00      0.00      0.00
NONPOINT          4   SL      100.09      2.50      0.00      0.00      0.00      0.00
NONPOINT          5   SL       16.44      0.33      0.00      0.00      0.00      0.00
NONPOINT          6   SL      235.56     43.53      0.00      0.00      0.00      0.00
NONPOINT          7   SL      366.36     15.43      0.00      0.00      0.00      0.00
ENDATA19

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

CARD TYPE     ELEMENT   NAME                  UNIT     FLOW     FLOW    TEMP    SALIN      CM-I     CM-II
                                                        m³/s      cfs   deg C      ppt      MG/L      MG/L

HDWTR-1           1     HEADWATER - NBB03A      0   0.00710    0.251   30.36     0.17    38.800   344.400
ENDATA20

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

CARD TYPE     ELEMENT   NAME                          DO     BOD#1     NBOD                          BOD#2
                                                    mg/L      mg/L      mg/L      mg/L      mg/L      mg/L
```

```
HDWTR-2           1     HEADWATER - NBB03A          6.76      2.84      0.69      0.00      0.00      0.00
ENDATA21

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

CARD TYPE     ELEMENT   NAME                         PHOS     CHL A      COLI       NCM
                                                     mg/L      mg/L      mg/L      mg/L

HDWTR-3           1     HEADWATER - NBB03A           0.00      5.00      0.00      0.00
ENDATA22

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

CARD TYPE   JUNCTION   UPSTRM     RIVER     NAME
             ELEMENT  ELEMENT     KILOM

ENDATA23

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

CARD TYPE  ELEMENT    RKILO  NAME                      FLOW       FLOW     FLOW    TEMP    SALIN      CM-I     CM-II
                                                       m³/s        cfs      MGD   deg C      ppt      MG/L      MG/L

WSTLD-1        1      29.10  MANSFIELD STP          0.01010    0.35664    0.231   30.36     0.43    82.000   836.300
WSTLD-1      232       6.00  RAMBIN BAYOU           0.00280    0.09887    0.064   30.36     0.50    11.300   116.800
ENDATA24

$$$ DATA TYPE 25 (WASTELOAD DATA FOR DO, BOD, AND NITROGEN) $$$
                                                                          % BOD                              %
CARD TYPE     ELEMENT   NAME                           DO       BOD      RMVL     NBOD                 NITRIF                BOD#2
                                                      mg/L      mg/L                mg/L      mg/L                 mg/L      mg/L

WSTLD-2           1     MANSFIELD STP                6.00     23.00      0.00     21.50      0.00      0.00      0.00      0.00
WSTLD-2         232     RAMBIN BAYOU                 5.00      3.02      0.00      0.51      0.00      0.00      0.00      0.00
ENDATA25

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

CARD TYPE     ELEMENT   NAME                         PHOS     CHL A      COLI       NCM
                                                     mg/L      mg/L      mg/L      mg/L

WSTLD-3           1     MANSFIELD STP                0.00      0.00      0.00      0.00
WSTLD-3         232     RAMBIN BAYOU                 0.00      0.00      0.00      0.00
ENDATA26

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

CARD TYPE    CONSTITUENT                     CONCENTRATION

LOWER BC     TEMPERATURE                        =     28.890     deg C
LOWER BC     SALINITY                           =      0.020     ppt
LOWER BC     CONSERVATIVE MATERIAL I            =      6.800     MG/L
LOWER BC     CONSERVATIVE MATERIAL II           =     75.100     MG/L
LOWER BC     DISSOLVED OXYGEN                   =      5.000     mg/L
LOWER BC     BOD1 BIOCHEMICAL OXYGEN DEMAND     =     14.299     mg/L
LOWER BC     CHLOROPHYLL A                      =      5.000     µg/L
LOWER BC     NBOD                               =      2.725     mg/L
ENDATA27
```

```
$$$ DATA TYPE 28 (DAM DATA) $$$

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

ENDATA28

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

CARD TYPE       PARAMETER     COL 1     COL 2     COL 3     COL 4     COL 5     COL 6     COL 7     COL 8

ENDATA29

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


NUMBER OF PLOTS =  1
NUMBER OF REACHES IN PLOT 1 =   7
PLOT RCH  1  2  3  4  5  6  7
ENDATA30

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


ENDATA31



     .....NO ERRORS DETECTED IN INPUT DATA
     .....HYDRAULIC CALCULATIONS COMPLETED
     .....TRIDIAGONAL MATRIX TERMS INITIALIZED
     .....OXYGEN DEPENDENT RATES CONVERGENT IN   3 ITERATIONS
     .....CONSTITUENT CALCULATIONS COMPLETED
     .....GRAPHICS DATA FOR PLOT 1 WRITTEN TO UNIT 11


FINAL REPORT    HEADWATER - NBB03A                              SMITHPORT LAKE WATERSHED MODEL
REACH NO.  1      NBB03C TO NBB02                               SMITHPORT LAKE SUMMER 100% MAN-MADE AND 40% BACKGROUND

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

 ELEM  TYPE        FLOW     TEMP     SALN     CM-I    CM-II     DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN    NH3  NO3+2   PHOS  CHL A     COLI     NCM
 NO.                       deg C      ppt     MG/L     MG/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   µg/L  #/100mL

    1  HDWTR     0.00710   30.36     0.17    38.80   344.40   6.76   2.34   0.00   2.84   0.00   0.69   0.00   0.00   0.00   5.00     0.00    0.00
 EACH  INCR      0.00007   30.36     0.00    55.00   148.00   2.00   0.00   0.00                  0.00   0.00   0.00   0.00     0.00    0.00
    1  WSTLD     0.01010   30.36     0.43    82.00   836.30   6.00  23.00   0.00  23.00   0.00  21.50   0.00   0.00   0.00   0.00     0.00    0.00

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

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

    1   29.10   29.00    0.01727  58.5   0.05572      0.02    0.11    2.74     31.00     274.30    0.31      0.00   0.000     1.000   0.056
    2   29.00   28.90    0.01734  58.2   0.05595      0.02    0.11    2.74     31.00     274.30    0.31      0.00   0.000     1.000   0.056
    3   28.90   28.80    0.01741  58.0   0.05618      0.02    0.11    2.74     31.00     274.30    0.31      0.00   0.000     1.000   0.056
```

4	28.80	28.70	0.01748	57.8	0.05641	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.056
5	28.70	28.60	0.01756	57.5	0.05664	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.057
6	28.60	28.50	0.01763	57.3	0.05687	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.057
7	28.50	28.40	0.01770	57.1	0.05710	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.057
8	28.40	28.30	0.01777	56.8	0.05733	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.057
9	28.30	28.20	0.01784	56.6	0.05756	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.058
10	28.20	28.10	0.01791	56.4	0.05779	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.058
11	28.10	28.00	0.01798	56.2	0.05802	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.058
12	28.00	27.90	0.01805	55.9	0.05825	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.058
13	27.90	27.80	0.01813	55.7	0.05848	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.058
14	27.80	27.70	0.01820	55.5	0.05871	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.059
15	27.70	27.60	0.01827	55.3	0.05894	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.059
16	27.60	27.50	0.01834	55.1	0.05917	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.059
17	27.50	27.40	0.01841	54.9	0.05940	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.059
18	27.40	27.30	0.01848	54.6	0.05963	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.060
19	27.30	27.20	0.01855	54.4	0.05986	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.060
20	27.20	27.10	0.01862	54.2	0.06009	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.060
21	27.10	27.00	0.01870	54.0	0.06032	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.060
22	27.00	26.90	0.01877	53.8	0.06055	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.061
23	26.90	26.80	0.01884	53.6	0.06078	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.061
24	26.80	26.70	0.01891	53.4	0.06101	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.061
25	26.70	26.60	0.01898	53.2	0.06124	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.061
26	26.60	26.50	0.01905	53.0	0.06147	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.061
27	26.50	26.40	0.01912	52.8	0.06170	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.062
28	26.40	26.30	0.01919	52.6	0.06193	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.062
29	26.30	26.20	0.01927	52.4	0.06216	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.062
30	26.20	26.10	0.01934	52.2	0.06239	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.062
31	26.10	26.00	0.01941	52.0	0.06262	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.063
32	26.00	25.90	0.01948	51.8	0.06285	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.063
33	25.90	25.80	0.01955	51.7	0.06308	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.063
34	25.80	25.70	0.01962	51.5	0.06330	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.063
35	25.70	25.60	0.01969	51.3	0.06353	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.064
36	25.60	25.50	0.01976	51.1	0.06376	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.064
37	25.50	25.40	0.01984	50.9	0.06399	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.064
38	25.40	25.30	0.01991	50.7	0.06422	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.064
39	25.30	25.20	0.01998	50.6	0.06445	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.064
40	25.20	25.10	0.02005	50.4	0.06468	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.065
41	25.10	25.00	0.02012	50.2	0.06491	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.065
42	25.00	24.90	0.02019	50.0	0.06514	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.065
43	24.90	24.80	0.02026	49.8	0.06537	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.065
44	24.80	24.70	0.02033	49.7	0.06560	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.066
45	24.70	24.60	0.02041	49.5	0.06583	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.066
46	24.60	24.50	0.02048	49.3	0.06606	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.066
47	24.50	24.40	0.02055	49.2	0.06629	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.066
48	24.40	24.30	0.02062	49.0	0.06652	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.067
49	24.30	24.20	0.02069	48.8	0.06675	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.067
50	24.20	24.10	0.02076	48.6	0.06698	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.067
51	24.10	24.00	0.02083	48.5	0.06721	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.067
52	24.00	23.90	0.02090	48.3	0.06744	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.067
53	23.90	23.80	0.02098	48.2	0.06767	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.068
54	23.80	23.70	0.02105	48.0	0.06790	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.068
55	23.70	23.60	0.02112	47.8	0.06813	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.068
56	23.60	23.50	0.02119	47.7	0.06836	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.068
57	23.50	23.40	0.02126	47.5	0.06859	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.069
58	23.40	23.30	0.02133	47.3	0.06882	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.069
59	23.30	23.20	0.02140	47.2	0.06905	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.069
60	23.20	23.10	0.02147	47.0	0.06928	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.069
61	23.10	23.00	0.02155	46.9	0.06951	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.070
62	23.00	22.90	0.02162	46.7	0.06974	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.070

63	22.90	22.80	0.02169	46.6	0.06997	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.070
64	22.80	22.70	0.02176	46.4	0.07020	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.070
65	22.70	22.60	0.02183	46.3	0.07043	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.070
66	22.60	22.50	0.02190	46.1	0.07066	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.071
67	22.50	22.40	0.02197	46.0	0.07089	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.071
68	22.40	22.30	0.02204	45.8	0.07112	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.071
69	22.30	22.20	0.02212	45.7	0.07135	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.071
70	22.20	22.10	0.02219	45.5	0.07158	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
71	22.10	22.00	0.02226	45.4	0.07181	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
72	22.00	21.90	0.02233	45.2	0.07204	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
73	21.90	21.80	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
TOT						1.33			2262.70	20023.90					
AVG					0.0636		0.11	2.74			0.31				
CUM						1.33									

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD#1 DECAY 1/da	BOD#1 SETT 1/da	ABOD#1 DECAY 1/da	BOD#2 DECAY 1/da	BOD#2 SETT 1/da	ABOD#2 DECAY 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORGN DECAY 1/da	ORGN SETT 1/da	NH3 DECAY 1/da	NH3 SRCE *	DENIT RATE 1/da	PO4 SRCE *	ALG PROD **	MAC PROD **	COLI DECAY 1/da	NCM DECAY 1/da	NCM SETT 1/da
1	29.000	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.09	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	28.900	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.09	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	28.800	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.09	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	28.700	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.09	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	28.600	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.09	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	28.500	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.09	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	28.400	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.09	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	28.300	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.09	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	28.200	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.09	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	28.100	7.50	7.51	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.09	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	28.000	7.50	7.51	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.09	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	27.900	7.50	7.52	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.09	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	27.800	7.50	7.53	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.09	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	27.700	7.50	7.54	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.09	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	27.600	7.50	7.55	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.09	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	27.500	7.50	7.55	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.09	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	27.400	7.50	7.56	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.09	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	27.300	7.50	7.57	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.09	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	27.200	7.50	7.58	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.09	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	27.100	7.50	7.59	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	27.000	7.50	7.59	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	26.900	7.50	7.60	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	26.800	7.50	7.61	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	26.700	7.50	7.62	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	26.600	7.50	7.63	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	26.500	7.50	7.63	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	26.400	7.50	7.64	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	26.300	7.50	7.65	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	26.200	7.50	7.66	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	26.100	7.50	7.66	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	26.000	7.50	7.67	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
32	25.900	7.50	7.68	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
33	25.800	7.50	7.69	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
34	25.700	7.50	7.69	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
35	25.600	7.50	7.70	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
36	25.500	7.50	7.71	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

37	25.400	7.50	7.72	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
38	25.300	7.50	7.72	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
39	25.200	7.50	7.73	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
40	25.100	7.50	7.74	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
41	25.000	7.50	7.75	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
42	24.900	7.50	7.75	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
43	24.800	7.50	7.76	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
44	24.700	7.50	7.77	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
45	24.600	7.50	7.78	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
46	24.500	7.50	7.78	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
47	24.400	7.50	7.79	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.09	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
48	24.300	7.50	7.80	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.09	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
49	24.200	7.50	7.81	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.09	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
50	24.100	7.50	7.81	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.09	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
51	24.000	7.50	7.82	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.09	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
52	23.900	7.50	7.83	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.09	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
53	23.800	7.50	7.84	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.09	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
54	23.700	7.50	7.84	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.09	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
55	23.600	7.50	7.85	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.09	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
56	23.500	7.50	7.86	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.09	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
57	23.400	7.50	7.86	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.09	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
58	23.300	7.50	7.87	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.09	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
59	23.200	7.50	7.88	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.09	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
60	23.100	7.50	7.89	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.09	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
61	23.000	7.50	7.89	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.09	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
62	22.900	7.50	7.90	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.09	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
63	22.800	7.50	7.91	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.09	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
64	22.700	7.50	7.91	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.09	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
65	22.600	7.50	7.92	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.09	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
66	22.500	7.50	7.93	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.09	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
67	22.400	7.50	7.94	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.09	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
68	22.300	7.50	7.94	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.09	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
69	22.200	7.50	7.95	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.09	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
70	22.100	7.50	7.96	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.09	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
71	22.000	7.50	7.96	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.09	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
72	21.900	7.50	7.97	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.09	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
73	21.800	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	2.07	2.07	2.07	0.09	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			6.38	0.03	0.50	0.00	0.00	0.00	0.00	1.08			0.05	0.10	0.00	0.00	0.00	0.00			0.00	0.00	0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I MG/L	CM-II MG/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO g/m³	COLI #/100mL	NCM
1	29.000	30.36	0.30	57.44	555.26	6.24	11.08	0.00	11.58	0.00	9.60	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
2	28.900	30.36	0.30	57.43	553.59	6.04	10.89	0.00	11.39	0.00	9.52	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
3	28.800	30.36	0.30	57.42	551.94	5.88	10.70	0.00	11.20	0.00	9.45	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
4	28.700	30.36	0.30	57.41	550.29	5.73	10.51	0.00	11.01	0.00	9.37	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
5	28.600	30.36	0.30	57.40	548.66	5.61	10.32	0.00	10.82	0.00	9.30	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
6	28.500	30.36	0.30	57.39	547.05	5.50	10.14	0.00	10.64	0.00	9.22	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
7	28.400	30.36	0.29	57.38	545.44	5.41	9.97	0.00	10.47	0.00	9.15	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
8	28.300	30.36	0.29	57.37	543.85	5.33	9.80	0.00	10.30	0.00	9.08	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
9	28.200	30.36	0.29	57.36	542.27	5.26	9.63	0.00	10.13	0.00	9.00	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
10	28.100	30.36	0.29	57.35	540.71	5.21	9.46	0.00	9.96	0.00	8.93	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
11	28.000	30.36	0.29	57.34	539.15	5.16	9.30	0.00	9.80	0.00	8.86	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00

12	27.900	30.36	0.29	57.33	537.61	5.11	9.14	0.00	9.64	0.00	8.79	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
13	27.800	30.36	0.29	57.32	536.08	5.08	8.99	0.00	9.49	0.00	8.73	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
14	27.700	30.36	0.29	57.31	534.57	5.05	8.84	0.00	9.34	0.00	8.66	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
15	27.600	30.36	0.29	57.31	533.06	5.02	8.69	0.00	9.19	0.00	8.59	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
16	27.500	30.36	0.29	57.30	531.57	5.00	8.54	0.00	9.04	0.00	8.53	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
17	27.400	30.36	0.29	57.29	530.08	4.98	8.40	0.00	8.90	0.00	8.46	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
18	27.300	30.36	0.29	57.28	528.61	4.96	8.26	0.00	8.76	0.00	8.40	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
19	27.200	30.36	0.28	57.27	527.15	4.95	8.13	0.00	8.63	0.00	8.33	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
20	27.100	30.36	0.28	57.26	525.71	4.94	7.99	0.00	8.49	0.00	8.27	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
21	27.000	30.36	0.28	57.25	524.27	4.93	7.86	0.00	8.36	0.00	8.21	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
22	26.900	30.36	0.28	57.24	522.84	4.92	7.73	0.00	8.23	0.00	8.15	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
23	26.800	30.36	0.28	57.24	521.43	4.92	7.61	0.00	8.11	0.00	8.09	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
24	26.700	30.36	0.28	57.23	520.02	4.91	7.49	0.00	7.99	0.00	8.03	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
25	26.600	30.36	0.28	57.22	518.63	4.91	7.36	0.00	7.86	0.00	7.97	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
26	26.500	30.36	0.28	57.21	517.24	4.91	7.25	0.00	7.75	0.00	7.91	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
27	26.400	30.36	0.28	57.20	515.87	4.91	7.13	0.00	7.63	0.00	7.85	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
28	26.300	30.36	0.28	57.19	514.51	4.90	7.02	0.00	7.52	0.00	7.79	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
29	26.200	30.36	0.28	57.19	513.15	4.90	6.91	0.00	7.41	0.00	7.74	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
30	26.100	30.36	0.28	57.18	511.81	4.90	6.80	0.00	7.30	0.00	7.68	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
31	26.000	30.36	0.27	57.17	510.48	4.90	6.69	0.00	7.19	0.00	7.63	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
32	25.900	30.36	0.27	57.16	509.15	4.91	6.59	0.00	7.09	0.00	7.57	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
33	25.800	30.36	0.27	57.15	507.84	4.91	6.48	0.00	6.98	0.00	7.52	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
34	25.700	30.36	0.27	57.15	506.53	4.91	6.38	0.00	6.88	0.00	7.47	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
35	25.600	30.36	0.27	57.14	505.24	4.91	6.28	0.00	6.78	0.00	7.41	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
36	25.500	30.36	0.27	57.13	503.95	4.91	6.19	0.00	6.69	0.00	7.36	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
37	25.400	30.36	0.27	57.12	502.67	4.92	6.09	0.00	6.59	0.00	7.31	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
38	25.300	30.36	0.27	57.12	501.41	4.92	6.00	0.00	6.50	0.00	7.26	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
39	25.200	30.36	0.27	57.11	500.15	4.92	5.91	0.00	6.41	0.00	7.21	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
40	25.100	30.36	0.27	57.10	498.90	4.92	5.82	0.00	6.32	0.00	7.16	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
41	25.000	30.36	0.27	57.09	497.66	4.93	5.73	0.00	6.23	0.00	7.11	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
42	24.900	30.36	0.27	57.09	496.43	4.93	5.64	0.00	6.14	0.00	7.06	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
43	24.800	30.36	0.26	57.08	495.20	4.93	5.56	0.00	6.06	0.00	7.01	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
44	24.700	30.36	0.26	57.07	493.99	4.93	5.48	0.00	5.98	0.00	6.96	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
45	24.600	30.36	0.26	57.06	492.78	4.94	5.39	0.00	5.89	0.00	6.91	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
46	24.500	30.36	0.26	57.06	491.58	4.94	5.31	0.00	5.81	0.00	6.87	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
47	24.400	30.36	0.26	57.05	490.39	4.94	5.24	0.00	5.74	0.00	6.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
48	24.300	30.36	0.26	57.04	489.21	4.95	5.16	0.00	5.66	0.00	6.78	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
49	24.200	30.36	0.26	57.04	488.04	4.95	5.08	0.00	5.58	0.00	6.73	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
50	24.100	30.36	0.26	57.03	486.87	4.95	5.01	0.00	5.51	0.00	6.69	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
51	24.000	30.36	0.26	57.02	485.71	4.96	4.94	0.00	5.44	0.00	6.64	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
52	23.900	30.36	0.26	57.02	484.56	4.96	4.86	0.00	5.36	0.00	6.60	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
53	23.800	30.36	0.26	57.01	483.42	4.96	4.79	0.00	5.29	0.00	6.55	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
54	23.700	30.36	0.26	57.00	482.29	4.96	4.72	0.00	5.22	0.00	6.51	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
55	23.600	30.36	0.25	56.99	481.16	4.97	4.66	0.00	5.16	0.00	6.47	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
56	23.500	30.36	0.25	56.99	480.04	4.97	4.59	0.00	5.09	0.00	6.42	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
57	23.400	30.36	0.25	56.98	478.93	4.97	4.53	0.00	5.03	0.00	6.38	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
58	23.300	30.36	0.25	56.97	477.83	4.98	4.46	0.00	4.96	0.00	6.34	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
59	23.200	30.36	0.25	56.97	476.73	4.98	4.40	0.00	4.90	0.00	6.30	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
60	23.100	30.36	0.25	56.96	475.64	4.98	4.34	0.00	4.84	0.00	6.26	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
61	23.000	30.36	0.25	56.96	474.56	4.99	4.28	0.00	4.78	0.00	6.22	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
62	22.900	30.36	0.25	56.95	473.48	4.99	4.22	0.00	4.72	0.00	6.18	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
63	22.800	30.36	0.25	56.94	472.42	4.99	4.16	0.00	4.66	0.00	6.14	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
64	22.700	30.36	0.25	56.94	471.36	5.00	4.10	0.00	4.60	0.00	6.10	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
65	22.600	30.36	0.25	56.93	470.30	5.00	4.04	0.00	4.54	0.00	6.06	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
66	22.500	30.36	0.25	56.92	469.25	5.00	3.99	0.00	4.49	0.00	6.03	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
67	22.400	30.36	0.24	56.92	468.21	5.00	3.93	0.00	4.43	0.00	5.99	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
68	22.300	30.36	0.24	56.91	467.18	5.01	3.88	0.00	4.38	0.00	5.95	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
69	22.200	30.36	0.24	56.90	466.15	5.01	3.83	0.00	4.33	0.00	5.91	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
70	22.100	30.36	0.24	56.90	465.13	5.01	3.78	0.00	4.28	0.00	5.88	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00

71	22.000	30.36	0.24	56.89	464.12	5.02	3.72	0.00	4.22	0.00	5.84	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
72	21.900	30.36	0.24	56.89	463.13	5.02	3.67	0.00	4.17	0.00	5.80	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
73	21.800	30.36	0.24	56.88	462.25	5.02	3.63	0.00	4.13	0.00	5.77	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00

FINAL REPORT HEADWATER - NBB03A SMITHPORT LAKE WATERSHED MODEL
REACH NO. 2 NBB02 TO RB01 SMITHPORT LAKE SUMMER 100% MAN-MADE AND 40% BACKGROUND

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CM-I MG/L	CM-II MG/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM
74	UPR RCH	0.02240	30.36	0.24	56.88	462.25	5.02	3.63	0.00	4.13	0.00	5.77	0.00	0.00	0.00	5.00	0.00	0.00

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m^3/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	DEPTH m	WIDTH m	VOLUME m^3	SURFACE AREA m^2	X-SECT AREA m^2	TIDAL PRISM m^3	TIDAL VELO m/s	DISPRSN m^2/s	MEAN VELO m/s
74	21.80	21.70	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
75	21.70	21.60	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
76	21.60	21.50	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
77	21.50	21.40	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
78	21.40	21.30	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
79	21.30	21.20	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
80	21.20	21.10	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
81	21.10	21.00	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
82	21.00	20.90	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
83	20.90	20.80	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
84	20.80	20.70	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
85	20.70	20.60	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
86	20.60	20.50	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
87	20.50	20.40	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
88	20.40	20.30	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
89	20.30	20.20	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
90	20.20	20.10	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
91	20.10	20.00	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
92	20.00	19.90	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
93	19.90	19.80	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
94	19.80	19.70	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
95	19.70	19.60	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
96	19.60	19.50	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
97	19.50	19.40	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
98	19.40	19.30	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
99	19.30	19.20	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
100	19.20	19.10	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
101	19.10	19.00	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
102	19.00	18.90	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
103	18.90	18.80	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
104	18.80	18.70	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
105	18.70	18.60	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
106	18.60	18.50	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
107	18.50	18.40	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
108	18.40	18.30	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
109	18.30	18.20	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072

110	18.20	18.10	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
111	18.10	18.00	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
112	18.00	17.90	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
113	17.90	17.80	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
114	17.80	17.70	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
115	17.70	17.60	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
116	17.60	17.50	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
117	17.50	17.40	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
118	17.40	17.30	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
119	17.30	17.20	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
120	17.20	17.10	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
121	17.10	17.00	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
122	17.00	16.90	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
123	16.90	16.80	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
124	16.80	16.70	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
125	16.70	16.60	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
126	16.60	16.50	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
127	16.50	16.40	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
128	16.40	16.30	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
129	16.30	16.20	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
130	16.20	16.10	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
131	16.10	16.00	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
132	16.00	15.90	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
133	15.90	15.80	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
134	15.80	15.70	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
135	15.70	15.60	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
136	15.60	15.50	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
137	15.50	15.40	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
138	15.40	15.30	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
139	15.30	15.20	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
140	15.20	15.10	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
141	15.10	15.00	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
142	15.00	14.90	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
143	14.90	14.80	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
144	14.80	14.70	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
145	14.70	14.60	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
146	14.60	14.50	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
147	14.50	14.40	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
148	14.40	14.30	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
149	14.30	14.20	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
150	14.20	14.10	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
151	14.10	14.00	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
152	14.00	13.90	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
153	13.90	13.80	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
154	13.80	13.70	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
155	13.70	13.60	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
156	13.60	13.50	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
157	13.50	13.40	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
158	13.40	13.30	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
159	13.30	13.20	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
160	13.20	13.10	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
161	13.10	13.00	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
162	13.00	12.90	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
163	12.90	12.80	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
164	12.80	12.70	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
165	12.70	12.60	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
166	12.60	12.50	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
167	12.50	12.40	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
168	12.40	12.30	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072

169	12.30	12.20	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
170	12.20	12.10	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
171	12.10	12.00	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
172	12.00	11.90	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
173	11.90	11.80	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
174	11.80	11.70	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
175	11.70	11.60	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
176	11.60	11.50	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
177	11.50	11.40	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
178	11.40	11.30	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
179	11.30	11.20	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
180	11.20	11.10	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
181	11.10	11.00	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
182	11.00	10.90	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
183	10.90	10.80	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
184	10.80	10.70	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
185	10.70	10.60	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
186	10.60	10.50	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
187	10.50	10.40	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
188	10.40	10.30	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
189	10.30	10.20	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
190	10.20	10.10	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
191	10.10	10.00	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
192	10.00	9.90	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
193	9.90	9.80	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
194	9.80	9.70	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
195	9.70	9.60	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
196	9.60	9.50	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
197	9.50	9.40	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
198	9.40	9.30	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
199	9.30	9.20	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
200	9.20	9.10	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
201	9.10	9.00	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
202	9.00	8.90	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
203	8.90	8.80	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
204	8.80	8.70	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
205	8.70	8.60	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
206	8.60	8.50	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
207	8.50	8.40	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
208	8.40	8.30	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
209	8.30	8.20	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
210	8.20	8.10	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
211	8.10	8.00	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
212	8.00	7.90	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
213	7.90	7.80	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
214	7.80	7.70	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
215	7.70	7.60	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
216	7.60	7.50	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
217	7.50	7.40	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
218	7.40	7.30	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
219	7.30	7.20	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
220	7.20	7.10	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
221	7.10	7.00	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
222	7.00	6.90	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
223	6.90	6.80	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
224	6.80	6.70	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
225	6.70	6.60	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
226	6.60	6.50	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
227	6.50	6.40	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072

228	6.40	6.30	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
229	6.30	6.20	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
230	6.20	6.10	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
231	6.10	6.00	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
TOT						2.53			4897.35	43339.47					
AVG					0.0723		0.11	2.74			0.31				
CUM						3.86									

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD#1 DECAY 1/da	BOD#1 SETT 1/da	ABOD#1 DECAY 1/da	BOD#2 DECAY 1/da	BOD#2 SETT 1/da	ABOD#2 DECAY 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORGN DECAY 1/da	ORGN SETT 1/da	NH3 DECAY 1/da	NH3 SRCE *	DENIT RATE 1/da	PO4 SRCE *	ALG PROD **	MAC PROD **	COLI DECAY 1/da	NCM DECAY 1/da	NCM SETT 1/da
74	21.700	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
75	21.600	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
76	21.500	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
77	21.400	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
78	21.300	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
79	21.200	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
80	21.100	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
81	21.000	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
82	20.900	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
83	20.800	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
84	20.700	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
85	20.600	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
86	20.500	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
87	20.400	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
88	20.300	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
89	20.200	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90	20.100	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
91	20.000	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
92	19.900	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
93	19.800	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
94	19.700	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95	19.600	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
96	19.500	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
97	19.400	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
98	19.300	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
99	19.200	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100	19.100	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
101	19.000	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
102	18.900	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
103	18.800	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
104	18.700	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
105	18.600	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
106	18.500	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
107	18.400	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
108	18.300	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
109	18.200	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
110	18.100	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
111	18.000	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
112	17.900	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
113	17.800	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
114	17.700	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
115	17.600	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
116	17.500	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

117	17.400	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
118	17.300	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
119	17.200	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
120	17.100	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
121	17.000	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
122	16.900	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
123	16.800	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
124	16.700	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
125	16.600	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
126	16.500	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
127	16.400	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
128	16.300	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
129	16.200	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
130	16.100	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
131	16.000	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
132	15.900	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
133	15.800	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
134	15.700	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
135	15.600	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
136	15.500	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
137	15.400	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
138	15.300	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
139	15.200	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
140	15.100	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
141	15.000	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
142	14.900	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
143	14.800	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
144	14.700	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
145	14.600	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
146	14.500	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
147	14.400	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
148	14.300	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
149	14.200	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
150	14.100	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
151	14.000	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
152	13.900	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
153	13.800	7.50	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
154	13.700	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
155	13.600	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
156	13.500	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
157	13.400	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
158	13.300	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
159	13.200	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
160	13.100	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
161	13.000	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
162	12.900	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
163	12.800	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
164	12.700	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
165	12.600	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
166	12.500	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
167	12.400	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
168	12.300	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
169	12.200	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
170	12.100	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
171	12.000	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
172	11.900	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
173	11.800	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
174	11.700	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
175	11.600	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

176	11.500	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
177	11.400	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
178	11.300	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
179	11.200	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
180	11.100	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
181	11.000	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
182	10.900	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
183	10.800	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
184	10.700	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
185	10.600	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
186	10.500	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
187	10.400	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
188	10.300	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
189	10.200	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
190	10.100	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
191	10.000	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
192	9.900	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
193	9.800	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
194	9.700	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
195	9.600	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
196	9.500	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
197	9.400	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
198	9.300	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
199	9.200	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
200	9.100	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
201	9.000	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
202	8.900	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
203	8.800	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
204	8.700	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
205	8.600	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
206	8.500	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
207	8.400	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
208	8.300	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
209	8.200	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
210	8.100	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
211	8.000	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
212	7.900	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
213	7.800	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
214	7.700	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
215	7.600	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
216	7.500	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
217	7.400	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
218	7.300	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
219	7.200	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
220	7.100	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
221	7.000	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
222	6.900	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
223	6.800	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
224	6.700	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
225	6.600	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
226	6.500	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
227	6.400	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
228	6.300	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
229	6.200	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
230	6.100	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.16	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
231	6.000	7.51	7.98	0.05	0.64	0.00	0.00	0.00	0.00	1.98	1.98	1.98	0.17	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			6.59	0.03	0.50	0.00	0.00	0.00	0.00	1.03			0.09	0.10	0.00	0.00	0.00	0.00			0.00	0.00	0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I MG/L	CM-II MG/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO g/m³	COLI #/100mL	NCM
74	21.700	30.36	0.24	56.88	462.25	5.04	3.61	0.00	4.11	0.00	5.75	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
75	21.600	30.36	0.24	56.88	462.25	5.05	3.59	0.00	4.09	0.00	5.72	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
76	21.500	30.36	0.24	56.88	462.25	5.07	3.58	0.00	4.08	0.00	5.70	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
77	21.400	30.36	0.24	56.88	462.25	5.08	3.56	0.00	4.06	0.00	5.67	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
78	21.300	30.36	0.24	56.88	462.25	5.09	3.54	0.00	4.04	0.00	5.65	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
79	21.200	30.36	0.23	56.88	462.25	5.10	3.53	0.00	4.03	0.00	5.63	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
80	21.100	30.36	0.23	56.88	462.25	5.11	3.51	0.00	4.01	0.00	5.60	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
81	21.000	30.36	0.23	56.88	462.25	5.11	3.50	0.00	4.00	0.00	5.58	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
82	20.900	30.36	0.23	56.88	462.25	5.12	3.48	0.00	3.98	0.00	5.55	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
83	20.800	30.36	0.23	56.88	462.25	5.13	3.46	0.00	3.96	0.00	5.53	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
84	20.700	30.36	0.23	56.88	462.25	5.13	3.45	0.00	3.95	0.00	5.51	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
85	20.600	30.36	0.23	56.88	462.25	5.14	3.43	0.00	3.93	0.00	5.48	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
86	20.500	30.36	0.23	56.88	462.25	5.14	3.42	0.00	3.92	0.00	5.46	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
87	20.400	30.36	0.23	56.88	462.25	5.15	3.40	0.00	3.90	0.00	5.44	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
88	20.300	30.36	0.23	56.88	462.25	5.15	3.39	0.00	3.89	0.00	5.42	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
89	20.200	30.36	0.22	56.88	462.25	5.15	3.37	0.00	3.87	0.00	5.39	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
90	20.100	30.36	0.22	56.88	462.25	5.16	3.36	0.00	3.86	0.00	5.37	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
91	20.000	30.36	0.22	56.88	462.25	5.16	3.34	0.00	3.84	0.00	5.35	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
92	19.900	30.36	0.22	56.88	462.25	5.16	3.33	0.00	3.83	0.00	5.32	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
93	19.800	30.36	0.22	56.88	462.25	5.16	3.31	0.00	3.81	0.00	5.30	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
94	19.700	30.36	0.22	56.88	462.25	5.17	3.30	0.00	3.80	0.00	5.28	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
95	19.600	30.36	0.22	56.88	462.25	5.17	3.29	0.00	3.79	0.00	5.26	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
96	19.500	30.36	0.22	56.88	462.25	5.17	3.27	0.00	3.77	0.00	5.24	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
97	19.400	30.36	0.22	56.88	462.25	5.17	3.26	0.00	3.76	0.00	5.21	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
98	19.300	30.36	0.22	56.88	462.25	5.17	3.25	0.00	3.75	0.00	5.19	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
99	19.200	30.36	0.22	56.88	462.25	5.17	3.23	0.00	3.73	0.00	5.17	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
100	19.100	30.36	0.21	56.88	462.25	5.17	3.22	0.00	3.72	0.00	5.15	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
101	19.000	30.36	0.21	56.88	462.25	5.18	3.21	0.00	3.71	0.00	5.13	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
102	18.900	30.36	0.21	56.88	462.25	5.18	3.19	0.00	3.69	0.00	5.11	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
103	18.800	30.36	0.21	56.88	462.25	5.18	3.18	0.00	3.68	0.00	5.08	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
104	18.700	30.36	0.21	56.88	462.25	5.18	3.17	0.00	3.67	0.00	5.06	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
105	18.600	30.36	0.21	56.88	462.25	5.18	3.16	0.00	3.66	0.00	5.04	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
106	18.500	30.36	0.21	56.88	462.25	5.18	3.14	0.00	3.64	0.00	5.02	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
107	18.400	30.36	0.21	56.88	462.25	5.18	3.13	0.00	3.63	0.00	5.00	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
108	18.300	30.36	0.21	56.88	462.25	5.18	3.12	0.00	3.62	0.00	4.98	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
109	18.200	30.36	0.21	56.88	462.25	5.18	3.11	0.00	3.61	0.00	4.96	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
110	18.100	30.36	0.20	56.88	462.25	5.18	3.10	0.00	3.60	0.00	4.94	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
111	18.000	30.36	0.20	56.88	462.25	5.18	3.09	0.00	3.59	0.00	4.92	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
112	17.900	30.36	0.20	56.88	462.25	5.19	3.07	0.00	3.57	0.00	4.90	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
113	17.800	30.36	0.20	56.88	462.25	5.19	3.06	0.00	3.56	0.00	4.88	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
114	17.700	30.36	0.20	56.88	462.25	5.19	3.05	0.00	3.55	0.00	4.86	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
115	17.600	30.36	0.20	56.88	462.25	5.19	3.04	0.00	3.54	0.00	4.84	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
116	17.500	30.36	0.20	56.88	462.25	5.19	3.03	0.00	3.53	0.00	4.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
117	17.400	30.36	0.20	56.88	462.25	5.19	3.02	0.00	3.52	0.00	4.80	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
118	17.300	30.36	0.20	56.88	462.25	5.19	3.01	0.00	3.51	0.00	4.78	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
119	17.200	30.36	0.20	56.88	462.25	5.19	3.00	0.00	3.50	0.00	4.76	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
120	17.100	30.36	0.20	56.88	462.25	5.19	2.99	0.00	3.49	0.00	4.74	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
121	17.000	30.36	0.19	56.88	462.25	5.19	2.98	0.00	3.48	0.00	4.72	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
122	16.900	30.36	0.19	56.88	462.25	5.19	2.97	0.00	3.47	0.00	4.70	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
123	16.800	30.36	0.19	56.88	462.25	5.19	2.96	0.00	3.46	0.00	4.68	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
124	16.700	30.36	0.19	56.88	462.25	5.19	2.95	0.00	3.45	0.00	4.66	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00

125	16.600	30.36	0.19	56.88	462.25	5.19	2.94	0.00	3.44	0.00	4.64	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
126	16.500	30.36	0.19	56.88	462.25	5.19	2.93	0.00	3.43	0.00	4.62	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
127	16.400	30.36	0.19	56.88	462.25	5.19	2.92	0.00	3.42	0.00	4.60	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
128	16.300	30.36	0.19	56.88	462.25	5.20	2.91	0.00	3.41	0.00	4.58	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
129	16.200	30.36	0.19	56.88	462.25	5.20	2.90	0.00	3.40	0.00	4.56	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
130	16.100	30.36	0.19	56.88	462.25	5.20	2.89	0.00	3.39	0.00	4.54	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
131	16.000	30.36	0.18	56.88	462.25	5.20	2.88	0.00	3.38	0.00	4.52	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
132	15.900	30.36	0.18	56.88	462.25	5.20	2.87	0.00	3.37	0.00	4.51	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
133	15.800	30.36	0.18	56.88	462.25	5.20	2.86	0.00	3.36	0.00	4.49	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
134	15.700	30.36	0.18	56.88	462.25	5.20	2.85	0.00	3.35	0.00	4.47	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
135	15.600	30.36	0.18	56.88	462.25	5.20	2.84	0.00	3.34	0.00	4.45	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
136	15.500	30.36	0.18	56.88	462.25	5.20	2.83	0.00	3.33	0.00	4.43	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
137	15.400	30.36	0.18	56.88	462.25	5.20	2.82	0.00	3.32	0.00	4.41	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
138	15.300	30.36	0.18	56.88	462.25	5.20	2.82	0.00	3.32	0.00	4.40	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
139	15.200	30.36	0.18	56.88	462.25	5.20	2.81	0.00	3.31	0.00	4.38	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
140	15.100	30.36	0.18	56.88	462.25	5.20	2.80	0.00	3.30	0.00	4.36	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
141	15.000	30.36	0.18	56.88	462.25	5.20	2.79	0.00	3.29	0.00	4.34	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
142	14.900	30.36	0.17	56.88	462.25	5.20	2.78	0.00	3.28	0.00	4.32	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
143	14.800	30.36	0.17	56.88	462.25	5.20	2.77	0.00	3.27	0.00	4.31	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
144	14.700	30.36	0.17	56.88	462.25	5.20	2.77	0.00	3.27	0.00	4.29	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
145	14.600	30.36	0.17	56.88	462.25	5.20	2.76	0.00	3.26	0.00	4.27	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
146	14.500	30.36	0.17	56.88	462.25	5.20	2.75	0.00	3.25	0.00	4.25	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
147	14.400	30.36	0.17	56.88	462.25	5.20	2.74	0.00	3.24	0.00	4.24	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
148	14.300	30.36	0.17	56.88	462.25	5.20	2.73	0.00	3.23	0.00	4.22	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
149	14.200	30.36	0.17	56.88	462.25	5.21	2.73	0.00	3.23	0.00	4.20	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
150	14.100	30.36	0.17	56.88	462.25	5.21	2.72	0.00	3.22	0.00	4.18	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
151	14.000	30.36	0.17	56.88	462.25	5.21	2.71	0.00	3.21	0.00	4.17	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
152	13.900	30.36	0.17	56.88	462.25	5.21	2.70	0.00	3.20	0.00	4.15	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
153	13.800	30.36	0.16	56.88	462.25	5.21	2.70	0.00	3.20	0.00	4.13	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
154	13.700	30.36	0.16	56.88	462.25	5.21	2.69	0.00	3.19	0.00	4.12	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
155	13.600	30.36	0.16	56.88	462.25	5.21	2.68	0.00	3.18	0.00	4.10	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
156	13.500	30.36	0.16	56.88	462.25	5.21	2.68	0.00	3.18	0.00	4.08	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
157	13.400	30.36	0.16	56.88	462.25	5.21	2.67	0.00	3.17	0.00	4.07	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
158	13.300	30.36	0.16	56.88	462.25	5.21	2.66	0.00	3.16	0.00	4.05	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
159	13.200	30.36	0.16	56.88	462.25	5.21	2.65	0.00	3.15	0.00	4.03	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
160	13.100	30.36	0.16	56.88	462.25	5.21	2.65	0.00	3.15	0.00	4.02	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
161	13.000	30.36	0.16	56.88	462.25	5.21	2.64	0.00	3.14	0.00	4.00	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
162	12.900	30.36	0.16	56.88	462.25	5.21	2.63	0.00	3.13	0.00	3.98	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
163	12.800	30.36	0.15	56.88	462.25	5.21	2.63	0.00	3.13	0.00	3.97	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
164	12.700	30.36	0.15	56.88	462.25	5.21	2.62	0.00	3.12	0.00	3.95	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
165	12.600	30.36	0.15	56.88	462.25	5.21	2.61	0.00	3.11	0.00	3.93	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
166	12.500	30.36	0.15	56.88	462.25	5.21	2.61	0.00	3.11	0.00	3.92	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
167	12.400	30.36	0.15	56.88	462.25	5.21	2.60	0.00	3.10	0.00	3.90	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
168	12.300	30.36	0.15	56.88	462.25	5.21	2.60	0.00	3.10	0.00	3.89	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
169	12.200	30.36	0.15	56.88	462.25	5.21	2.59	0.00	3.09	0.00	3.87	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
170	12.100	30.36	0.15	56.88	462.25	5.21	2.58	0.00	3.08	0.00	3.86	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
171	12.000	30.36	0.15	56.88	462.25	5.21	2.58	0.00	3.08	0.00	3.84	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
172	11.900	30.36	0.15	56.88	462.25	5.22	2.57	0.00	3.07	0.00	3.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
173	11.800	30.36	0.15	56.88	462.25	5.22	2.57	0.00	3.07	0.00	3.81	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
174	11.700	30.36	0.14	56.88	462.25	5.22	2.56	0.00	3.06	0.00	3.79	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
175	11.600	30.36	0.14	56.88	462.25	5.22	2.55	0.00	3.05	0.00	3.78	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
176	11.500	30.36	0.14	56.88	462.25	5.22	2.55	0.00	3.05	0.00	3.76	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
177	11.400	30.36	0.14	56.88	462.25	5.22	2.54	0.00	3.04	0.00	3.75	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
178	11.300	30.36	0.14	56.88	462.25	5.22	2.54	0.00	3.04	0.00	3.73	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
179	11.200	30.36	0.14	56.88	462.25	5.22	2.53	0.00	3.03	0.00	3.72	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
180	11.100	30.36	0.14	56.88	462.25	5.22	2.53	0.00	3.03	0.00	3.70	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
181	11.000	30.36	0.14	56.88	462.25	5.22	2.52	0.00	3.02	0.00	3.69	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
182	10.900	30.36	0.14	56.88	462.25	5.22	2.52	0.00	3.02	0.00	3.67	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
183	10.800	30.36	0.14	56.88	462.25	5.22	2.51	0.00	3.01	0.00	3.66	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00

184	10.700	30.36	0.13	56.88	462.25	5.22	2.51	0.00	3.01	0.00	3.64	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
185	10.600	30.36	0.13	56.88	462.25	5.22	2.50	0.00	3.00	0.00	3.63	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
186	10.500	30.36	0.13	56.88	462.25	5.22	2.49	0.00	2.99	0.00	3.61	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
187	10.400	30.36	0.13	56.88	462.25	5.22	2.49	0.00	2.99	0.00	3.60	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
188	10.300	30.36	0.13	56.88	462.25	5.22	2.48	0.00	2.98	0.00	3.59	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
189	10.200	30.36	0.13	56.88	462.25	5.22	2.48	0.00	2.98	0.00	3.57	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
190	10.100	30.36	0.13	56.88	462.25	5.22	2.47	0.00	2.97	0.00	3.56	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
191	10.000	30.36	0.13	56.88	462.25	5.22	2.47	0.00	2.97	0.00	3.54	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
192	9.900	30.36	0.13	56.88	462.25	5.22	2.47	0.00	2.97	0.00	3.53	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
193	9.800	30.36	0.13	56.88	462.25	5.22	2.46	0.00	2.96	0.00	3.51	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
194	9.700	30.36	0.13	56.88	462.25	5.22	2.46	0.00	2.96	0.00	3.50	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
195	9.600	30.36	0.12	56.88	462.25	5.22	2.45	0.00	2.95	0.00	3.49	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
196	9.500	30.36	0.12	56.88	462.25	5.22	2.45	0.00	2.95	0.00	3.47	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
197	9.400	30.36	0.12	56.88	462.25	5.22	2.44	0.00	2.94	0.00	3.46	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
198	9.300	30.36	0.12	56.88	462.25	5.23	2.44	0.00	2.94	0.00	3.44	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
199	9.200	30.36	0.12	56.88	462.25	5.23	2.43	0.00	2.93	0.00	3.43	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
200	9.100	30.36	0.12	56.88	462.25	5.23	2.43	0.00	2.93	0.00	3.42	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
201	9.000	30.36	0.12	56.88	462.25	5.23	2.42	0.00	2.92	0.00	3.40	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
202	8.900	30.36	0.12	56.88	462.25	5.23	2.42	0.00	2.92	0.00	3.39	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
203	8.800	30.36	0.12	56.88	462.25	5.23	2.42	0.00	2.92	0.00	3.38	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
204	8.700	30.36	0.12	56.88	462.25	5.23	2.41	0.00	2.91	0.00	3.36	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
205	8.600	30.36	0.11	56.88	462.25	5.23	2.41	0.00	2.91	0.00	3.35	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
206	8.500	30.36	0.11	56.88	462.25	5.23	2.40	0.00	2.90	0.00	3.34	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
207	8.400	30.36	0.11	56.88	462.25	5.23	2.40	0.00	2.90	0.00	3.32	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
208	8.300	30.36	0.11	56.88	462.25	5.23	2.40	0.00	2.90	0.00	3.31	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
209	8.200	30.36	0.11	56.88	462.25	5.23	2.39	0.00	2.89	0.00	3.30	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
210	8.100	30.36	0.11	56.88	462.25	5.23	2.39	0.00	2.89	0.00	3.28	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
211	8.000	30.36	0.11	56.88	462.25	5.23	2.38	0.00	2.88	0.00	3.27	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
212	7.900	30.36	0.11	56.88	462.25	5.23	2.38	0.00	2.88	0.00	3.26	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
213	7.800	30.36	0.11	56.88	462.25	5.23	2.38	0.00	2.88	0.00	3.25	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
214	7.700	30.36	0.11	56.88	462.25	5.23	2.37	0.00	2.87	0.00	3.23	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
215	7.600	30.36	0.11	56.88	462.25	5.23	2.37	0.00	2.87	0.00	3.22	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
216	7.500	30.36	0.10	56.88	462.25	5.23	2.36	0.00	2.86	0.00	3.21	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
217	7.400	30.36	0.10	56.88	462.25	5.23	2.36	0.00	2.86	0.00	3.19	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
218	7.300	30.36	0.10	56.88	462.25	5.23	2.36	0.00	2.86	0.00	3.18	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
219	7.200	30.36	0.10	56.88	462.25	5.23	2.35	0.00	2.85	0.00	3.17	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
220	7.100	30.36	0.10	56.88	462.25	5.23	2.35	0.00	2.85	0.00	3.16	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
221	7.000	30.36	0.10	56.88	462.25	5.23	2.35	0.00	2.85	0.00	3.14	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
222	6.900	30.36	0.10	56.88	462.25	5.23	2.34	0.00	2.84	0.00	3.13	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
223	6.800	30.36	0.10	56.88	462.25	5.23	2.34	0.00	2.84	0.00	3.12	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
224	6.700	30.36	0.10	56.88	462.25	5.23	2.34	0.00	2.84	0.00	3.11	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
225	6.600	30.36	0.10	56.88	462.25	5.23	2.33	0.00	2.83	0.00	3.10	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
226	6.500	30.36	0.09	56.88	462.24	5.23	2.33	0.00	2.83	0.00	3.08	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
227	6.400	30.36	0.09	56.87	462.18	5.24	2.33	0.00	2.83	0.00	3.07	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
228	6.300	30.36	0.09	56.81	461.70	5.24	2.32	0.00	2.82	0.00	3.05	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
229	6.200	30.36	0.09	56.30	457.74	5.25	2.29	0.00	2.79	0.00	3.00	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
230	6.100	30.36	0.09	52.08	425.16	5.41	2.09	0.00	2.59	0.00	2.68	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
231	6.000	30.36	0.09	17.39	157.17	6.86	0.39	0.00	0.89	0.00	0.11	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00

FINAL REPORT HEADWATER - NBB03A SMITHPORT LAKE WATERSHED MODEL
REACH NO. 3 RB01 TO CLK02 SMITHPORT LAKE SUMMER 100% MAN-MADE AND 40% BACKGROUND

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CM-I MG/L	CM-II MG/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM

232	UPR RCH	0.02240	30.36	0.09	17.39	157.17	6.86	0.39	0.00	0.89	0.00	0.11	0.00	0.00	0.00	5.00	0.00	0.00
232	WSTLD	0.00280	30.36	0.50	11.30	116.80	5.00	3.02	0.00	3.02	0.00	0.51	0.00	0.00	0.00	0.00	0.00	0.00

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
232	6.00	5.90	0.02520	51.2	0.00004	26.49	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
233	5.90	5.80	0.02520	51.2	0.00004	26.49	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
234	5.80	5.70	0.02520	51.2	0.00004	26.49	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
235	5.70	5.60	0.02520	51.2	0.00004	26.49	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
236	5.60	5.50	0.02520	51.2	0.00004	26.49	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
237	5.50	5.40	0.02520	51.2	0.00004	26.49	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
238	5.40	5.30	0.02520	51.2	0.00004	26.49	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
TOT						185.40			403673.97	103479.59					
AVG					0.0000		3.90	147.83			576.68				
CUM						189.26									

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD#1 DECAY 1/da	BOD#1 SETT 1/da	ABOD#1 DECAY 1/da	BOD#2 DECAY 1/da	BOD#2 SETT 1/da	ABOD#2 DECAY 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORGN DECAY 1/da	ORGN SETT 1/da	NH3 DECAY 1/da	NH3 SRCE *	DENIT RATE 1/da	PO4 SRCE *	ALG PROD **	MAC PROD **	COLI DECAY 1/da	NCM DECAY 1/da	NCM SETT 1/da
232	5.900	7.51	0.22	0.15	0.64	0.00	0.00	0.00	0.00	0.13	0.13	0.13	0.20	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
233	5.800	7.51	0.22	0.15	0.64	0.00	0.00	0.00	0.00	0.13	0.13	0.13	0.20	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
234	5.700	7.51	0.22	0.15	0.64	0.00	0.00	0.00	0.00	0.13	0.13	0.13	0.20	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
235	5.600	7.51	0.22	0.15	0.64	0.00	0.00	0.00	0.00	0.13	0.13	0.13	0.20	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
236	5.500	7.51	0.22	0.15	0.64	0.00	0.00	0.00	0.00	0.13	0.13	0.13	0.20	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
237	5.400	7.51	0.22	0.15	0.64	0.00	0.00	0.00	0.00	0.13	0.13	0.13	0.20	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
238	5.300	7.51	0.22	0.15	0.64	0.00	0.00	0.00	0.00	0.13	0.13	0.13	0.20	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.18	0.09	0.50	0.00	0.00	0.00	0.00	0.07			0.10	0.10	0.00	0.00	0.00	0.00			0.00	0.00	0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I MG/L	CM-II MG/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO g/m³	COLI #/100mL	NCM
232	5.900	30.36	0.09	17.09	154.80	6.88	0.38	0.00	0.88	0.00	0.08	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
233	5.800	30.36	0.09	16.94	153.62	6.88	0.37	0.00	0.87	0.00	0.07	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
234	5.700	30.36	0.09	16.78	152.44	6.88	0.37	0.00	0.87	0.00	0.07	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
235	5.600	30.36	0.09	16.63	151.26	6.88	0.36	0.00	0.86	0.00	0.06	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
236	5.500	30.36	0.09	16.48	150.07	6.87	0.35	0.00	0.85	0.00	0.06	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
237	5.400	30.36	0.09	16.32	148.87	6.86	0.35	0.00	0.85	0.00	0.05	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
238	5.300	30.36	0.09	16.17	147.67	6.84	0.34	0.00	0.84	0.00	0.05	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00

FINAL REPORT HEADWATER - NBB03A SMITHPORT LAKE WATERSHED MODEL
REACH NO. 4 CLK02 TO CLK01 SMITHPORT LAKE SUMMER 100% MAN-MADE AND 40% BACKGROUND

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CM-I MG/L	CM-II MG/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM
239	UPR RCH	0.02520	30.36	0.09	16.17	147.67	6.84	0.34	0.00	0.84	0.00	0.05	0.00	0.00	0.00	5.00	0.00	0.00

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
239	5.30	5.20	0.02520	51.2	0.00004	26.49	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
240	5.20	5.10	0.02520	51.2	0.00004	26.49	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
241	5.10	5.00	0.02520	51.2	0.00004	26.49	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
242	5.00	4.90	0.02520	51.2	0.00004	26.49	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
243	4.90	4.80	0.02520	51.2	0.00004	26.49	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
244	4.80	4.70	0.02520	51.2	0.00004	26.49	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
245	4.70	4.60	0.02520	51.2	0.00004	26.49	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
TOT						185.40			403673.97	103479.59					
AVG					0.0000		3.90	147.83			576.68				
CUM						374.66									

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD#1 DECAY 1/da	BOD#1 SETT 1/da	ABOD#1 DECAY 1/da	BOD#2 DECAY 1/da	BOD#2 SETT 1/da	ABOD#2 DECAY 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORGN DECAY 1/da	ORGN SETT 1/da	NH3 DECAY 1/da	NH3 SRCE *	DENIT RATE 1/da	PO4 SRCE *	ALG PROD **	MAC PROD **	COLI DECAY 1/da	NCM DECAY 1/da	NCM SETT 1/da
239	5.200	7.51	0.22	0.14	0.64	0.00	0.00	0.00	0.00	0.40	0.40	0.40	0.17	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
240	5.100	7.51	0.22	0.14	0.64	0.00	0.00	0.00	0.00	0.40	0.40	0.40	0.17	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
241	5.000	7.51	0.22	0.14	0.64	0.00	0.00	0.00	0.00	0.40	0.40	0.40	0.17	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
242	4.900	7.51	0.22	0.14	0.64	0.00	0.00	0.00	0.00	0.40	0.40	0.40	0.17	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
243	4.800	7.51	0.22	0.14	0.64	0.00	0.00	0.00	0.00	0.40	0.40	0.40	0.17	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
244	4.700	7.51	0.22	0.14	0.64	0.00	0.00	0.00	0.00	0.40	0.40	0.40	0.17	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
245	4.600	7.51	0.22	0.14	0.64	0.00	0.00	0.00	0.00	0.40	0.40	0.40	0.17	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.18	0.09	0.50	0.00	0.00	0.00	0.00	0.21			0.09	0.10	0.00	0.00	0.00	0.00			0.00	0.00	0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I MG/L	CM-II MG/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO g/m³	COLI #/100mL	NCM
239	5.200	30.36	0.09	16.01	146.46	6.82	0.33	0.00	0.83	0.00	0.05	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
240	5.100	30.36	0.09	15.85	145.25	6.80	0.32	0.00	0.82	0.00	0.05	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
241	5.000	30.36	0.09	15.70	144.03	6.78	0.31	0.00	0.81	0.00	0.05	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
242	4.900	30.36	0.08	15.54	142.81	6.76	0.31	0.00	0.81	0.00	0.05	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
243	4.800	30.36	0.08	15.38	141.58	6.73	0.30	0.00	0.80	0.00	0.06	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
244	4.700	30.36	0.08	15.22	140.35	6.71	0.28	0.00	0.78	0.00	0.06	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
245	4.600	30.36	0.08	15.06	139.11	6.68	0.27	0.00	0.77	0.00	0.07	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00

FINAL REPORT HEADWATER - NBB03A SMITHPORT LAKE WATERSHED MODEL
REACH NO. 5 CLK01 TO SL04 SMITHPORT LAKE SUMMER 100% MAN-MADE AND 40% BACKGROUND

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CM-I MG/L	CM-II MG/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM
246	UPR RCH	0.02520	30.36	0.08	15.06	139.11	6.68	0.27	0.00	0.77	0.00	0.07	0.00	0.00	0.00	5.00	0.00	0.00

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
246	4.60	4.50	0.02520	51.2	0.00004	26.49	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
247	4.50	4.40	0.02520	51.2	0.00004	26.49	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
248	4.40	4.30	0.02520	51.2	0.00004	26.49	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
TOT						79.46			173003.12	44348.40					
AVG					0.0000		3.90	147.83			576.68				
CUM						454.12									

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD#1 DECAY 1/da	BOD#1 SETT 1/da	ABOD#1 DECAY 1/da	BOD#2 DECAY 1/da	BOD#2 SETT 1/da	ABOD#2 DECAY 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORGN DECAY 1/da	ORGN SETT 1/da	NH3 DECAY 1/da	NH3 SRCE *	DENIT RATE 1/da	PO4 SRCE *	ALG PROD **	MAC PROD **	COLI DECAY 1/da	NCM DECAY 1/da	NCM SETT 1/da
246	4.500	7.57	0.22	0.12	0.63	0.00	0.00	0.00	0.00	1.53	1.53	1.53	0.10	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
247	4.400	7.64	0.21	0.11	0.62	0.00	0.00	0.00	0.00	1.48	1.48	1.48	0.09	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
248	4.300	7.70	0.21	0.11	0.62	0.00	0.00	0.00	0.00	1.44	1.44	1.44	0.09	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.18	0.07	0.50	0.00	0.00	0.00	0.00	0.82			0.05	0.10	0.00	0.00	0.00	0.00			0.00	0.00	0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I MG/L	CM-II MG/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO g/m³	COLI #/100mL	NCM
246	4.500	29.87	0.08	14.90	137.86	6.65	0.25	0.00	0.75	0.00	0.07	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
247	4.400	29.38	0.07	14.74	136.61	6.64	0.24	0.00	0.74	0.00	0.08	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
248	4.300	28.89	0.07	14.58	135.36	6.66	0.24	0.00	0.74	0.00	0.10	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00

FINAL REPORT HEADWATER - NBB03A SMITHPORT LAKE WATERSHED MODEL
REACH NO. 6 SL04 TO SL03 SMITHPORT LAKE SUMMER 100% MAN-MADE AND 40% BACKGROUND

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CM-I MG/L	CM-II MG/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM
249	UPR RCH	0.02520	28.89	0.07	14.58	135.36	6.66	0.24	0.00	0.74	0.00	0.10	0.00	0.00	0.00	5.00	0.00	0.00

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
249	4.30	4.20	0.02520	51.2	0.00004	26.49	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
250	4.20	4.10	0.02520	51.2	0.00004	26.49	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
251	4.10	4.00	0.02520	51.2	0.00004	26.49	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
252	4.00	3.90	0.02520	51.2	0.00004	26.49	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
253	3.90	3.80	0.02520	51.2	0.00004	26.49	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
254	3.80	3.70	0.02520	51.2	0.00004	26.49	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
255	3.70	3.60	0.02520	51.2	0.00004	26.49	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
256	3.60	3.50	0.02520	51.2	0.00004	26.49	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
257	3.50	3.40	0.02520	51.2	0.00004	26.49	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
258	3.40	3.30	0.02520	51.2	0.00004	26.49	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
259	3.30	3.20	0.02520	51.2	0.00004	26.49	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
260	3.20	3.10	0.02520	51.2	0.00004	26.49	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
261	3.10	3.00	0.02520	51.2	0.00004	26.49	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
262	3.00	2.90	0.02520	51.2	0.00004	26.49	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
263	2.90	2.80	0.02520	51.2	0.00004	26.49	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
264	2.80	2.70	0.02520	51.2	0.00004	26.49	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
265	2.70	2.60	0.02520	51.2	0.00004	26.49	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
266	2.60	2.50	0.02520	51.2	0.00004	26.49	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
267	2.50	2.40	0.02520	51.2	0.00004	26.49	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
268	2.40	2.30	0.02520	51.2	0.00004	26.49	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
TOT						529.72			1153354.12	295656.00					
AVG					0.0000		3.90	147.83			576.68				
CUM						983.84									

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD#1 DECAY 1/da	BOD#1 SETT 1/da	ABOD#1 DECAY 1/da	BOD#2 DECAY 1/da	BOD#2 SETT 1/da	ABOD#2 DECAY 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORGN DECAY 1/da	ORGN SETT 1/da	NH3 DECAY 1/da	NH3 SRCE *	DENIT RATE 1/da	PO4 SRCE *	ALG PROD **	MAC PROD **	COLI DECAY 1/da	NCM DECAY 1/da	NCM SETT 1/da
249	4.200	7.70	0.21	0.12	0.62	0.00	0.00	0.00	0.00	0.46	0.46	0.46	0.07	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
250	4.100	7.70	0.21	0.12	0.62	0.00	0.00	0.00	0.00	0.46	0.46	0.46	0.07	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
251	4.000	7.70	0.21	0.12	0.62	0.00	0.00	0.00	0.00	0.46	0.46	0.46	0.07	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
252	3.900	7.70	0.21	0.12	0.62	0.00	0.00	0.00	0.00	0.46	0.46	0.46	0.07	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
253	3.800	7.70	0.21	0.12	0.62	0.00	0.00	0.00	0.00	0.46	0.46	0.46	0.07	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
254	3.700	7.70	0.21	0.12	0.62	0.00	0.00	0.00	0.00	0.46	0.46	0.46	0.07	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
255	3.600	7.70	0.21	0.12	0.62	0.00	0.00	0.00	0.00	0.46	0.46	0.46	0.07	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
256	3.500	7.70	0.21	0.12	0.62	0.00	0.00	0.00	0.00	0.46	0.46	0.46	0.07	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
257	3.400	7.70	0.21	0.12	0.62	0.00	0.00	0.00	0.00	0.46	0.46	0.46	0.07	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
258	3.300	7.70	0.21	0.12	0.62	0.00	0.00	0.00	0.00	0.46	0.46	0.46	0.07	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
259	3.200	7.70	0.21	0.12	0.62	0.00	0.00	0.00	0.00	0.46	0.46	0.46	0.07	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
260	3.100	7.70	0.21	0.12	0.62	0.00	0.00	0.00	0.00	0.46	0.46	0.46	0.07	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
261	3.000	7.70	0.21	0.12	0.62	0.00	0.00	0.00	0.00	0.46	0.46	0.46	0.07	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
262	2.900	7.70	0.21	0.12	0.62	0.00	0.00	0.00	0.00	0.46	0.46	0.46	0.07	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

263	2.800	7.70	0.21	0.12	0.62	0.00	0.00	0.00	0.00	0.46	0.46	0.46	0.07	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
264	2.700	7.70	0.21	0.12	0.62	0.00	0.00	0.00	0.00	0.46	0.46	0.46	0.07	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
265	2.600	7.70	0.21	0.12	0.62	0.00	0.00	0.00	0.00	0.46	0.46	0.46	0.07	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
266	2.500	7.70	0.21	0.12	0.62	0.00	0.00	0.00	0.00	0.46	0.46	0.46	0.07	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
267	2.400	7.70	0.21	0.12	0.62	0.00	0.00	0.00	0.00	0.46	0.46	0.46	0.07	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
268	2.300	7.70	0.21	0.12	0.62	0.00	0.00	0.00	0.00	0.46	0.46	0.46	0.07	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.18	0.08	0.50	0.00	0.00	0.00	0.00	0.26			0.04	0.10	0.00	0.00	0.00	0.00			0.00	0.00	0.00	

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I MG/L	CM-II MG/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO g/m³	COLI #/100mL	NCM
249	4.200	28.89	0.07	14.42	134.10	6.70	0.25	0.00	0.75	0.00	0.11	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
250	4.100	28.89	0.07	14.25	132.83	6.74	0.26	0.00	0.76	0.00	0.12	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
251	4.000	28.89	0.07	14.09	131.56	6.77	0.26	0.00	0.76	0.00	0.13	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
252	3.900	28.89	0.07	13.92	130.28	6.79	0.26	0.00	0.76	0.00	0.14	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
253	3.800	28.89	0.06	13.76	129.00	6.81	0.27	0.00	0.77	0.00	0.15	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
254	3.700	28.89	0.06	13.59	127.71	6.83	0.27	0.00	0.77	0.00	0.15	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
255	3.600	28.89	0.06	13.42	126.42	6.84	0.27	0.00	0.77	0.00	0.16	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
256	3.500	28.89	0.06	13.26	125.12	6.85	0.27	0.00	0.77	0.00	0.16	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
257	3.400	28.89	0.06	13.09	123.81	6.86	0.28	0.00	0.78	0.00	0.17	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
258	3.300	28.89	0.06	12.92	122.50	6.87	0.28	0.00	0.78	0.00	0.17	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
259	3.200	28.89	0.06	12.75	121.18	6.88	0.28	0.00	0.78	0.00	0.17	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
260	3.100	28.89	0.06	12.58	119.86	6.88	0.28	0.00	0.78	0.00	0.17	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
261	3.000	28.89	0.06	12.41	118.53	6.88	0.28	0.00	0.78	0.00	0.18	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
262	2.900	28.89	0.06	12.23	117.20	6.89	0.28	0.00	0.78	0.00	0.18	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
263	2.800	28.89	0.05	12.06	115.86	6.89	0.29	0.00	0.79	0.00	0.18	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
264	2.700	28.89	0.05	11.89	114.51	6.89	0.29	0.00	0.79	0.00	0.18	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
265	2.600	28.89	0.05	11.71	113.16	6.89	0.30	0.00	0.80	0.00	0.18	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
266	2.500	28.89	0.05	11.54	111.80	6.89	0.30	0.00	0.80	0.00	0.18	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
267	2.400	28.89	0.05	11.36	110.44	6.89	0.31	0.00	0.81	0.00	0.18	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
268	2.300	28.89	0.05	11.18	109.07	6.89	0.33	0.00	0.83	0.00	0.18	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00

FINAL REPORT HEADWATER - NBB03A SMITHPORT LAKE WATERSHED MODEL
REACH NO. 7 SL03 TO SL01 SMITHPORT LAKE SUMMER 100% MAN-MADE AND 40% BACKGROUND

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CM-I MG/L	CM-II MG/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM
269	UPR RCH	0.02520	28.89	0.05	11.18	109.07	6.89	0.33	0.00	0.83	0.00	0.18	0.00	0.00	0.00	5.00	0.00	0.00

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
269	2.30	2.20	0.02520	51.2	0.00004	26.49	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
270	2.20	2.10	0.02520	51.2	0.00004	26.49	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000

271	2.10	2.00	0.02520	51.2	0.00004	26.49	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
272	2.00	1.90	0.02520	51.2	0.00004	26.49	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
273	1.90	1.80	0.02520	51.2	0.00004	26.49	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
274	1.80	1.70	0.02520	51.2	0.00004	26.49	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
275	1.70	1.60	0.02520	51.2	0.00004	26.49	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
276	1.60	1.50	0.02520	51.2	0.00004	26.49	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
277	1.50	1.40	0.02520	51.2	0.00004	26.49	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
278	1.40	1.30	0.02520	51.2	0.00004	26.49	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
279	1.30	1.20	0.02520	51.2	0.00004	26.49	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
280	1.20	1.10	0.02520	51.2	0.00004	26.49	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
281	1.10	1.00	0.02520	51.2	0.00004	26.49	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
282	1.00	0.90	0.02520	51.2	0.00004	26.49	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
283	0.90	0.80	0.02520	51.2	0.00004	26.49	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
284	0.80	0.70	0.02520	51.2	0.00004	26.49	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
285	0.70	0.60	0.02520	51.2	0.00004	26.49	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
286	0.60	0.50	0.02520	51.2	0.00004	26.49	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
287	0.50	0.40	0.02520	51.2	0.00004	26.49	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
288	0.40	0.30	0.02520	51.2	0.00004	26.49	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
289	0.30	0.20	0.02520	51.2	0.00004	26.49	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
290	0.20	0.10	0.02520	51.2	0.00004	26.49	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
291	0.10	0.00	0.02520	51.2	0.00004	26.49	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
TOT						609.18			1326357.38	340004.44					
AVG					0.0000		3.90	147.83			576.68				
CUM						1593.02									

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD#1 DECAY 1/da	BOD#1 SETT 1/da	ABOD#1 DECAY 1/da	BOD#2 DECAY 1/da	BOD#2 SETT 1/da	ABOD#2 DECAY 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORGN DECAY 1/da	ORGN SETT 1/da	NH3 DECAY 1/da	NH3 SRCE *	DENIT RATE 1/da	PO4 SRCE *	ALG PROD **	MAC PROD **	COLI DECAY 1/da	NCM DECAY 1/da	NCM SETT 1/da
269	2.200	7.70	0.21	0.14	0.62	0.00	0.00	0.00	0.00	0.14	0.14	0.14	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
270	2.100	7.70	0.21	0.14	0.62	0.00	0.00	0.00	0.00	0.14	0.14	0.14	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
271	2.000	7.70	0.21	0.14	0.62	0.00	0.00	0.00	0.00	0.14	0.14	0.14	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
272	1.900	7.70	0.21	0.14	0.62	0.00	0.00	0.00	0.00	0.14	0.14	0.14	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
273	1.800	7.70	0.21	0.14	0.62	0.00	0.00	0.00	0.00	0.14	0.14	0.14	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
274	1.700	7.70	0.21	0.14	0.62	0.00	0.00	0.00	0.00	0.14	0.14	0.14	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
275	1.600	7.70	0.21	0.14	0.62	0.00	0.00	0.00	0.00	0.14	0.14	0.14	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
276	1.500	7.70	0.21	0.14	0.62	0.00	0.00	0.00	0.00	0.14	0.14	0.14	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
277	1.400	7.70	0.21	0.14	0.62	0.00	0.00	0.00	0.00	0.14	0.14	0.14	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
278	1.300	7.70	0.21	0.14	0.62	0.00	0.00	0.00	0.00	0.14	0.14	0.14	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
279	1.200	7.70	0.21	0.14	0.62	0.00	0.00	0.00	0.00	0.14	0.14	0.14	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
280	1.100	7.70	0.21	0.14	0.62	0.00	0.00	0.00	0.00	0.14	0.14	0.14	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
281	1.000	7.70	0.21	0.14	0.62	0.00	0.00	0.00	0.00	0.14	0.14	0.14	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
282	0.900	7.70	0.21	0.14	0.62	0.00	0.00	0.00	0.00	0.14	0.14	0.14	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
283	0.800	7.70	0.21	0.14	0.62	0.00	0.00	0.00	0.00	0.14	0.14	0.14	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
284	0.700	7.70	0.21	0.14	0.62	0.00	0.00	0.00	0.00	0.14	0.14	0.14	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
285	0.600	7.70	0.21	0.14	0.62	0.00	0.00	0.00	0.00	0.14	0.14	0.14	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
286	0.500	7.70	0.21	0.14	0.62	0.00	0.00	0.00	0.00	0.14	0.14	0.14	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
287	0.400	7.70	0.21	0.14	0.62	0.00	0.00	0.00	0.00	0.14	0.14	0.14	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
288	0.300	7.70	0.21	0.14	0.62	0.00	0.00	0.00	0.00	0.14	0.14	0.14	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
289	0.200	7.70	0.21	0.14	0.62	0.00	0.00	0.00	0.00	0.14	0.14	0.14	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
290	0.100	7.70	0.21	0.14	0.62	0.00	0.00	0.00	0.00	0.14	0.14	0.14	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
291	0.000	7.70	0.21	0.14	0.62	0.00	0.00	0.00	0.00	0.14	0.14	0.14	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.18	0.09	0.50	0.00	0.00	0.00	0.00	0.08			0.06	0.10	0.00	0.00	0.00	0.00			0.00	0.00	0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I MG/L	CM-II MG/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO g/m³	COLI #/100mL	NCM
269	2.200	28.89	0.05	11.01	107.69	6.88	0.34	0.00	0.84	0.00	0.18	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
270	2.100	28.89	0.05	10.83	106.31	6.87	0.36	0.00	0.86	0.00	0.19	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
271	2.000	28.89	0.05	10.65	104.92	6.85	0.37	0.00	0.87	0.00	0.19	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
272	1.900	28.89	0.04	10.47	103.53	6.83	0.39	0.00	0.89	0.00	0.20	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
273	1.800	28.89	0.04	10.29	102.13	6.79	0.41	0.00	0.91	0.00	0.22	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
274	1.700	28.89	0.04	10.11	100.72	6.75	0.43	0.00	0.93	0.00	0.24	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
275	1.600	28.89	0.04	9.93	99.31	6.69	0.46	0.00	0.96	0.00	0.26	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
276	1.500	28.89	0.04	9.74	97.89	6.63	0.49	0.00	0.99	0.00	0.29	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
277	1.400	28.89	0.04	9.56	96.47	6.55	0.54	0.00	1.04	0.00	0.32	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
278	1.300	28.89	0.04	9.37	95.04	6.46	0.60	0.00	1.10	0.00	0.37	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
279	1.200	28.89	0.04	9.19	93.60	6.36	0.69	0.00	1.19	0.00	0.42	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
280	1.100	28.89	0.03	9.00	92.16	6.25	0.80	0.00	1.30	0.00	0.48	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
281	1.000	28.89	0.03	8.81	90.71	6.12	0.95	0.00	1.45	0.00	0.55	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
282	0.900	28.89	0.03	8.63	89.25	5.98	1.15	0.00	1.65	0.00	0.63	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
283	0.800	28.89	0.03	8.44	87.79	5.83	1.43	0.00	1.93	0.00	0.73	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
284	0.700	28.89	0.03	8.25	86.32	5.66	1.79	0.00	2.29	0.00	0.85	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
285	0.600	28.89	0.03	8.06	84.85	5.49	2.29	0.00	2.79	0.00	0.99	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
286	0.500	28.89	0.03	7.87	83.37	5.31	2.96	0.00	3.46	0.00	1.15	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
287	0.400	28.89	0.03	7.67	81.88	5.15	3.85	0.00	4.35	0.00	1.34	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
288	0.300	28.89	0.02	7.48	80.38	5.00	5.06	0.00	5.56	0.00	1.57	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
289	0.200	28.89	0.02	7.29	78.88	4.89	6.69	0.00	7.19	0.00	1.83	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
290	0.100	28.89	0.02	7.09	77.37	4.84	8.87	0.00	9.37	0.00	2.14	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
291	0.000	28.89	0.02	6.90	75.86	4.89	11.82	0.00	12.32	0.00	2.51	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00

STREAM SUMMARY
HEADWATER - NBB03A

SMITHPORT LAKE WATERSHED MODEL
SMITHPORT LAKE SUMMER 100% MAN-MADE AND 40% BACKGROUND

TRAVEL TIME = 1593.02 DAYS

MAXIMUM EFFLUENT = 58.48 PERCENT

FLOW	=	0.01727	TO	0.02520	m³/s
DISPERSION	=	1.0000	TO	1.0000	m²/s
VELOCITY	=	0.00004	TO	0.07227	m/s
DEPTH	=	0.11	TO	3.90	m
WIDTH	=	2.74	TO	147.83	m
BOD DECAY	=	0.05	TO	0.15	per day
NH3 DECAY	=	0.00	TO	0.00	per day
SOD	=	0.13	TO	2.07	g/m²/d
NH3 SOURCE	=	0.00	TO	0.00	g/m²/d
REAERATION	=	0.21	TO	7.98	per day
BOD SETTLING	=	0.62	TO	0.64	per day
NBOD DECAY	=	0.07	TO	0.20	per day
NBOD SETTLING	=	0.12	TO	0.13	per day
TEMPERATURE	=	28.89	TO	30.36	deg C
DISSOLVED OXYGEN	=	4.84	TO	6.89	mg/L

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.....EXECUTION COMPLETED
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Appendix D2 – Summer Justifications

DATA TYPE 3 - PROGRAM CONSTANTS			
CONSTANT NAME	**VALUE**	**UNITS**	**DATA SOURCE**
KL MINIMUM	0.7	m/day	The minimum KL of 2.3 ft/day converted to 0.70 m/day.
INHIBITION CONTROL VALUE	3		The water column dissolved oxygen demand is assumed to come primarily from facultative bacteria under anoxic conditions and SOD is not influenced by modeled dissolved oxygen levels in the upper water column.
K2 MAXIMUM	25	1/day at 20 deg C	EPA Policy in the absence of a measured value.
HYDRAULIC CALCULATION METHOD	2		The low slopes in this waterbody cause a substantial amount of water to be present during critical flow conditions. This method allows the model to predict a more accurate depth and width during low flow conditions.
SETTLING RATE UNITS	2		LAQUAL Default
ALGAE OXYGEN PRODUCTION	0		Standard practice for steady state calibration to a wide variation in DO.
EFFECTIVE BOD DUE TO ALGAE	0.1		Standard practice for steady state calibration to a wide variation in DO.

DATA TYPE 8 - REACH IDENTIFICATION DATA					
Reach	**ID**	**Name**	**Upstream River Kilometer**	**Upstream River Kilometer**	**Element Length, meters**
1	SL	Bayou Na Bonchase at Mansfield STP Discharger to Bayou Na Bonchase at Hwy 175	29.1	21.8	0.1
2	SL	Bayou Na Bonchase at Hwy 175 to Rambin Bayou Intercept	21.8	6.0	0.1
3	SL	Rambin Bayou intercept to Center of Clear Lake	6.0	5.3	0.1
4	SL	Center of Clear Lake to Clear Lake north of Hwy 509	5.3	4.6	0.1
5	SL	Clear lake north of Hwy 509 to Smithport Lake south of Hwy 509	4.6	4.3	0.1
6	SL	Smithport Lake south of hwy 509 to Center of Smithport lake	4.3	2.3	0.1
7	SL	Center of Smithport lake to Smithport lake dam	2.3	0.0	0.1

		DATA TYPE 9 - ADVECTIVE HYDRAULIC COEFFICIENTS			
Reach	**Name**	**Width Coeff. "a"**	**Width Exp. "b"**	**Width Const. "c"**	**Data Source**
1	Bayou Na Bonchase at Mansfield STP Discharger to Bayou Na Bonchase at Hwy 175	0.00	0.10	2.74	Constant - NBB02 and Coefficients and Exponent - calibration
2	Bayou Na Bonchase at Hwy 175 to Rambin Bayou Intercept	0.00	0.10	2.74	Constant - NBB02 and Coefficients and Exponent - calibration
3	Rambin Bayou intercept to Center of Clear Lake	0.00	0.10	147.83	Constant - CLK01 and Coefficients and Exponent - calibration
4	Center of Clear Lake to Clear Lake north of Hwy 509	0.00	0.10	147.83	Constant - CLK01 and Coefficients and Exponent - calibration
5	Clear lake north of Hwy 509 to Smithport Lake south of Hwy 509	0.00	0.10	147.83	Constant - CLK01 and Coefficients and Exponent - calibration
6	Smithport Lake south of hwy 509 to Center of Smithport lake	0.00	0.10	147.83	Constant - CLK01 and Coefficients and Exponent - calibration
7	Center of Smithport lake to Smithport lake dam	0.00	0.10	147.83	Constant - CLK01 and Coefficients and Exponent - calibration

		DATA TYPE 9 - ADVECTIVE HYDRAULIC COEFFICIENTS			
Reach	Name	Depth Coeff. "d"	Depth Exp. "e"	Depth Const. "f"	Data Source
1	Bayou Na Bonchase at Mansfield STP Discharger to Bayou Na Bonchase at Hwy 175	0.00	0.10	0.11	Constant - NBB02 and Coefficients and Exponent - calibration
2	Bayou Na Bonchase at Hwy 175 to Rambin Bayou Intercept	0.00	0.10	0.11	Constant - NBB02 and Coefficients and Exponent - calibration
3	Rambin Bayou intercept to Center of Clear Lake	0.00	0.10	3.90	Constant - CLK01 and Coefficients and Exponent - calibration
4	Center of Clear Lake to Clear Lake north of Hwy 509	0.00	0.10	3.90	Constant - CLK01 and Coefficients and Exponent - calibration
5	Clear lake north of Hwy 509 to Smithport Lake south of Hwy 509	0.00	0.10	3.90	Constant - CLK01 and Coefficients and Exponent - calibration
6	Smithport Lake south of hwy 509 to Center of Smithport lake	0.00	0.10	3.90	Constant - CLK01 and Coefficients and Exponent - calibration
7	Center of Smithport lake to Smithport lake dam	0.00	0.10	3.90	Constant - CLK01 and Coefficients and Exponent - calibration

DATA TYPE 10 - DISPERSIVE HYDRAULIC COEFFICIENTS			
Reach	Name	Dispersion Coeff. "a"	Data Source
1	Bayou Na Bonchase at Mansfield STP Discharger to Bayou Na Bonchase at Hwy 175	1.000	Best professional judgement
2	Bayou Na Bonchase at Hwy 175 to Rambin Bayou Intercept	1.000	Best professional judgement
3	Rambin Bayou intercept to Center of Clear Lake	1.000	Best professional judgement
4	Center of Clear Lake to Clear Lake north of Hwy 509	1.000	Best professional judgement
5	Clear lake north of Hwy 509 to Smithport Lake south of Hwy 509	1.000	Best professional judgement
6	Smithport Lake south of hwy 509 to Center of Smithport lake	1.000	Best professional judgement
7	Center of Smithport lake to Smithport lake dam	1.000	Best professional judgement

DATA TYPE 11 - INITIAL CONDITIONS									
Reach	Name	Temp, deg C	Data Source	SALINITY	Data Source	DO, mg/l	Data Source	Chl a, ug/l	Data Source
1	Bayou Na Bonchase at Mansfield STP Discharger to Bayou Na Bonchase at Hwy 175	30.36	90th percentile Temperature for WQN Site 0281	0.30	Continuous Monitoring Data Average (NBB03C+NBB02)	5.00	Disolved Oxygen Standard for Subsegment 100605	5.00	Best Professional Judgement
2	Bayou Na Bonchase at Hwy 175 to Rambin Bayou Intercept	30.36	90th percentile Temperature for WQN Site 0281	0.24	NBB02 Continuous Monitoring Data Average	5.00	Disolved Oxygen Standard for Subsegment 100605	5.00	Best Professional Judgement
3	Rambin Bayou intercept to Center of Clear Lake	30.36	90th percentile Temperature for WQN Site 0281	0.09	Continuous Monitoring Data Average (CLK02+CLK01)	5.00	Disolved Oxygen Standard for Subsegment 100605	5.00	Best Professional Judgement
4	Center of Clear Lake to Clear Lake north of Hwy 509	30.36	90th percentile Temperature for WQN Site 0281	0.09	Continuous Monitoring Data Average (CLK02+CLK01)	5.00	Disolved Oxygen Standard for Subsegment 100605	5.00	Best Professional Judgement
5	Clear lake north of Hwy 509 to Smithport Lake south of Hwy 509	30.36	90th percentile Temperature for WQN Site 0281	0.08	CLK01 Continuous Monitoring Data Average	5.00	Disolved Oxygen Standard for Subsegment 100605	5.00	Best Professional Judgement
6	Smithport Lake south of hwy 509 to Center of Smithport lake	28.89	90th percentile Temperature for WQN Site 1208	0.07	SL03 Continuous Monitoring Data Average	5.00	Disolved Oxygen Standard for Subsegment 100605	5.00	Best Professional Judgement
7	Center of Smithport lake to Smithport lake dam	28.89	90th percentile Temperature for WQN Site 1208	0.05	Continuous Monitoring Data Average (SL03+SL02)	5.00	Disolved Oxygen Standard for Subsegment 100605	5.00	Best Professional Judgement

		DATA TYPE 12 - REAERATION, SEDIMENT OXYGEN DEMAND AND BOD COEFFICIENTS						
REACH	NAME	K_2 OPT	K_2 "A"	K_2 "B"	K_2 "C"	Data Source	BKGRND SOD, gmO_2/m^2/day at 20 deg C	Data Source
1	Bayou Na Bonchase at Mansfield STP Discharger to Bayou Na Bonchase at Hwy 175	11				Texas Equation	1.08	100% Reduction of man-made sources and 40% Reduction of natural background
2	Bayou Na Bonchase at Hwy 175 to Rambin Bayou Intercept	11				Texas Equation	1.03	100% Reduction of man-made sources and 40% Reduction of natural background
3	Rambin Bayou intercept to Center of Clear Lake	11				Texas Equation	0.07	100% Reduction of man-made sources and 40% Reduction of natural background
4	Center of Clear Lake to Clear Lake north of Hwy 509	11				Texas Equation	0.21	100% Reduction of man-made sources and 40% Reduction of natural background
5	Clear lake north of Hwy 509 to Smithport Lake south of Hwy 509	11				Texas Equation	0.82	100% Reduction of man-made sources and 40% Reduction of natural background
6	Smithport Lake south of hwy 509 to Center of Smithport lake	11				Texas Equation	0.26	100% Reduction of man-made sources and 40% Reduction of natural background
7	Center of Smithport lake to Smithport lake dam	11				Texas Equation	0.08	100% Reduction of man-made sources and 40% Reduction of natural background

		DATA TYPE 12 - REAERATION, SEDIMENT OXYGEN DEMAND AND BOD COEFFICIENTS			
REACH	**NAME**	**BOD1 Decay Rate (1/Day)**	**Data Source**	**BOD1 SETT RATE (1/day)**	**Data Source**
1	Bayou Na Bonchase at Mansfield STP Discharger to Bayou Na Bonchase at Hwy 175	0.0284	Lab Data avg(NBB03c+NBB02)	0.5	Calibration
2	Bayou Na Bonchase at Hwy 175 to Rambin Bayou Intercept	0.0302	Lab Data NBB02	0.5	Calibration
3	Rambin Bayou intercept to Center of Clear Lake	0.0915	Lab Data CLK02	0.5	Calibration
4	Center of Clear Lake to Clear Lake north of Hwy 509	0.0866	Lab Data avg(CLK02+CLK01)	0.5	Calibration
5	Clear lake north of Hwy 509 to Smithport Lake south of Hwy 509	0.0743	Lab Data avg(CLK01+SL04)	0.5	Calibration
6	Smithport Lake south of hwy 509 to Center of Smithport lake	0.0816	Lab Data avg(SL04+SL03)	0.5	Calibration
7	Center of Smithport lake to Smithport lake dam	0.0941	Lab Data avg(SL03+SL02)	0.5	Calibration

DATA TYPE 13 - NITROGEN AND PHOSPHORUS COEFFICIENTS					
Reach	**Name**	**NBOD decay rate, 1/day**	**Data Source**	**NBOD settling rate, 1/day**	**Data Source**
1	Bayou Na Bonchase at Mansfield STP Discharger to Bayou Na Bonchase at Hwy 175	0.0462	Lab Data avg(NBB03c+NBB02)	0.100	Calibration
2	Bayou Na Bonchase at Hwy 175 to Rambin Bayou Intercept	0.0875	Lab Data NBB02	0.100	Calibration
3	Rambin Bayou intercept to Center of Clear Lake	0.1035	Lab Data CLK02	0.100	Calibration
4	Center of Clear Lake to Clear Lake north of Hwy 509	0.0889	Lab Data avg(CLK02+CLK01)	0.100	Calibration
5	Clear lake north of Hwy 509 to Smithport Lake south of Hwy 509	0.0520	Lab Data avg(CLK01+SL04)	0.100	Calibration
6	Smithport Lake south of hwy 509 to Center of Smithport lake	0.0414	Lab Data avg(SL04+SL03)	0.100	Calibration
7	Center of Smithport lake to Smithport lake dam	0.0575	Lab Data avg(SL03+SL02)	0.100	Calibration

DATA TYPES 16 - INCREMENTAL DATA FOR TEMP AND CONS					DATA TYPES 16 - INCREMENTAL DATA FOR TEMP AND CONS				
Reach	**Reach Name**	**Incr. Ouflow, m3**	**Incr. Inflow, m3**	**Data Source**	**Temp, deg C**	**Data Source**	**Chl**	**Cond**	**Data Source**
1	Bayou Na Bonchase at Mansfield STP Discharger to Bayou Na Bonchase at Hwy 175	0.0000	0.0052	Flow Balance Calculation	30.360	90th Percentile Temperature for WQ site 0281	55	148	Calibration
2	Bayou Na Bonchase at Hwy 175 to Rambin Bayou Intercept	0.0000	0.0000	Flow Balance Calculation	30.360	90th Percentile Temperature for WQ site 0281	0	0	Calibration
3	Rambin Bayou intercept to Center of Clear Lake	0.0000	0.0000	Flow Balance Calculation	30.360	90th Percentile Temperature for WQ site 0281	0	0	Calibration
4	Center of Clear Lake to Clear Lake north of Hwy 509	0.0000	0.0000	Flow Balance Calculation	30.360	90th Percentile Temperature for WQ site 0281	0	0	Calibration
5	Clear lake north of Hwy 509 to Smithport Lake south of Hwy 509	0.0000	0.0000	Flow Balance Calculation	30.360	90th Percentile Temperature for WQ site 0281	0	0	Calibration
6	Smithport Lake south of hwy 509 to Center of Smithport lake	0.0000	0.0000	Flow Balance Calculation	28.89	90th Percentile Temperature for WQ site 1208	0	0	Calibration
7	Center of Smithport lake to Smithport lake dam	0.0000	0.0000	Flow Balance Calculation	28.89	90th Percentile Temperature for WQ site 1208	0	0	Calibration

DATA TYPES 17 - INCREMENTAL DATA FOR DO, BOD, AND NITROGEN			
Reach	**Reach Name**	**DO, mg/l**	**Data Source**
1	Bayou Na Bonchase at Mansfield STP Discharger to Bayou Na Bonchase at Hwy 175	2	Normal Groundwater DO
2	Bayou Na Bonchase at Hwy 175 to Rambin Bayou Intercept	2	Normal Groundwater DO
3	Rambin Bayou intercept to Center of Clear Lake	2	Normal Groundwater DO
4	Center of Clear Lake to Clear Lake north of Hwy 509	2	Normal Groundwater DO
5	Center of Clear Lake to Clear Lake north of Hwy 509	2	Normal Groundwater DO
6	Clear lake north of Hwy 509 to Smithport Lake south of Hwy 509	2	Normal Groundwater DO
7	Smithport Lake south of hwy 509 to Center of Smithport lake	2	Normal Groundwater DO

DATA TYPE 19 - NONPOINT SOURCES					
Reach	**Reach Name**	**Length of Reach, km**	**CBOD, kg/day**	**NBOD, kg/day**	**Data Source**
1	Bayou Na Bonchase at Mansfield STP Discharger to Bayou Na Bonchase at Hwy 175	7.3	0.3	0.35	100% Reduction of man-made sources and 40% Reduction of natural background
2	Bayou Na Bonchase at Hwy 175 to Rambin Bayou Intercept	15.8	6.8	0.68	100% Reduction of man-made sources and 40% Reduction of natural background
3	Rambin Bayou intercept to Center of Clear Lake	0.7	114.5	2.94	100% Reduction of man-made sources and 40% Reduction of natural background
4	Center of Clear Lake to Clear Lake north of Hwy 509	0.7	100.1	2.50	100% Reduction of man-made sources and 40% Reduction of natural background
5	Clear lake north of Hwy 509 to Smithport Lake south of Hwy 509	0.3	16.4	0.33	100% Reduction of man-made sources and 40% Reduction of natural background
6	Smithport Lake south of hwy 509 to Center of Smithport lake	2.0	235.6	43.53	100% Reduction of man-made sources and 40% Reduction of natural background
7	Center of Smithport lake to Smithport lake dam	2.3	366.4	15.43	100% Reduction of man-made sources and 40% Reduction of natural background

DATA TYPES 20 - HEADWATER DATA FOR FLOW, TEMPERATURE, SALINITY, AND CONSERVATIVES							
Headwater Name	**Element No.**	**Headwater Flow, cms**	**Temp, deg C**	**Salinity**	**Chlorides**	**Conductivity**	**Data Source**
Bayou Na Bonchase Headwater upstream from Mansfield STP	1	0.0071	30.36	0.17	38.8	344.4	90th Percentile Temp for WQ Site 0281 Lab Data - Chlorides Insitu - Salinity and Conductivity 7Q10 Flow for Na Bonchase Bayou

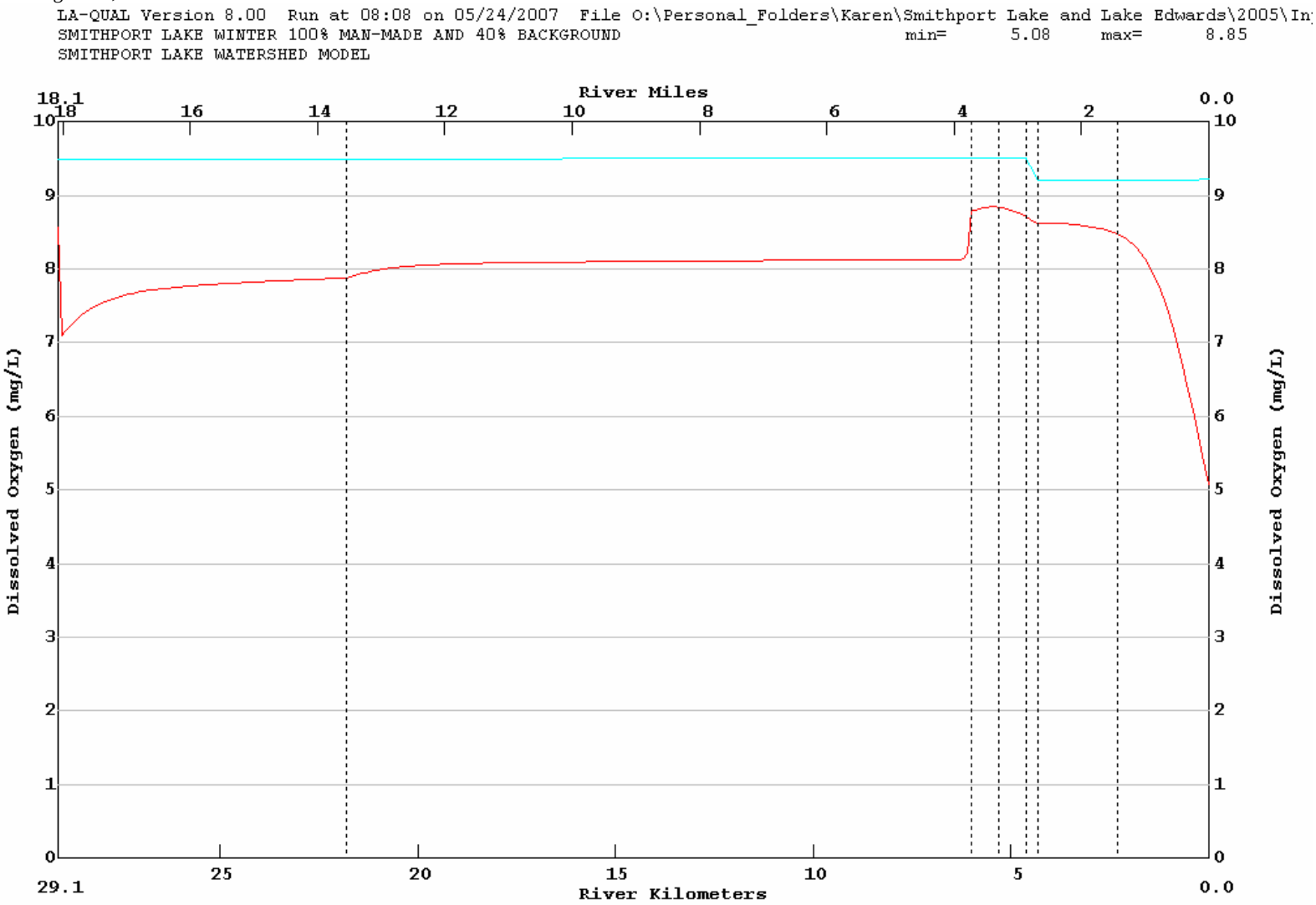
Datatype 21					
Headwater Name	**Dissolved Oxygen, mg/L**	**Data Source**	**UCBOD1, mg/l**	**NBOD, mg/l**	**Data Source**
Bayou Na Bonchase Headwater upstream from Mansfield STP	6.76	90% DO Saturation for WQ site 0281	2.84	0.69	100% Reduction of man-made sources and 40% Reduction of natural background

DATA TYPES 24 - WASTELOAD DATA FOR FLOW, TEMPERATURE, SALINITY, AND CONSERVATIVES										
Wasteload / Withdrawal Name	EL #	Flow, cms	Data Source	Temperature, deg C	Data Source	Salinity	Conductivity	Data Source	Chlorides	Data Source
Mansfield STP	1	0.010100	August 2005 DMR	30.36	90th Percentile Temp for WQ Site 0281	0.43	836.3	Insitu Data at NBB03B	82.0	Lab Data at NBB03B
Rambin Bayou	232	0.0028	LTP Minimum flow for Summer	30.36	90th Percentile Temp for WQ Site 0281	0.50	116.8	Insitu Data at RB01	11.3	Lab Data at RB01

DATA TYPES 25 - WASTELOAD DATA FOR DO, BOD, AND NITROGEN						
Wasteload / Withdrawal Name	EL #	DO, mg/l	Data Source	UCBOD1, mg/l	UNBOD, mg/l	Data Source
Mansfield STP	1	6.00	Summer Permit Limits	23.000	21.500	Permit Limits
Rambin Bayou	232	5.00	Disolved Oxygen Standard for Subsegment 100605	3.020	0.510	100% Reduction of man-made sources and 40% Reduction of natural background

DATA TYPES 27 - LOWER BOUNDARY CONDITIONS			
Parameter	Value	Units	Data Source
TEMPERATURE	28.890	^{O}C	90th Percentile Temp from WQ site 1208
SALINITY	0.020	mg/L	SL02 Insitu
CHLORIDES	6.800	ppm	SL02 Lab Data
CONDUCTIVITY	75.100	umhos/cm	SL02 Insitu
DISSOLVED OXYGEN	5.000	mg/L	Disolved Oxygen Standard for Subsegment 100605
CBOD1	14.299	mg/L	SL02 BOD Calculation
NBOD	2.725	mg/L	SL02 BOD Calculation
CHLOROPHYLL A	5.000	ug/L	Best professional Judgement

Appendix D3 – Winter Output Graphs and Input and Output Files



LAKE EDWARDS/SMITHPORT LAKE 100605 WINTER PROJECTION INPUT DATA SET

```
CNTROL01     SMITHPORT LAKE WATERSHED MODEL
CNTROL02     SMITHPORT LAKE WINTER 100% MAN-MADE AND 40% BACKGROUND
CNTROL04 YES METRIC UNITS
ENDATA01
MODOPT01  NO TEMPERATURE
MODOPT02  NO SALINITY
MODOPT03 YES CONSERVATIVE MATERIAL  I = CHLORIDES                  IN MG/L
MODOPT04 YES CONSERVATIVE MATERIAL II = CONDUCTIVITY               IN MG/L
MODOPT05 YES DISSOLVED OXYGEN
MODOPT06 YES BOD1 BIOCHEMICAL OXYGEN DEMAND
MODOPT07  NO BOD2 BIOCHEMICAL OXYGEN DEMAND
MODOPT08 YES NBOD OXYGEN DEMAND
MODOPT10  NO PHOSPHORUS
MODOPT11  NO CHLOROPHYLL A
MODOPT12  NO MACROPHYTES
MODOPT13  NO COLIFORM
ENDATA02
PROGRAM  KL MINIMUM                        =     0.7
PROGRAM  INHIBITION CONTROL VALUE          =     3.
PROGRAM  K2 MAXIMUM                        =     25.0
PROGRAM  HYDRAULIC CALCULATION METHOD      =     2.
PROGRAM  SETTLING RATE UNITS               =     2.
PROGRAM  ALGAE OXYGEN PROD                 =     0.
PROGRAM  EFFECTIVE BOD DUE TO ALGAE        =     0.10
ENDATA03
!Temperature Correction Constants
!--------1---------2---------3---------4---------5---------6---------7---------8
!23456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
!        ******** ********
ENDATA04
ENDATA05
ENDATA06
ENDATA07
!Reach Identification Data
!--------1---------2---------3---------4---------5---------6---------7---------8
!23456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
!         ***  -- ******************************----------*********----------
!          R#  ID   SITE NAME                          RKM        RKM    LENGTH
REACH ID    1  SL   NBB03C TO NBB02                   29.1       21.8      0.1
REACH ID    2  SL   NBB02 TO RB01                     21.8        6.0      0.1
```

```
REACH ID    3  SL   RB01 TO CLK02                        6.0        5.3      0.1
REACH ID    4  SL   CLK02 TO CLK01                       5.3        4.6      0.1
REACH ID    5  SL   CLK01 TO SL04                        4.6        4.3      0.1
REACH ID    6  SL   SL04 TO SL03                        4.3        2.3      0.1
REACH ID    7  SL   SL03 TO SL01                        2.3        0.0      0.1
ENDATA08
!Advective Hydraulic Coefficients
!--------1---------2---------3---------4---------5---------6---------7---------8
!234567890123456789012345678901234567890123456789012345678901234567890123456789 0
!         ***  -------*******-------*******-------*******-------*******
!                a      b       c     d      e        f
!               WIDTH  WIDTH   WIDTH DEPTH  DEPTH   DEPTH
!          R#   COEFF   EXP    CONST COEFF   EXP    CONST SLOPE MANNING
HYDR-1      1   0.00   0.10    2.743  0.00   0.10   0.113
HYDR-1      2   0.00   0.10    2.743  0.00   0.10   0.113
HYDR-1      3   0.00   0.10  147.828  0.00   0.10   3.901
HYDR-1      4   0.00   0.10  147.828  0.00   0.10   3.901
HYDR-1      5   0.00   0.10  147.828  0.00   0.10   3.901
HYDR-1      6   0.00   0.10  147.828  0.00   0.10   3.901
HYDR-1      7   0.00   0.10  147.828  0.00   0.10   3.901
ENDATA09
!Dispersive Hydraulic Coefficients
!--------1---------2---------3---------4---------5---------6---------7---------8
!234567890123456789012345678901234567890123456789012345678901234567890123456789 0
!         ***  -----**********----------**********----------
!              TIDAL
!          R#  RANGE    a          b         c         d
HYDR-2      1   0.0   1.00        0.0       0.0       0.0
HYDR-2      2   0.0   1.00        0.0       0.0       0.0
HYDR-2      3   0.0   1.00        0.0       0.0       0.0
HYDR-2      4   0.0   1.00        0.0       0.0       0.0
HYDR-2      5   0.0   1.00        0.0       0.0       0.0
HYDR-2      6   0.0   1.00        0.0       0.0       0.0
HYDR-2      7   0.0   1.00        0.0       0.0       0.0
ENDATA10
!Initial Conditions
!--------1---------2---------3---------4---------5---------6---------7---------8
!234567890123456789012345678901234567890123456789012345678901234567890123456789 0
!         ***  --------********--------********--------********--------********
!          R#    TEMP  SALINITY   DO     NH3 N  NIT NIT  PHOS   CHL A   MACROPHYTES
INITIAL     1    17.78  0.30     5.00                             5.0
```

```
INITIAL     2    17.78  0.24     5.00                            5.0
INITIAL     3    17.78  0.09     5.00                            5.0
INITIAL     4    17.78  0.09     5.00                            5.0
INITIAL     5    17.78  0.08     5.00                            5.0
INITIAL     6    19.32  0.07     5.00                            5.0
INITIAL     7    19.32  0.05     5.00                            5.0
ENDATA11
!Reaeration, Sediment Oxygen Demand and BOD Coefficients
!--------1---------2---------3---------4---------5---------6---------7---------8---------9
!234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
!         ***  -----******----- ******-------*******-------*******-------*******-------***
!               REA    KL                     BOD 1  BOD 1                BOD 2    BOD 2
!          R#   EQ    MIN              SOD    DECAY  SETT                DECAY    SETT
COEF-1      1  11.00                   1.08   0.0284  0.50
COEF-1      2  11.00                   1.03   0.0302  0.50
COEF-1      3  11.00                   0.07   0.0915  0.50
COEF-1      4  11.00                   0.21   0.0866  0.50
COEF-1      5  11.00                   0.82   0.0743  0.50
COEF-1      6  11.00                   0.26   0.0816  0.50
COEF-1      7  11.00                   0.08   0.0941  0.50
ENDATA12
!Nitrogen and Phosphorus Coefficients
!--------1---------2---------3---------4---------5---------6---------7---------8
!234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
!         ***  -------*******-------*******-------*******-------
!              NBOD     NBOD
!          R#  DECAY    SETT
COEF-2      1  0.0462   0.10
COEF-2      2  0.0875   0.10
COEF-2      3  0.1035   0.10
COEF-2      4  0.0889   0.10
COEF-2      5  0.0520   0.10
COEF-2      6  0.0414   0.10
COEF-2      7  0.0575   0.10
ENDATA13
ENDATA14
!Coliform and Nonconservative Cofficients
!--------1---------2---------3---------4---------5---------6---------7---------8
!234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
!         ***  -------*******-------*******
ENDATA15
```

```
!Incremental Data for Flow, Temperature, Salinity, and Conservatives
!--------1---------2---------3---------4---------5---------6---------7---------8
!23456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
!         ***  ---------********---------********---------********
!          R#   OUTFLOW   INFLOW  TEMP     SALINITY CHLORIDE  COND
INCR-1      1    0.0000   0.0052  17.780             55.00  148.00
INCR-1      2    0.0000   0.0000  00.000              0.00    0.00
INCR-1      3    0.0000   0.0000  00.000              0.00    0.00
INCR-1      4    0.0000   0.0000  00.000              0.00    0.00
INCR-1      5    0.0000   0.0000  00.000              0.00    0.00
INCR-1      6    0.0000   0.0000  00.000              0.00    0.00
INCR-1      7    0.0000   0.0000  00.000              0.00    0.00
ENDATA16
!Incremental Data for DO, BOD, and Nitrogen
!--------1---------2---------3---------4---------5---------6---------7---------8
!23456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
!         ***  ---------********---------********---------********
!          R#      DO     BOD 1     NBOD    NH3 N   NIT NIT    BOD 2
INCR-2      1     2.00
INCR-2      2     2.00
INCR-2      3     2.00
INCR-2      4     2.00
INCR-2      5     2.00
INCR-2      6     2.00
INCR-2      7     2.00
ENDATA17
!Incremental Data for Phosphorus, Chlorophyll, Coliform and Nonconservatives
!--------1---------2---------3---------4---------5---------6---------7---------8
!23456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
!         ***  ---------********---------********
!          R#   PHOSPH    CHL A   COLIFORM NONCONSERVATIVE
INCR-3      1
INCR-3      2
INCR-3      3
INCR-3      4
INCR-3      5
INCR-3      6
INCR-3      7
ENDATA18
!Nonpoint Source Data
!--------1---------2---------3---------4---------5---------6---------7---------8
```

```
!234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
!          ***  ---------*********---------*********---------*********
!           R#     BOD 1    NBOD   COLIFORM NONCONS    DO      BOD 2
NONPOINT    1     0.30     0.35
NONPOINT    2     6.84     0.68
NONPOINT    3   114.46     2.94
NONPOINT    4   100.09     2.50
NONPOINT    5    16.44     0.33
NONPOINT    6   235.56    43.53
NONPOINT    7   366.36    15.43
ENDATA19
!Headwater Data for Flow, Temperature, Salinity, and Conservatives
!--------1---------2---------3---------4---------5---------6---------7---------8
!234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
!        ****  -------------------- *** --------********--------********--------
!         E#    NAME                      FLOW    TEMP  SALIN   CHLORIDE   COND
HDWTR-1     1  HEADWATER - NBB03A         0.0071  17.78  0.17    38.8     344.4
ENDATA20
!Headwater Data for DO, BOD, and Nitrogen
!--------1---------2---------3---------4---------5---------6---------7---------8
!234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
!        ****  ---------*********---------*********---------*********
!          E#      DO      BOD 1    NBOD    NH3 N    NIT NIT  BOD 2
HDWTR-2     1      8.56   2.84     0.69
ENDATA21
!Headwater Data for Phosphorus, Chlorophyll, Coliform, and Nonconservatives
!--------1---------2---------3---------4---------5---------6---------7---------8
!234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
!        ****  ---------*********---------*********
!          E#  PHOSPHOR   CHL A   COLIFORM  NONCONSERVATIVE
HDWTR-3     1               5.0
ENDATA22
ENDATA23
!Wasteload Data for Flow, Temperature, Salinity, and Conservatives
!--------1---------2---------3---------4---------5---------6---------7---------8
!234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
!        ****  --------------------*********---------*********---------*********
!          E#     NAME                FLOW      TEMP   SALINITY CHLORIDE  COND
WSTLD-1     1  MANSFIELD STP           0.0101    30.00     0.43   82.0     836.3
WSTLD-1   232  RAMBIN BAYOU            0.0280    17.78     0.50   11.3     116.8
ENDATA24
```

```
!Wasteload Data for DO, BOD, and Nitrogen
!--------1---------2---------3---------4---------5---------6---------7---------8
!234567890123456789012345678901234567890123456789012345678901234567890123456789 0
!        ****  ---------********-----********---------*****---------********
!          E#       DO    BOD 1         NBOD    NH3 N          NIT NIT  BOD 2
WSTLD-2     1      5.00   23.000       43.000
WSTLD-2   232      5.00    3.02         0.51
ENDATA25
!Wasteload Data for Phosphorus, Chlorophyll, Coliform, and Nonconservatives
!--------1---------2---------3---------4---------5---------6---------7---------8
!234567890123456789012345678901234567890123456789012345678901234567890123456789 0
!        ****  ---------********---------********
!          E#  PHOSPHOR  CHL A    COLIFORM NONCONSERVATIVE
WSTLD-3     1
WSTLD-3   232
ENDATA26
LOWER BC TEMPERATURE                        =  19.32
LOWER BC SALINITY                           =   0.02
LOWER BC CONSERVATIVE MATERIAL I            =   6.8
LOWER BC CONSERVATIVE MATERIAL II           =  75.1
LOWER BC DISSOLVED OXYGEN                   =   5.00
LOWER BC BOD1 BIOCHEMICAL OXYGEN DEMAND     =  14.299
LOWER BC CHLOROPHYLL A                      =   5.0
LOWER BC NBOD                               =   2.725
ENDATA27
!Dam Data
!--------1---------2---------3---------4---------5---------6---------7---------8
!234567890123456789012345678901234567890123456789012345678901234567890123456789 0
!        ****  ******************** ** ******** ******** ********
ENDATA28
ENDATA29
!--------1---------2---------3---------4---------5---------6---------7---------8
!234567890123456789012345678901234567890123456789012345678901234567890123456789 0
!        ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** **
NUMBER OF PLOTS = 1
NUMBER OF REACHES IN PLOT 1 =  07                       INCREMENT = 0.1
PLOT RCH  1  2  3  4  5  6  7
ENDATA30
ENDATA31
```

LAKE EDWARDS/SMITHPORT LAKE 100605 WINTER PROJECTION INPUT DATA SET

```
LA-QUAL Version 8.00
Louisiana Department of Environmental Quality

Input file is O:\Personal_Folders\Karen\Smithport Lake and Lake Edwards\2005\Input Files\SLKwin140.txt
Output produced at 08:08 on 05/24/2007

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

CARD TYPE       CONTROL TITLES

TITLE01         SMITHPORT LAKE WATERSHED MODEL
TITLE02         SMITHPORT LAKE WINTER 100% MAN-MADE AND 40% BACKGROUND
CNTROL04  YES   METRIC UNITS
ENDATA01

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

CARD TYPE       MODEL OPTION

MODOPT01   NO   TEMPERATURE
MODOPT02   NO   SALINITY
MODOPT03  YES   CONSERVATIVE MATERIAL  I = CHLORIDES                  IN MG/L
MODOPT04  YES   CONSERVATIVE MATERIAL II = CONDUCTIVITY               IN MG/L
MODOPT05  YES   DISSOLVED OXYGEN
MODOPT06  YES   BOD1 BIOCHEMICAL OXYGEN DEMAND
MODOPT07   NO   BOD2 BIOCHEMICAL OXYGEN DEMAND
MODOPT08  YES   NBOD OXYGEN DEMAND
MODOPT10   NO   PHOSPHORUS
MODOPT11   NO   CHLOROPHYLL A
MODOPT12   NO   MACROPHYTES
MODOPT13   NO   COLIFORM
ENDATA02

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

CARD TYPE       DESCRIPTION OF CONSTANT                       VALUE

PROGRAM         KL MINIMUM                        =         0.70000 meters/day
PROGRAM         INHIBITION CONTROL VALUE          =         3.00000 (inhibit all rates but SOD)
PROGRAM         K2 MAXIMUM                        =        25.00000 per day
PROGRAM         HYDRAULIC CALCULATION METHOD      =         2.00000 (widths and depths)
PROGRAM         SETTLING RATE UNITS               =         2.00000 (values entered as per day)
PROGRAM         ALGAE OXYGEN PROD                 =         0.00000 mg O/ug chl a/day
PROGRAM         EFFECTIVE BOD DUE TO ALGAE        =         0.10000 mg/L BOD per ug/L chl a
ENDATA03

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

 CARD TYPE     RATE CODE     THETA VALUE

ENDATA04

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

CARD TYPE       DESCRIPTION OF CONSTANT                       VALUE
```

```
ENDATA05

$$$ DATA TYPE 6 (ALGAE CONSTANTS) $$$

CARD TYPE       DESCRIPTION OF CONSTANT                        VALUE

ENDATA06

$$$ DATA TYPE 7 (MACROPHYTE CONSTANTS) $$$

CARD TYPE       DESCRIPTION OF CONSTANT                        VALUE

ENDATA07

$$$ DATA TYPE 8 (REACH IDENTIFICATION DATA) $$$
                                                      BEGIN        END    ELEM    REACH    ELEMS   BEGIN    END
CARD TYPE  REACH  ID  NAME                            REACH       REACH   LENGTH   LENGTH   PER RCH   ELEM   ELEM
                                                         km          km       km       km              NUM    NUM

REACH ID      1   SL    NBB03C TO NBB02               29.10  TO   21.80   0.1000     7.30      73       1     73
REACH ID      2   SL    NBB02 TO RB01                 21.80  TO    6.00   0.1000    15.80     158      74    231
REACH ID      3   SL    RB01 TO CLK02                  6.00  TO    5.30   0.1000     0.70       7     232    238
REACH ID      4   SL    CLK02 TO CLK01                 5.30  TO    4.60   0.1000     0.70       7     239    245
REACH ID      5   SL    CLK01 TO SL04                  4.60  TO    4.30   0.1000     0.30       3     246    248
REACH ID      6   SL    SL04 TO SL03                   4.30  TO    2.30   0.1000     2.00      20     249    268
REACH ID      7   SL    SL03 TO SL01                   2.30  TO    0.00   0.1000     2.30      23     269    291
ENDATA08

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

CARD TYPE  REACH  ID       WIDTH       WIDTH       WIDTH       DEPTH       DEPTH       DEPTH      SLOPE    MANNINGS
                            "A"         "B"         "C"         "D"         "E"         "F"                  "N"

HYDR-1        1   SL       0.000       0.100       2.743       0.000       0.100       0.113     0.00000   0.000
HYDR-1        2   SL       0.000       0.100       2.743       0.000       0.100       0.113     0.00000   0.000
HYDR-1        3   SL       0.000       0.100     147.828       0.000       0.100       3.901     0.00000   0.000
HYDR-1        4   SL       0.000       0.100     147.828       0.000       0.100       3.901     0.00000   0.000
HYDR-1        5   SL       0.000       0.100     147.828       0.000       0.100       3.901     0.00000   0.000
HYDR-1        6   SL       0.000       0.100     147.828       0.000       0.100       3.901     0.00000   0.000
HYDR-1        7   SL       0.000       0.100     147.828       0.000       0.100       3.901     0.00000   0.000
ENDATA09

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

CARD TYPE  REACH  ID     TIDAL     DISPERSION     DISPERSION     DISPERSION     DISPERSION
                        RANGE        "A"            "B"            "C"            "D"

HYDR          1   SL      0.00        1.000          0.000          0.000          0.000
HYDR          2   SL      0.00        1.000          0.000          0.000          0.000
HYDR          3   SL      0.00        1.000          0.000          0.000          0.000
HYDR          4   SL      0.00        1.000          0.000          0.000          0.000
HYDR          5   SL      0.00        1.000          0.000          0.000          0.000
HYDR          6   SL      0.00        1.000          0.000          0.000          0.000
HYDR          7   SL      0.00        1.000          0.000          0.000          0.000
ENDATA10

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

CARD TYPE      REACH  ID        TEMP     SALIN        DO       NH3     NO3+2      PHOS     CHL A     MACRO
```

```
INITIAL           1   SL       17.78      0.30      5.00      0.00      0.00      0.00      5.00      0.00
INITIAL           2   SL       17.78      0.24      5.00      0.00      0.00      0.00      5.00      0.00
INITIAL           3   SL       17.78      0.09      5.00      0.00      0.00      0.00      5.00      0.00
INITIAL           4   SL       17.78      0.09      5.00      0.00      0.00      0.00      5.00      0.00
INITIAL           5   SL       17.78      0.08      5.00      0.00      0.00      0.00      5.00      0.00
INITIAL           6   SL       19.32      0.07      5.00      0.00      0.00      0.00      5.00      0.00
INITIAL           7   SL       19.32      0.05      5.00      0.00      0.00      0.00      5.00      0.00
ENDATA11

$$$ DATA TYPE 12 (REAERATION, SEDIMENT OXYGEN DEMAND, BOD COEFFICIENTS) $$$
                                                                                   BOD     ANAER                          BOD2     ANAER
CARD     RCH  RCH  K2                    K2        K2        K2    BKGRND       BOD       BOD      CONV     BOD2      BOD2      CONV     BOD2
TYPE     NUM   ID  OPT                   "A"       "B"       "C"       SOD     DECAY      SETT    TO SOD    DECAY     DECAY      SETT  TO SOD    DECAY
                                                                   g/m²/d   per day       m/d             per day   per day       m/d            per day

COEF-1     1   SL  11 TEXAS            0.000     0.000     0.000     1.080     0.028     0.500     0.000     0.000     0.000     0.000     0.000     0.000
COEF-1     2   SL  11 TEXAS            0.000     0.000     0.000     1.030     0.030     0.500     0.000     0.000     0.000     0.000     0.000     0.000
COEF-1     3   SL  11 TEXAS            0.000     0.000     0.000     0.070     0.091     0.500     0.000     0.000     0.000     0.000     0.000     0.000
COEF-1     4   SL  11 TEXAS            0.000     0.000     0.000     0.210     0.087     0.500     0.000     0.000     0.000     0.000     0.000     0.000
COEF-1     5   SL  11 TEXAS            0.000     0.000     0.000     0.820     0.074     0.500     0.000     0.000     0.000     0.000     0.000     0.000
COEF-1     6   SL  11 TEXAS            0.000     0.000     0.000     0.260     0.082     0.500     0.000     0.000     0.000     0.000     0.000     0.000
COEF-1     7   SL  11 TEXAS            0.000     0.000     0.000     0.080     0.094     0.500     0.000     0.000     0.000     0.000     0.000     0.000
ENDATA12

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

CARD TYPE      REACH  ID        NBOD      NBOD   ORGN CONV       NH3       NH3      PHOS     DENIT
                                 DECA      SETT  TO NH3 SRCE     DECA      SRCE      SRCE      RATE

COEF-2           1   SL       0.046     0.100     0.000       0.000     0.000     0.000     0.000
COEF-2           2   SL       0.087     0.100     0.000       0.000     0.000     0.000     0.000
COEF-2           3   SL       0.104     0.100     0.000       0.000     0.000     0.000     0.000
COEF-2           4   SL       0.089     0.100     0.000       0.000     0.000     0.000     0.000
COEF-2           5   SL       0.052     0.100     0.000       0.000     0.000     0.000     0.000
COEF-2           6   SL       0.041     0.100     0.000       0.000     0.000     0.000     0.000
COEF-2           7   SL       0.058     0.100     0.000       0.000     0.000     0.000     0.000
ENDATA13

$$$ DATA TYPE 14 (ALGAE AND MACROPHYTE COEFFICIENTS) $$$

CARD TYPE      REACH  ID       SECCHI    ALGAE:     ALGAE    ALG CONV     ALGAE     ALGAE     MACRO     MACRO
                                DEPTH     CHL A      SETT     TO SOD      GROW      RESP      GROW      RESP

ENDATA14

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

CARD TYPE      REACH  ID    COLIFORM       NCM       NCM    NCM CONV
                             DIE-OFF     DECAY      SETT     TO SOD

ENDATA15

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

CARD TYPE      REACH  ID       OUTFLOW      INFLOW      TEMP     SALIN      CM-I     CM-II   IN/DIST  OUT/DIST

INCR-1           1   SL       0.00000     0.00520     17.78      0.00     55.00    148.00   0.00071   0.00000
INCR-1           2   SL       0.00000     0.00000      0.00      0.00      0.00      0.00   0.00000   0.00000
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INCR-1            3   SL       0.00000     0.00000      0.00      0.00      0.00      0.00   0.00000   0.00000
INCR-1            4   SL       0.00000     0.00000      0.00      0.00      0.00      0.00   0.00000   0.00000
INCR-1            5   SL       0.00000     0.00000      0.00      0.00      0.00      0.00   0.00000   0.00000
INCR-1            6   SL       0.00000     0.00000      0.00      0.00      0.00      0.00   0.00000   0.00000
INCR-1            7   SL       0.00000     0.00000      0.00      0.00      0.00      0.00   0.00000   0.00000
ENDATA16

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

CARD TYPE      REACH  ID          DO       BOD      NBOD                        BOD#2

INCR-2            1   SL        2.00      0.00      0.00      0.00      0.00      0.00
INCR-2            2   SL        2.00      0.00      0.00      0.00      0.00      0.00
INCR-2            3   SL        2.00      0.00      0.00      0.00      0.00      0.00
INCR-2            4   SL        2.00      0.00      0.00      0.00      0.00      0.00
INCR-2            5   SL        2.00      0.00      0.00      0.00      0.00      0.00
INCR-2            6   SL        2.00      0.00      0.00      0.00      0.00      0.00
INCR-2            7   SL        2.00      0.00      0.00      0.00      0.00      0.00
ENDATA17

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

 CARD TYPE      REACH  ID        PHOS     CHL A      COLI       NCM

INCR-3            1   SL        0.00      0.00      0.00      0.00
INCR-3            2   SL        0.00      0.00      0.00      0.00
INCR-3            3   SL        0.00      0.00      0.00      0.00
INCR-3            4   SL        0.00      0.00      0.00      0.00
INCR-3            5   SL        0.00      0.00      0.00      0.00
INCR-3            6   SL        0.00      0.00      0.00      0.00
INCR-3            7   SL        0.00      0.00      0.00      0.00
ENDATA18

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

CARD TYPE      REACH  ID       BOD#1     NBOD       COLI       NCM        DO     BOD#2

NONPOINT          1   SL        0.30      0.35      0.00      0.00      0.00      0.00
NONPOINT          2   SL        6.84      0.68      0.00      0.00      0.00      0.00
NONPOINT          3   SL      114.46      2.94      0.00      0.00      0.00      0.00
NONPOINT          4   SL      100.09      2.50      0.00      0.00      0.00      0.00
NONPOINT          5   SL       16.44      0.33      0.00      0.00      0.00      0.00
NONPOINT          6   SL      235.56     43.53      0.00      0.00      0.00      0.00
NONPOINT          7   SL      366.36     15.43      0.00      0.00      0.00      0.00
ENDATA19

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

CARD TYPE     ELEMENT   NAME                  UNIT     FLOW     FLOW    TEMP    SALIN      CM-I     CM-II
                                                        m³/s      cfs   deg C      ppt      MG/L      MG/L

HDWTR-1           1     HEADWATER - NBB03A      0   0.00710    0.251   17.78     0.17    38.800   344.400
ENDATA20

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

CARD TYPE     ELEMENT   NAME                          DO     BOD#1     NBOD                        BOD#2
                                                     mg/L      mg/L      mg/L      mg/L      mg/L      mg/L
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HDWTR-2           1     HEADWATER - NBB03A          8.56      2.84      0.69      0.00      0.00      0.00
ENDATA21

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

CARD TYPE     ELEMENT   NAME                        PHOS     CHL A      COLI       NCM
                                                    mg/L      mg/L      mg/L      mg/L

HDWTR-3           1     HEADWATER - NBB03A          0.00      5.00      0.00      0.00
ENDATA22

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

CARD TYPE   JUNCTION   UPSTRM     RIVER     NAME
             ELEMENT  ELEMENT     KILOM

ENDATA23

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

CARD TYPE  ELEMENT    RKILO  NAME                      FLOW       FLOW     FLOW    TEMP    SALIN      CM-I     CM-II
                                                       m³/s        cfs      MGD   deg C      ppt      MG/L      MG/L

WSTLD-1        1      29.10  MANSFIELD STP          0.01010    0.35664    0.231   30.00     0.43    82.000   836.300
WSTLD-1      232       6.00  RAMBIN BAYOU           0.02800    0.98870    0.639   17.78     0.50    11.300   116.800
ENDATA24

$$$ DATA TYPE 25 (WASTELOAD DATA FOR DO, BOD, AND NITROGEN) $$$
                                                                          % BOD                                %
CARD TYPE     ELEMENT   NAME                          DO       BOD      RMVL     NBOD                  NITRIF                 BOD#2
                                                     mg/L      mg/L                mg/L      mg/L                    mg/L      mg/L

WSTLD-2           1     MANSFIELD STP               5.00     23.00      0.00     43.00      0.00      0.00      0.00      0.00
WSTLD-2         232     RAMBIN BAYOU                5.00      3.02      0.00      0.51      0.00      0.00      0.00      0.00
ENDATA25

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

CARD TYPE     ELEMENT   NAME                        PHOS     CHL A      COLI       NCM
                                                    mg/L      mg/L      mg/L      mg/L

WSTLD-3           1     MANSFIELD STP               0.00      0.00      0.00      0.00
WSTLD-3         232     RAMBIN BAYOU                0.00      0.00      0.00      0.00
ENDATA26

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

CARD TYPE    CONSTITUENT                    CONCENTRATION

LOWER BC     TEMPERATURE                       =     19.320     deg C
LOWER BC     SALINITY                          =      0.020     ppt
LOWER BC     CONSERVATIVE MATERIAL I           =      6.800     MG/L
LOWER BC     CONSERVATIVE MATERIAL II          =     75.100     MG/L
LOWER BC     DISSOLVED OXYGEN                  =      5.000     mg/L
LOWER BC     BOD1 BIOCHEMICAL OXYGEN DEMAND    =     14.299     mg/L
LOWER BC     CHLOROPHYLL A                     =      5.000     µg/L
LOWER BC     NBOD                              =      2.725     mg/L
ENDATA27
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$$$ DATA TYPE 28 (DAM DATA) $$$

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

ENDATA28

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

CARD TYPE       PARAMETER     COL 1     COL 2     COL 3     COL 4     COL 5     COL 6     COL 7     COL 8

ENDATA29

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


NUMBER OF PLOTS =  1
NUMBER OF REACHES IN PLOT 1 =   7
PLOT RCH  1  2  3  4  5  6  7
ENDATA30

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


ENDATA31



     .....NO ERRORS DETECTED IN INPUT DATA
     .....HYDRAULIC CALCULATIONS COMPLETED
     .....TRIDIAGONAL MATRIX TERMS INITIALIZED
     .....OXYGEN DEPENDENT RATES CONVERGENT IN   2 ITERATIONS
     .....CONSTITUENT CALCULATIONS COMPLETED
     .....GRAPHICS DATA FOR PLOT 1 WRITTEN TO UNIT 11


FINAL REPORT    HEADWATER - NBB03A                              SMITHPORT LAKE WATERSHED MODEL
REACH NO.  1      NBB03C TO NBB02                               SMITHPORT LAKE WINTER 100% MAN-MADE AND 40% BACKGROUND

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

 ELEM  TYPE        FLOW     TEMP     SALN     CM-I    CM-II     DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN    NH3  NO3+2   PHOS  CHL A     COLI     NCM
 NO.                       deg C     ppt     MG/L     MG/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   µg/L  #/100mL

    1  HDWTR     0.00710   17.78     0.17    38.80   344.40   8.56   2.34   0.00   2.84   0.00   0.69   0.00   0.00   0.00   5.00     0.00    0.00
 EACH  INCR      0.00007   17.78     0.00    55.00   148.00   2.00   0.00   0.00                  0.00   0.00   0.00   0.00    0.00     0.00
    1  WSTLD     0.01010   30.00     0.43    82.00   836.30   5.00  23.00   0.00  23.00   0.00  43.00   0.00   0.00   0.00   0.00     0.00    0.00

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

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

    1   29.10   29.00    0.01727  58.5   0.05572      0.02    0.11    2.74     31.00     274.30    0.31      0.00   0.000     1.000   0.056
    2   29.00   28.90    0.01734  58.2   0.05595      0.02    0.11    2.74     31.00     274.30    0.31      0.00   0.000     1.000   0.056
    3   28.90   28.80    0.01741  58.0   0.05618      0.02    0.11    2.74     31.00     274.30    0.31      0.00   0.000     1.000   0.056
    4   28.80   28.70    0.01748  57.8   0.05641      0.02    0.11    2.74     31.00     274.30    0.31      0.00   0.000     1.000   0.056
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5	28.70	28.60	0.01756	57.5	0.05664	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.057
6	28.60	28.50	0.01763	57.3	0.05687	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.057
7	28.50	28.40	0.01770	57.1	0.05710	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.057
8	28.40	28.30	0.01777	56.8	0.05733	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.057
9	28.30	28.20	0.01784	56.6	0.05756	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.058
10	28.20	28.10	0.01791	56.4	0.05779	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.058
11	28.10	28.00	0.01798	56.2	0.05802	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.058
12	28.00	27.90	0.01805	55.9	0.05825	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.058
13	27.90	27.80	0.01813	55.7	0.05848	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.058
14	27.80	27.70	0.01820	55.5	0.05871	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.059
15	27.70	27.60	0.01827	55.3	0.05894	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.059
16	27.60	27.50	0.01834	55.1	0.05917	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.059
17	27.50	27.40	0.01841	54.9	0.05940	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.059
18	27.40	27.30	0.01848	54.6	0.05963	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.060
19	27.30	27.20	0.01855	54.4	0.05986	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.060
20	27.20	27.10	0.01862	54.2	0.06009	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.060
21	27.10	27.00	0.01870	54.0	0.06032	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.060
22	27.00	26.90	0.01877	53.8	0.06055	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.061
23	26.90	26.80	0.01884	53.6	0.06078	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.061
24	26.80	26.70	0.01891	53.4	0.06101	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.061
25	26.70	26.60	0.01898	53.2	0.06124	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.061
26	26.60	26.50	0.01905	53.0	0.06147	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.061
27	26.50	26.40	0.01912	52.8	0.06170	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.062
28	26.40	26.30	0.01919	52.6	0.06193	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.062
29	26.30	26.20	0.01927	52.4	0.06216	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.062
30	26.20	26.10	0.01934	52.2	0.06239	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.062
31	26.10	26.00	0.01941	52.0	0.06262	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.063
32	26.00	25.90	0.01948	51.8	0.06285	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.063
33	25.90	25.80	0.01955	51.7	0.06308	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.063
34	25.80	25.70	0.01962	51.5	0.06330	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.063
35	25.70	25.60	0.01969	51.3	0.06353	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.064
36	25.60	25.50	0.01976	51.1	0.06376	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.064
37	25.50	25.40	0.01984	50.9	0.06399	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.064
38	25.40	25.30	0.01991	50.7	0.06422	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.064
39	25.30	25.20	0.01998	50.6	0.06445	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.064
40	25.20	25.10	0.02005	50.4	0.06468	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.065
41	25.10	25.00	0.02012	50.2	0.06491	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.065
42	25.00	24.90	0.02019	50.0	0.06514	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.065
43	24.90	24.80	0.02026	49.8	0.06537	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.065
44	24.80	24.70	0.02033	49.7	0.06560	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.066
45	24.70	24.60	0.02041	49.5	0.06583	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.066
46	24.60	24.50	0.02048	49.3	0.06606	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.066
47	24.50	24.40	0.02055	49.2	0.06629	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.066
48	24.40	24.30	0.02062	49.0	0.06652	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.067
49	24.30	24.20	0.02069	48.8	0.06675	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.067
50	24.20	24.10	0.02076	48.6	0.06698	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.067
51	24.10	24.00	0.02083	48.5	0.06721	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.067
52	24.00	23.90	0.02090	48.3	0.06744	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.067
53	23.90	23.80	0.02098	48.2	0.06767	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.068
54	23.80	23.70	0.02105	48.0	0.06790	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.068
55	23.70	23.60	0.02112	47.8	0.06813	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.068
56	23.60	23.50	0.02119	47.7	0.06836	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.068
57	23.50	23.40	0.02126	47.5	0.06859	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.069
58	23.40	23.30	0.02133	47.3	0.06882	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.069
59	23.30	23.20	0.02140	47.2	0.06905	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.069
60	23.20	23.10	0.02147	47.0	0.06928	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.069
61	23.10	23.00	0.02155	46.9	0.06951	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.070
62	23.00	22.90	0.02162	46.7	0.06974	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.070
63	22.90	22.80	0.02169	46.6	0.06997	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.070

64	22.80	22.70	0.02176	46.4	0.07020	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.070
65	22.70	22.60	0.02183	46.3	0.07043	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.070
66	22.60	22.50	0.02190	46.1	0.07066	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.071
67	22.50	22.40	0.02197	46.0	0.07089	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.071
68	22.40	22.30	0.02204	45.8	0.07112	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.071
69	22.30	22.20	0.02212	45.7	0.07135	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.071
70	22.20	22.10	0.02219	45.5	0.07158	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
71	22.10	22.00	0.02226	45.4	0.07181	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
72	22.00	21.90	0.02233	45.2	0.07204	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
73	21.90	21.80	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
TOT						1.33			2262.70	20023.90					
AVG					0.0636		0.11	2.74			0.31				
CUM						1.33									

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD#1 DECAY 1/da	BOD#1 SETT 1/da	ABOD#1 DECAY 1/da	BOD#2 DECAY 1/da	BOD#2 SETT 1/da	ABOD#2 DECAY 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORGN DECAY 1/da	ORGN SETT 1/da	NH3 DECAY 1/da	NH3 SRCE *	DENIT RATE 1/da	PO4 SRCE *	ALG PROD **	MAC PROD **	COLI DECAY 1/da	NCM DECAY 1/da	NCM SETT 1/da
1	29.000	9.49	5.92	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	28.900	9.49	5.92	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	28.800	9.49	5.92	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	28.700	9.49	5.92	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	28.600	9.49	5.92	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	28.500	9.49	5.92	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	28.400	9.49	5.92	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	28.300	9.49	5.92	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	28.200	9.49	5.92	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	28.100	9.49	5.93	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	28.000	9.49	5.94	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	27.900	9.49	5.94	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	27.800	9.49	5.95	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	27.700	9.49	5.96	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	27.600	9.49	5.96	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	27.500	9.49	5.97	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	27.400	9.49	5.97	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	27.300	9.49	5.98	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	27.200	9.49	5.99	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	27.100	9.49	5.99	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	27.000	9.49	6.00	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	26.900	9.49	6.01	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	26.800	9.49	6.01	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	26.700	9.49	6.02	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	26.600	9.49	6.02	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	26.500	9.49	6.03	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	26.400	9.49	6.04	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	26.300	9.49	6.04	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	26.200	9.49	6.05	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	26.100	9.49	6.05	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	26.000	9.49	6.06	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
32	25.900	9.49	6.07	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
33	25.800	9.49	6.07	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
34	25.700	9.49	6.08	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
35	25.600	9.49	6.08	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
36	25.500	9.49	6.09	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37	25.400	9.49	6.10	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

38	25.300	9.49	6.10	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
39	25.200	9.49	6.11	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
40	25.100	9.49	6.11	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
41	25.000	9.49	6.12	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
42	24.900	9.49	6.13	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
43	24.800	9.49	6.13	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
44	24.700	9.49	6.14	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
45	24.600	9.49	6.14	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
46	24.500	9.49	6.15	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
47	24.400	9.49	6.16	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
48	24.300	9.49	6.16	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
49	24.200	9.49	6.17	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
50	24.100	9.49	6.17	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
51	24.000	9.49	6.18	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
52	23.900	9.49	6.18	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
53	23.800	9.49	6.19	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
54	23.700	9.49	6.20	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
55	23.600	9.50	6.20	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
56	23.500	9.50	6.21	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
57	23.400	9.50	6.21	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
58	23.300	9.50	6.22	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
59	23.200	9.50	6.22	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
60	23.100	9.50	6.23	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
61	23.000	9.50	6.24	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
62	22.900	9.50	6.24	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
63	22.800	9.50	6.25	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
64	22.700	9.50	6.25	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
65	22.600	9.50	6.26	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
66	22.500	9.50	6.26	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
67	22.400	9.50	6.27	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
68	22.300	9.50	6.28	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
69	22.200	9.50	6.28	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
70	22.100	9.50	6.29	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
71	22.000	9.50	6.29	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
72	21.900	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
73	21.800	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.94	0.94	0.94	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			6.38	0.03	0.50	0.00	0.00	0.00	0.00	1.08			0.05	0.10	0.00	0.00	0.00	0.00			0.00	0.00	0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I MG/L	CM-II MG/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO g/m³	COLI #/100mL	NCM
1	29.000	17.78	0.30	57.44	555.26	7.09	11.12	0.00	11.62	0.00	18.84	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
2	28.900	17.78	0.30	57.43	553.59	7.16	10.96	0.00	11.46	0.00	18.72	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
3	28.800	17.78	0.30	57.42	551.94	7.23	10.81	0.00	11.31	0.00	18.59	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
4	28.700	17.78	0.30	57.41	550.29	7.28	10.66	0.00	11.16	0.00	18.47	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
5	28.600	17.78	0.30	57.40	548.66	7.33	10.51	0.00	11.01	0.00	18.35	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
6	28.500	17.78	0.30	57.39	547.05	7.38	10.37	0.00	10.87	0.00	18.23	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
7	28.400	17.78	0.29	57.38	545.44	7.42	10.23	0.00	10.73	0.00	18.11	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
8	28.300	17.78	0.29	57.37	543.85	7.45	10.09	0.00	10.59	0.00	17.99	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
9	28.200	17.78	0.29	57.36	542.27	7.48	9.95	0.00	10.45	0.00	17.88	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
10	28.100	17.78	0.29	57.35	540.71	7.51	9.81	0.00	10.31	0.00	17.76	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
11	28.000	17.78	0.29	57.34	539.15	7.54	9.68	0.00	10.18	0.00	17.65	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
12	27.900	17.78	0.29	57.33	537.61	7.56	9.55	0.00	10.05	0.00	17.54	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00

13	27.800	17.78	0.29	57.32	536.08	7.58	9.42	0.00	9.92	0.00	17.42	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
14	27.700	17.78	0.29	57.31	534.57	7.60	9.30	0.00	9.80	0.00	17.31	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
15	27.600	17.78	0.29	57.31	533.06	7.62	9.18	0.00	9.68	0.00	17.20	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
16	27.500	17.78	0.29	57.30	531.57	7.63	9.05	0.00	9.55	0.00	17.10	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
17	27.400	17.78	0.29	57.29	530.08	7.64	8.94	0.00	9.44	0.00	16.99	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
18	27.300	17.78	0.29	57.28	528.61	7.66	8.82	0.00	9.32	0.00	16.88	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
19	27.200	17.78	0.28	57.27	527.15	7.67	8.70	0.00	9.20	0.00	16.78	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
20	27.100	17.78	0.28	57.26	525.71	7.68	8.59	0.00	9.09	0.00	16.68	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
21	27.000	17.78	0.28	57.25	524.27	7.69	8.48	0.00	8.98	0.00	16.57	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
22	26.900	17.78	0.28	57.24	522.84	7.70	8.37	0.00	8.87	0.00	16.47	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
23	26.800	17.78	0.28	57.24	521.43	7.71	8.26	0.00	8.76	0.00	16.37	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
24	26.700	17.78	0.28	57.23	520.02	7.72	8.16	0.00	8.66	0.00	16.27	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
25	26.600	17.78	0.28	57.22	518.63	7.72	8.05	0.00	8.55	0.00	16.17	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
26	26.500	17.78	0.28	57.21	517.24	7.73	7.95	0.00	8.45	0.00	16.07	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
27	26.400	17.78	0.28	57.20	515.87	7.74	7.85	0.00	8.35	0.00	15.98	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
28	26.300	17.78	0.28	57.19	514.51	7.74	7.75	0.00	8.25	0.00	15.88	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
29	26.200	17.78	0.28	57.19	513.15	7.75	7.65	0.00	8.15	0.00	15.79	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
30	26.100	17.78	0.28	57.18	511.81	7.75	7.56	0.00	8.06	0.00	15.69	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
31	26.000	17.78	0.27	57.17	510.48	7.76	7.46	0.00	7.96	0.00	15.60	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
32	25.900	17.78	0.27	57.16	509.15	7.76	7.37	0.00	7.87	0.00	15.51	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
33	25.800	17.78	0.27	57.15	507.84	7.77	7.28	0.00	7.78	0.00	15.42	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
34	25.700	17.78	0.27	57.15	506.53	7.77	7.19	0.00	7.69	0.00	15.33	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
35	25.600	17.78	0.27	57.14	505.24	7.78	7.10	0.00	7.60	0.00	15.24	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
36	25.500	17.78	0.27	57.13	503.95	7.78	7.02	0.00	7.52	0.00	15.15	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
37	25.400	17.78	0.27	57.12	502.67	7.78	6.93	0.00	7.43	0.00	15.06	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
38	25.300	17.78	0.27	57.12	501.41	7.79	6.85	0.00	7.35	0.00	14.97	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
39	25.200	17.78	0.27	57.11	500.15	7.79	6.76	0.00	7.26	0.00	14.89	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
40	25.100	17.78	0.27	57.10	498.90	7.80	6.68	0.00	7.18	0.00	14.80	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
41	25.000	17.78	0.27	57.09	497.66	7.80	6.60	0.00	7.10	0.00	14.72	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
42	24.900	17.78	0.27	57.09	496.43	7.80	6.52	0.00	7.02	0.00	14.64	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
43	24.800	17.78	0.26	57.08	495.20	7.81	6.45	0.00	6.95	0.00	14.55	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
44	24.700	17.78	0.26	57.07	493.99	7.81	6.37	0.00	6.87	0.00	14.47	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
45	24.600	17.78	0.26	57.06	492.78	7.81	6.30	0.00	6.80	0.00	14.39	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
46	24.500	17.78	0.26	57.06	491.58	7.81	6.22	0.00	6.72	0.00	14.31	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
47	24.400	17.78	0.26	57.05	490.39	7.82	6.15	0.00	6.65	0.00	14.23	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
48	24.300	17.78	0.26	57.04	489.21	7.82	6.08	0.00	6.58	0.00	14.15	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
49	24.200	17.78	0.26	57.04	488.04	7.82	6.01	0.00	6.51	0.00	14.07	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
50	24.100	17.78	0.26	57.03	486.87	7.83	5.94	0.00	6.44	0.00	13.99	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
51	24.000	17.78	0.26	57.02	485.71	7.83	5.87	0.00	6.37	0.00	13.92	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
52	23.900	17.78	0.26	57.02	484.56	7.83	5.80	0.00	6.30	0.00	13.84	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
53	23.800	17.78	0.26	57.01	483.42	7.83	5.74	0.00	6.24	0.00	13.77	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
54	23.700	17.78	0.26	57.00	482.29	7.84	5.67	0.00	6.17	0.00	13.69	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
55	23.600	17.78	0.25	56.99	481.16	7.84	5.61	0.00	6.11	0.00	13.62	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
56	23.500	17.78	0.25	56.99	480.04	7.84	5.54	0.00	6.04	0.00	13.54	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
57	23.400	17.78	0.25	56.98	478.93	7.84	5.48	0.00	5.98	0.00	13.47	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
58	23.300	17.78	0.25	56.97	477.83	7.85	5.42	0.00	5.92	0.00	13.40	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
59	23.200	17.78	0.25	56.97	476.73	7.85	5.36	0.00	5.86	0.00	13.33	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
60	23.100	17.78	0.25	56.96	475.64	7.85	5.30	0.00	5.80	0.00	13.25	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
61	23.000	17.78	0.25	56.96	474.56	7.85	5.24	0.00	5.74	0.00	13.18	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
62	22.900	17.78	0.25	56.95	473.48	7.85	5.18	0.00	5.68	0.00	13.11	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
63	22.800	17.78	0.25	56.94	472.42	7.86	5.12	0.00	5.62	0.00	13.05	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
64	22.700	17.78	0.25	56.94	471.36	7.86	5.07	0.00	5.57	0.00	12.98	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
65	22.600	17.78	0.25	56.93	470.30	7.86	5.01	0.00	5.51	0.00	12.91	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
66	22.500	17.78	0.25	56.92	469.25	7.86	4.96	0.00	5.46	0.00	12.84	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
67	22.400	17.78	0.24	56.92	468.21	7.87	4.90	0.00	5.40	0.00	12.78	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
68	22.300	17.78	0.24	56.91	467.18	7.87	4.85	0.00	5.35	0.00	12.71	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
69	22.200	17.78	0.24	56.90	466.15	7.87	4.80	0.00	5.30	0.00	12.64	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
70	22.100	17.78	0.24	56.90	465.13	7.87	4.75	0.00	5.25	0.00	12.58	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
71	22.000	17.78	0.24	56.89	464.12	7.87	4.70	0.00	5.20	0.00	12.51	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00

72	21.900	17.78	0.24	56.89	463.13	7.88	4.65	0.00	5.15	0.00	12.45	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
73	21.800	17.78	0.24	56.88	462.25	7.88	4.60	0.00	5.10	0.00	12.39	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00

FINAL REPORT HEADWATER - NBB03A SMITHPORT LAKE WATERSHED MODEL
REACH NO. 2 NBB02 TO RB01 SMITHPORT LAKE WINTER 100% MAN-MADE AND 40% BACKGROUND

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CM-I MG/L	CM-II MG/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM
74	UPR RCH	0.02240	17.78	0.24	56.88	462.25	7.88	4.60	0.00	5.10	0.00	12.39	0.00	0.00	0.00	5.00	0.00	0.00

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m^3/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	DEPTH m	WIDTH m	VOLUME m^3	SURFACE AREA m^2	X-SECT AREA m^2	TIDAL PRISM m^3	TIDAL VELO m/s	DISPRSN m^2/s	MEAN VELO m/s
74	21.80	21.70	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
75	21.70	21.60	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
76	21.60	21.50	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
77	21.50	21.40	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
78	21.40	21.30	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
79	21.30	21.20	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
80	21.20	21.10	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
81	21.10	21.00	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
82	21.00	20.90	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
83	20.90	20.80	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
84	20.80	20.70	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
85	20.70	20.60	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
86	20.60	20.50	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
87	20.50	20.40	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
88	20.40	20.30	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
89	20.30	20.20	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
90	20.20	20.10	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
91	20.10	20.00	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
92	20.00	19.90	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
93	19.90	19.80	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
94	19.80	19.70	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
95	19.70	19.60	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
96	19.60	19.50	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
97	19.50	19.40	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
98	19.40	19.30	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
99	19.30	19.20	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
100	19.20	19.10	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
101	19.10	19.00	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
102	19.00	18.90	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
103	18.90	18.80	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
104	18.80	18.70	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
105	18.70	18.60	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
106	18.60	18.50	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
107	18.50	18.40	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
108	18.40	18.30	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
109	18.30	18.20	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
110	18.20	18.10	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072

111	18.10	18.00	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
112	18.00	17.90	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
113	17.90	17.80	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
114	17.80	17.70	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
115	17.70	17.60	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
116	17.60	17.50	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
117	17.50	17.40	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
118	17.40	17.30	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
119	17.30	17.20	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
120	17.20	17.10	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
121	17.10	17.00	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
122	17.00	16.90	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
123	16.90	16.80	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
124	16.80	16.70	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
125	16.70	16.60	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
126	16.60	16.50	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
127	16.50	16.40	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
128	16.40	16.30	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
129	16.30	16.20	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
130	16.20	16.10	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
131	16.10	16.00	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
132	16.00	15.90	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
133	15.90	15.80	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
134	15.80	15.70	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
135	15.70	15.60	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
136	15.60	15.50	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
137	15.50	15.40	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
138	15.40	15.30	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
139	15.30	15.20	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
140	15.20	15.10	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
141	15.10	15.00	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
142	15.00	14.90	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
143	14.90	14.80	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
144	14.80	14.70	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
145	14.70	14.60	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
146	14.60	14.50	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
147	14.50	14.40	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
148	14.40	14.30	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
149	14.30	14.20	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
150	14.20	14.10	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
151	14.10	14.00	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
152	14.00	13.90	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
153	13.90	13.80	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
154	13.80	13.70	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
155	13.70	13.60	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
156	13.60	13.50	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
157	13.50	13.40	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
158	13.40	13.30	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
159	13.30	13.20	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
160	13.20	13.10	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
161	13.10	13.00	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
162	13.00	12.90	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
163	12.90	12.80	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
164	12.80	12.70	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
165	12.70	12.60	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
166	12.60	12.50	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
167	12.50	12.40	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
168	12.40	12.30	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
169	12.30	12.20	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072

170	12.20	12.10	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
171	12.10	12.00	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
172	12.00	11.90	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
173	11.90	11.80	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
174	11.80	11.70	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
175	11.70	11.60	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
176	11.60	11.50	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
177	11.50	11.40	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
178	11.40	11.30	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
179	11.30	11.20	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
180	11.20	11.10	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
181	11.10	11.00	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
182	11.00	10.90	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
183	10.90	10.80	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
184	10.80	10.70	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
185	10.70	10.60	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
186	10.60	10.50	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
187	10.50	10.40	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
188	10.40	10.30	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
189	10.30	10.20	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
190	10.20	10.10	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
191	10.10	10.00	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
192	10.00	9.90	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
193	9.90	9.80	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
194	9.80	9.70	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
195	9.70	9.60	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
196	9.60	9.50	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
197	9.50	9.40	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
198	9.40	9.30	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
199	9.30	9.20	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
200	9.20	9.10	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
201	9.10	9.00	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
202	9.00	8.90	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
203	8.90	8.80	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
204	8.80	8.70	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
205	8.70	8.60	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
206	8.60	8.50	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
207	8.50	8.40	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
208	8.40	8.30	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
209	8.30	8.20	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
210	8.20	8.10	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
211	8.10	8.00	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
212	8.00	7.90	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
213	7.90	7.80	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
214	7.80	7.70	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
215	7.70	7.60	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
216	7.60	7.50	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
217	7.50	7.40	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
218	7.40	7.30	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
219	7.30	7.20	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
220	7.20	7.10	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
221	7.10	7.00	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
222	7.00	6.90	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
223	6.90	6.80	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
224	6.80	6.70	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
225	6.70	6.60	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
226	6.60	6.50	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
227	6.50	6.40	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
228	6.40	6.30	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072

229	6.30	6.20	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
230	6.20	6.10	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
231	6.10	6.00	0.02240	45.1	0.07227	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.072
TOT						2.53			4897.35	43339.47					
AVG					0.0723		0.11	2.74			0.31				
CUM						3.86									

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD#1 DECAY 1/da	BOD#1 SETT 1/da	ABOD#1 DECAY 1/da	BOD#2 DECAY 1/da	BOD#2 SETT 1/da	ABOD#2 DECAY 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORGN DECAY 1/da	ORGN SETT 1/da	NH3 DECAY 1/da	NH3 SRCE *	DENIT RATE 1/da	PO4 SRCE *	ALG PROD **	MAC PROD **	COLI DECAY 1/da	NCM DECAY 1/da	NCM SETT 1/da
74	21.700	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
75	21.600	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
76	21.500	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
77	21.400	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
78	21.300	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
79	21.200	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
80	21.100	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
81	21.000	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
82	20.900	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
83	20.800	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
84	20.700	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
85	20.600	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
86	20.500	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
87	20.400	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
88	20.300	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
89	20.200	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90	20.100	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
91	20.000	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
92	19.900	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
93	19.800	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
94	19.700	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95	19.600	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
96	19.500	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
97	19.400	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
98	19.300	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
99	19.200	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100	19.100	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
101	19.000	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
102	18.900	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
103	18.800	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
104	18.700	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
105	18.600	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
106	18.500	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
107	18.400	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
108	18.300	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
109	18.200	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
110	18.100	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
111	18.000	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
112	17.900	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
113	17.800	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
114	17.700	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
115	17.600	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
116	17.500	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
117	17.400	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

118	17.300	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
119	17.200	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
120	17.100	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
121	17.000	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
122	16.900	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
123	16.800	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
124	16.700	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
125	16.600	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
126	16.500	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
127	16.400	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
128	16.300	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
129	16.200	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
130	16.100	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
131	16.000	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
132	15.900	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
133	15.800	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
134	15.700	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
135	15.600	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
136	15.500	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
137	15.400	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
138	15.300	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
139	15.200	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
140	15.100	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
141	15.000	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
142	14.900	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
143	14.800	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
144	14.700	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
145	14.600	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
146	14.500	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
147	14.400	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
148	14.300	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
149	14.200	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
150	14.100	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
151	14.000	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
152	13.900	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
153	13.800	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
154	13.700	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
155	13.600	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
156	13.500	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
157	13.400	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
158	13.300	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
159	13.200	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
160	13.100	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
161	13.000	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
162	12.900	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
163	12.800	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
164	12.700	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
165	12.600	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
166	12.500	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
167	12.400	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
168	12.300	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
169	12.200	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
170	12.100	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
171	12.000	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
172	11.900	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
173	11.800	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
174	11.700	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
175	11.600	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
176	11.500	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

177	11.400	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
178	11.300	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
179	11.200	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
180	11.100	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
181	11.000	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
182	10.900	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
183	10.800	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
184	10.700	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
185	10.600	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
186	10.500	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
187	10.400	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
188	10.300	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
189	10.200	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
190	10.100	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
191	10.000	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
192	9.900	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
193	9.800	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
194	9.700	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
195	9.600	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
196	9.500	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
197	9.400	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
198	9.300	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
199	9.200	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
200	9.100	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
201	9.000	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
202	8.900	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
203	8.800	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
204	8.700	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
205	8.600	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
206	8.500	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
207	8.400	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
208	8.300	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
209	8.200	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
210	8.100	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
211	8.000	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
212	7.900	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
213	7.800	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
214	7.700	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
215	7.600	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
216	7.500	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
217	7.400	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
218	7.300	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
219	7.200	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
220	7.100	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
221	7.000	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
222	6.900	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
223	6.800	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
224	6.700	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
225	6.600	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
226	6.500	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
227	6.400	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
228	6.300	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
229	6.200	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
230	6.100	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
231	6.000	9.50	6.30	0.03	0.47	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			6.59	0.03	0.50	0.00	0.00	0.00	0.00	1.03			0.09	0.10	0.00	0.00	0.00	0.00			0.00	0.00	0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I MG/L	CM-II MG/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO g/m³	COLI #/100mL	NCM
74	21.700	17.78	0.24	56.88	462.25	7.90	4.59	0.00	5.09	0.00	12.36	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
75	21.600	17.78	0.24	56.88	462.25	7.91	4.57	0.00	5.07	0.00	12.33	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
76	21.500	17.78	0.24	56.88	462.25	7.93	4.56	0.00	5.06	0.00	12.30	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
77	21.400	17.78	0.24	56.88	462.25	7.94	4.54	0.00	5.04	0.00	12.27	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
78	21.300	17.78	0.24	56.88	462.25	7.96	4.53	0.00	5.03	0.00	12.24	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
79	21.200	17.78	0.23	56.88	462.25	7.97	4.52	0.00	5.02	0.00	12.21	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
80	21.100	17.78	0.23	56.88	462.25	7.98	4.50	0.00	5.00	0.00	12.18	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
81	21.000	17.78	0.23	56.88	462.25	7.99	4.49	0.00	4.99	0.00	12.15	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
82	20.900	17.78	0.23	56.88	462.25	7.99	4.48	0.00	4.98	0.00	12.12	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
83	20.800	17.78	0.23	56.88	462.25	8.00	4.46	0.00	4.96	0.00	12.09	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
84	20.700	17.78	0.23	56.88	462.25	8.01	4.45	0.00	4.95	0.00	12.06	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
85	20.600	17.78	0.23	56.88	462.25	8.02	4.44	0.00	4.94	0.00	12.03	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
86	20.500	17.78	0.23	56.88	462.25	8.02	4.42	0.00	4.92	0.00	12.00	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
87	20.400	17.78	0.23	56.88	462.25	8.03	4.41	0.00	4.91	0.00	11.97	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
88	20.300	17.78	0.23	56.88	462.25	8.03	4.40	0.00	4.90	0.00	11.94	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
89	20.200	17.78	0.22	56.88	462.25	8.04	4.38	0.00	4.88	0.00	11.91	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
90	20.100	17.78	0.22	56.88	462.25	8.04	4.37	0.00	4.87	0.00	11.88	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
91	20.000	17.78	0.22	56.88	462.25	8.05	4.36	0.00	4.86	0.00	11.85	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
92	19.900	17.78	0.22	56.88	462.25	8.05	4.35	0.00	4.85	0.00	11.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
93	19.800	17.78	0.22	56.88	462.25	8.05	4.33	0.00	4.83	0.00	11.79	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
94	19.700	17.78	0.22	56.88	462.25	8.06	4.32	0.00	4.82	0.00	11.76	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
95	19.600	17.78	0.22	56.88	462.25	8.06	4.31	0.00	4.81	0.00	11.73	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
96	19.500	17.78	0.22	56.88	462.25	8.06	4.30	0.00	4.80	0.00	11.70	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
97	19.400	17.78	0.22	56.88	462.25	8.06	4.28	0.00	4.78	0.00	11.67	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
98	19.300	17.78	0.22	56.88	462.25	8.07	4.27	0.00	4.77	0.00	11.64	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
99	19.200	17.78	0.22	56.88	462.25	8.07	4.26	0.00	4.76	0.00	11.62	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
100	19.100	17.78	0.21	56.88	462.25	8.07	4.25	0.00	4.75	0.00	11.59	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
101	19.000	17.78	0.21	56.88	462.25	8.07	4.24	0.00	4.74	0.00	11.56	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
102	18.900	17.78	0.21	56.88	462.25	8.07	4.23	0.00	4.73	0.00	11.53	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
103	18.800	17.78	0.21	56.88	462.25	8.07	4.21	0.00	4.71	0.00	11.50	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
104	18.700	17.78	0.21	56.88	462.25	8.08	4.20	0.00	4.70	0.00	11.47	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
105	18.600	17.78	0.21	56.88	462.25	8.08	4.19	0.00	4.69	0.00	11.44	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
106	18.500	17.78	0.21	56.88	462.25	8.08	4.18	0.00	4.68	0.00	11.42	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
107	18.400	17.78	0.21	56.88	462.25	8.08	4.17	0.00	4.67	0.00	11.39	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
108	18.300	17.78	0.21	56.88	462.25	8.08	4.16	0.00	4.66	0.00	11.36	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
109	18.200	17.78	0.21	56.88	462.25	8.08	4.15	0.00	4.65	0.00	11.33	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
110	18.100	17.78	0.20	56.88	462.25	8.08	4.14	0.00	4.64	0.00	11.30	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
111	18.000	17.78	0.20	56.88	462.25	8.08	4.13	0.00	4.63	0.00	11.28	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
112	17.900	17.78	0.20	56.88	462.25	8.09	4.11	0.00	4.61	0.00	11.25	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
113	17.800	17.78	0.20	56.88	462.25	8.09	4.10	0.00	4.60	0.00	11.22	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
114	17.700	17.78	0.20	56.88	462.25	8.09	4.09	0.00	4.59	0.00	11.19	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
115	17.600	17.78	0.20	56.88	462.25	8.09	4.08	0.00	4.58	0.00	11.16	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
116	17.500	17.78	0.20	56.88	462.25	8.09	4.07	0.00	4.57	0.00	11.14	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
117	17.400	17.78	0.20	56.88	462.25	8.09	4.06	0.00	4.56	0.00	11.11	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
118	17.300	17.78	0.20	56.88	462.25	8.09	4.05	0.00	4.55	0.00	11.08	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
119	17.200	17.78	0.20	56.88	462.25	8.09	4.04	0.00	4.54	0.00	11.06	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
120	17.100	17.78	0.20	56.88	462.25	8.09	4.03	0.00	4.53	0.00	11.03	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
121	17.000	17.78	0.19	56.88	462.25	8.09	4.02	0.00	4.52	0.00	11.00	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
122	16.900	17.78	0.19	56.88	462.25	8.09	4.01	0.00	4.51	0.00	10.97	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
123	16.800	17.78	0.19	56.88	462.25	8.09	4.00	0.00	4.50	0.00	10.95	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
124	16.700	17.78	0.19	56.88	462.25	8.09	3.99	0.00	4.49	0.00	10.92	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
125	16.600	17.78	0.19	56.88	462.25	8.09	3.98	0.00	4.48	0.00	10.89	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00

126	16.500	17.78	0.19	56.88	462.25	8.09	3.97	0.00	4.47	0.00	10.87	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
127	16.400	17.78	0.19	56.88	462.25	8.09	3.96	0.00	4.46	0.00	10.84	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
128	16.300	17.78	0.19	56.88	462.25	8.10	3.96	0.00	4.46	0.00	10.81	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
129	16.200	17.78	0.19	56.88	462.25	8.10	3.95	0.00	4.45	0.00	10.79	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
130	16.100	17.78	0.19	56.88	462.25	8.10	3.94	0.00	4.44	0.00	10.76	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
131	16.000	17.78	0.18	56.88	462.25	8.10	3.93	0.00	4.43	0.00	10.73	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
132	15.900	17.78	0.18	56.88	462.25	8.10	3.92	0.00	4.42	0.00	10.71	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
133	15.800	17.78	0.18	56.88	462.25	8.10	3.91	0.00	4.41	0.00	10.68	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
134	15.700	17.78	0.18	56.88	462.25	8.10	3.90	0.00	4.40	0.00	10.65	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
135	15.600	17.78	0.18	56.88	462.25	8.10	3.89	0.00	4.39	0.00	10.63	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
136	15.500	17.78	0.18	56.88	462.25	8.10	3.88	0.00	4.38	0.00	10.60	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
137	15.400	17.78	0.18	56.88	462.25	8.10	3.87	0.00	4.37	0.00	10.58	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
138	15.300	17.78	0.18	56.88	462.25	8.10	3.87	0.00	4.37	0.00	10.55	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
139	15.200	17.78	0.18	56.88	462.25	8.10	3.86	0.00	4.36	0.00	10.52	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
140	15.100	17.78	0.18	56.88	462.25	8.10	3.85	0.00	4.35	0.00	10.50	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
141	15.000	17.78	0.18	56.88	462.25	8.10	3.84	0.00	4.34	0.00	10.47	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
142	14.900	17.78	0.17	56.88	462.25	8.10	3.83	0.00	4.33	0.00	10.45	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
143	14.800	17.78	0.17	56.88	462.25	8.10	3.82	0.00	4.32	0.00	10.42	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
144	14.700	17.78	0.17	56.88	462.25	8.10	3.81	0.00	4.31	0.00	10.40	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
145	14.600	17.78	0.17	56.88	462.25	8.10	3.81	0.00	4.31	0.00	10.37	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
146	14.500	17.78	0.17	56.88	462.25	8.10	3.80	0.00	4.30	0.00	10.34	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
147	14.400	17.78	0.17	56.88	462.25	8.10	3.79	0.00	4.29	0.00	10.32	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
148	14.300	17.78	0.17	56.88	462.25	8.10	3.78	0.00	4.28	0.00	10.29	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
149	14.200	17.78	0.17	56.88	462.25	8.10	3.77	0.00	4.27	0.00	10.27	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
150	14.100	17.78	0.17	56.88	462.25	8.11	3.77	0.00	4.27	0.00	10.24	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
151	14.000	17.78	0.17	56.88	462.25	8.11	3.76	0.00	4.26	0.00	10.22	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
152	13.900	17.78	0.17	56.88	462.25	8.11	3.75	0.00	4.25	0.00	10.19	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
153	13.800	17.78	0.16	56.88	462.25	8.11	3.74	0.00	4.24	0.00	10.17	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
154	13.700	17.78	0.16	56.88	462.25	8.11	3.74	0.00	4.24	0.00	10.14	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
155	13.600	17.78	0.16	56.88	462.25	8.11	3.73	0.00	4.23	0.00	10.12	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
156	13.500	17.78	0.16	56.88	462.25	8.11	3.72	0.00	4.22	0.00	10.09	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
157	13.400	17.78	0.16	56.88	462.25	8.11	3.71	0.00	4.21	0.00	10.07	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
158	13.300	17.78	0.16	56.88	462.25	8.11	3.71	0.00	4.21	0.00	10.04	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
159	13.200	17.78	0.16	56.88	462.25	8.11	3.70	0.00	4.20	0.00	10.02	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
160	13.100	17.78	0.16	56.88	462.25	8.11	3.69	0.00	4.19	0.00	10.00	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
161	13.000	17.78	0.16	56.88	462.25	8.11	3.68	0.00	4.18	0.00	9.97	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
162	12.900	17.78	0.16	56.88	462.25	8.11	3.68	0.00	4.18	0.00	9.95	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
163	12.800	17.78	0.15	56.88	462.25	8.11	3.67	0.00	4.17	0.00	9.92	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
164	12.700	17.78	0.15	56.88	462.25	8.11	3.66	0.00	4.16	0.00	9.90	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
165	12.600	17.78	0.15	56.88	462.25	8.11	3.66	0.00	4.16	0.00	9.87	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
166	12.500	17.78	0.15	56.88	462.25	8.11	3.65	0.00	4.15	0.00	9.85	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
167	12.400	17.78	0.15	56.88	462.25	8.11	3.64	0.00	4.14	0.00	9.83	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
168	12.300	17.78	0.15	56.88	462.25	8.11	3.63	0.00	4.13	0.00	9.80	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
169	12.200	17.78	0.15	56.88	462.25	8.11	3.63	0.00	4.13	0.00	9.78	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
170	12.100	17.78	0.15	56.88	462.25	8.11	3.62	0.00	4.12	0.00	9.75	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
171	12.000	17.78	0.15	56.88	462.25	8.11	3.61	0.00	4.11	0.00	9.73	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
172	11.900	17.78	0.15	56.88	462.25	8.11	3.61	0.00	4.11	0.00	9.71	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
173	11.800	17.78	0.15	56.88	462.25	8.11	3.60	0.00	4.10	0.00	9.68	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
174	11.700	17.78	0.14	56.88	462.25	8.11	3.59	0.00	4.09	0.00	9.66	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
175	11.600	17.78	0.14	56.88	462.25	8.11	3.59	0.00	4.09	0.00	9.64	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
176	11.500	17.78	0.14	56.88	462.25	8.11	3.58	0.00	4.08	0.00	9.61	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
177	11.400	17.78	0.14	56.88	462.25	8.12	3.58	0.00	4.08	0.00	9.59	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
178	11.300	17.78	0.14	56.88	462.25	8.12	3.57	0.00	4.07	0.00	9.57	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
179	11.200	17.78	0.14	56.88	462.25	8.12	3.56	0.00	4.06	0.00	9.54	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
180	11.100	17.78	0.14	56.88	462.25	8.12	3.56	0.00	4.06	0.00	9.52	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
181	11.000	17.78	0.14	56.88	462.25	8.12	3.55	0.00	4.05	0.00	9.50	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
182	10.900	17.78	0.14	56.88	462.25	8.12	3.54	0.00	4.04	0.00	9.47	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
183	10.800	17.78	0.14	56.88	462.25	8.12	3.54	0.00	4.04	0.00	9.45	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
184	10.700	17.78	0.13	56.88	462.25	8.12	3.53	0.00	4.03	0.00	9.43	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00

185	10.600	17.78	0.13	56.88	462.25	8.12	3.53	0.00	4.03	0.00	9.40	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
186	10.500	17.78	0.13	56.88	462.25	8.12	3.52	0.00	4.02	0.00	9.38	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
187	10.400	17.78	0.13	56.88	462.25	8.12	3.51	0.00	4.01	0.00	9.36	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
188	10.300	17.78	0.13	56.88	462.25	8.12	3.51	0.00	4.01	0.00	9.34	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
189	10.200	17.78	0.13	56.88	462.25	8.12	3.50	0.00	4.00	0.00	9.31	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
190	10.100	17.78	0.13	56.88	462.25	8.12	3.50	0.00	4.00	0.00	9.29	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
191	10.000	17.78	0.13	56.88	462.25	8.12	3.49	0.00	3.99	0.00	9.27	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
192	9.900	17.78	0.13	56.88	462.25	8.12	3.49	0.00	3.99	0.00	9.25	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
193	9.800	17.78	0.13	56.88	462.25	8.12	3.48	0.00	3.98	0.00	9.22	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
194	9.700	17.78	0.13	56.88	462.25	8.12	3.48	0.00	3.98	0.00	9.20	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
195	9.600	17.78	0.12	56.88	462.25	8.12	3.47	0.00	3.97	0.00	9.18	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
196	9.500	17.78	0.12	56.88	462.25	8.12	3.46	0.00	3.96	0.00	9.16	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
197	9.400	17.78	0.12	56.88	462.25	8.12	3.46	0.00	3.96	0.00	9.13	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
198	9.300	17.78	0.12	56.88	462.25	8.12	3.45	0.00	3.95	0.00	9.11	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
199	9.200	17.78	0.12	56.88	462.25	8.12	3.45	0.00	3.95	0.00	9.09	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
200	9.100	17.78	0.12	56.88	462.25	8.12	3.44	0.00	3.94	0.00	9.07	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
201	9.000	17.78	0.12	56.88	462.25	8.12	3.44	0.00	3.94	0.00	9.05	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
202	8.900	17.78	0.12	56.88	462.25	8.12	3.43	0.00	3.93	0.00	9.02	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
203	8.800	17.78	0.12	56.88	462.25	8.12	3.43	0.00	3.93	0.00	9.00	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
204	8.700	17.78	0.12	56.88	462.25	8.12	3.42	0.00	3.92	0.00	8.98	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
205	8.600	17.78	0.11	56.88	462.25	8.12	3.42	0.00	3.92	0.00	8.96	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
206	8.500	17.78	0.11	56.88	462.25	8.13	3.41	0.00	3.91	0.00	8.94	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
207	8.400	17.78	0.11	56.88	462.25	8.13	3.41	0.00	3.91	0.00	8.91	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
208	8.300	17.78	0.11	56.88	462.25	8.13	3.40	0.00	3.90	0.00	8.89	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
209	8.200	17.78	0.11	56.88	462.25	8.13	3.40	0.00	3.90	0.00	8.87	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
210	8.100	17.78	0.11	56.88	462.25	8.13	3.39	0.00	3.89	0.00	8.85	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
211	8.000	17.78	0.11	56.88	462.25	8.13	3.39	0.00	3.89	0.00	8.83	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
212	7.900	17.78	0.11	56.88	462.25	8.13	3.38	0.00	3.88	0.00	8.81	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
213	7.800	17.78	0.11	56.88	462.25	8.13	3.38	0.00	3.88	0.00	8.79	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
214	7.700	17.78	0.11	56.88	462.25	8.13	3.37	0.00	3.87	0.00	8.77	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
215	7.600	17.78	0.11	56.88	462.25	8.13	3.37	0.00	3.87	0.00	8.74	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
216	7.500	17.78	0.10	56.88	462.25	8.13	3.36	0.00	3.86	0.00	8.72	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
217	7.400	17.78	0.10	56.88	462.25	8.13	3.36	0.00	3.86	0.00	8.70	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
218	7.300	17.78	0.10	56.88	462.25	8.13	3.35	0.00	3.85	0.00	8.68	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
219	7.200	17.78	0.10	56.88	462.25	8.13	3.35	0.00	3.85	0.00	8.66	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
220	7.100	17.78	0.10	56.88	462.25	8.13	3.35	0.00	3.85	0.00	8.64	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
221	7.000	17.78	0.10	56.88	462.25	8.13	3.34	0.00	3.84	0.00	8.62	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
222	6.900	17.78	0.10	56.88	462.25	8.13	3.34	0.00	3.84	0.00	8.60	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
223	6.800	17.78	0.10	56.88	462.25	8.13	3.33	0.00	3.83	0.00	8.58	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
224	6.700	17.78	0.10	56.88	462.25	8.13	3.33	0.00	3.83	0.00	8.56	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
225	6.600	17.78	0.10	56.88	462.25	8.13	3.32	0.00	3.82	0.00	8.54	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
226	6.500	17.78	0.09	56.88	462.24	8.13	3.32	0.00	3.82	0.00	8.52	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
227	6.400	17.78	0.09	56.87	462.18	8.13	3.31	0.00	3.81	0.00	8.49	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
228	6.300	17.78	0.09	56.81	461.70	8.13	3.31	0.00	3.81	0.00	8.46	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
229	6.200	17.78	0.09	56.29	457.73	8.14	3.27	0.00	3.77	0.00	8.34	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
230	6.100	17.78	0.09	52.05	425.07	8.21	2.98	0.00	3.48	0.00	7.45	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
231	6.000	17.78	0.09	17.12	156.39	8.79	0.59	0.00	1.09	0.00	0.34	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00

FINAL REPORT HEADWATER - NBB03A SMITHPORT LAKE WATERSHED MODEL
REACH NO. 3 RB01 TO CLK02 SMITHPORT LAKE WINTER 100% MAN-MADE AND 40% BACKGROUND

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CM-I MG/L	CM-II MG/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM
232	UPR RCH	0.02240	17.78	0.09	17.12	156.39	8.79	0.59	0.00	1.09	0.00	0.34	0.00	0.00	0.00	5.00	0.00	0.00

232	WSTLD	0.02800	17.78	0.50	11.30	116.80	5.00	3.02	0.00	3.02	0.00	0.51	0.00	0.00	0.00	0.00	0.00	0.00

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
232	6.00	5.90	0.05040	75.6	0.00009	13.24	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
233	5.90	5.80	0.05040	75.6	0.00009	13.24	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
234	5.80	5.70	0.05040	75.6	0.00009	13.24	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
235	5.70	5.60	0.05040	75.6	0.00009	13.24	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
236	5.60	5.50	0.05040	75.6	0.00009	13.24	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
237	5.50	5.40	0.05040	75.6	0.00009	13.24	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
238	5.40	5.30	0.05040	75.6	0.00009	13.24	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
TOT						92.70			403673.97	103479.59					
AVG					0.0001		3.90	147.83			576.68				
CUM						96.56									

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD#1 DECAY 1/da	BOD#1 SETT 1/da	ABOD#1 DECAY 1/da	BOD#2 DECAY 1/da	BOD#2 SETT 1/da	ABOD#2 DECAY 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORGN DECAY 1/da	ORGN SETT 1/da	NH3 DECAY 1/da	NH3 SRCE *	DENIT RATE 1/da	PO4 SRCE *	ALG PROD **	MAC PROD **	COLI DECAY 1/da	NCM DECAY 1/da	NCM SETT 1/da
232	5.900	9.50	0.17	0.08	0.47	0.00	0.00	0.00	0.00	0.06	0.06	0.06	0.09	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
233	5.800	9.50	0.17	0.08	0.47	0.00	0.00	0.00	0.00	0.06	0.06	0.06	0.09	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
234	5.700	9.50	0.17	0.08	0.47	0.00	0.00	0.00	0.00	0.06	0.06	0.06	0.09	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
235	5.600	9.50	0.17	0.08	0.47	0.00	0.00	0.00	0.00	0.06	0.06	0.06	0.09	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
236	5.500	9.50	0.17	0.08	0.47	0.00	0.00	0.00	0.00	0.06	0.06	0.06	0.09	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
237	5.400	9.50	0.17	0.08	0.47	0.00	0.00	0.00	0.00	0.06	0.06	0.06	0.09	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
238	5.300	9.50	0.17	0.08	0.47	0.00	0.00	0.00	0.00	0.06	0.06	0.06	0.09	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.18	0.09	0.50	0.00	0.00	0.00	0.00	0.07			0.10	0.10	0.00	0.00	0.00	0.00			0.00	0.00	0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I MG/L	CM-II MG/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO g/m³	COLI #/100mL	NCM
232	5.900	17.78	0.09	16.81	154.01	8.80	0.57	0.00	1.07	0.00	0.28	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
233	5.800	17.78	0.09	16.68	153.00	8.82	0.55	0.00	1.05	0.00	0.25	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
234	5.700	17.78	0.09	16.55	151.97	8.83	0.54	0.00	1.04	0.00	0.22	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
235	5.600	17.78	0.09	16.42	150.94	8.84	0.53	0.00	1.03	0.00	0.20	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
236	5.500	17.78	0.09	16.28	149.89	8.85	0.51	0.00	1.01	0.00	0.19	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
237	5.400	17.78	0.09	16.15	148.84	8.85	0.50	0.00	1.00	0.00	0.17	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
238	5.300	17.78	0.09	16.02	147.78	8.84	0.49	0.00	0.99	0.00	0.16	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00

FINAL REPORT HEADWATER - NBB03A SMITHPORT LAKE WATERSHED MODEL
REACH NO. 4 CLK02 TO CLK01 SMITHPORT LAKE WINTER 100% MAN-MADE AND 40% BACKGROUND

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CM-I MG/L	CM-II MG/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM
239	UPR RCH	0.05040	17.78	0.09	16.02	147.78	8.84	0.49	0.00	0.99	0.00	0.16	0.00	0.00	0.00	5.00	0.00	0.00

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
239	5.30	5.20	0.05040	75.6	0.00009	13.24	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
240	5.20	5.10	0.05040	75.6	0.00009	13.24	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
241	5.10	5.00	0.05040	75.6	0.00009	13.24	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
242	5.00	4.90	0.05040	75.6	0.00009	13.24	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
243	4.90	4.80	0.05040	75.6	0.00009	13.24	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
244	4.80	4.70	0.05040	75.6	0.00009	13.24	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
245	4.70	4.60	0.05040	75.6	0.00009	13.24	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
TOT						92.70			403673.97	103479.59					
AVG					0.0001		3.90	147.83			576.68				
CUM						189.26									

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD#1 DECAY 1/da	BOD#1 SETT 1/da	ABOD#1 DECAY 1/da	BOD#2 DECAY 1/da	BOD#2 SETT 1/da	ABOD#2 DECAY 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORGN DECAY 1/da	ORGN SETT 1/da	NH3 DECAY 1/da	NH3 SRCE *	DENIT RATE 1/da	PO4 SRCE *	ALG PROD **	MAC PROD **	COLI DECAY 1/da	NCM DECAY 1/da	NCM SETT 1/da
239	5.200	9.50	0.17	0.08	0.47	0.00	0.00	0.00	0.00	0.18	0.18	0.18	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
240	5.100	9.50	0.17	0.08	0.47	0.00	0.00	0.00	0.00	0.18	0.18	0.18	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
241	5.000	9.50	0.17	0.08	0.47	0.00	0.00	0.00	0.00	0.18	0.18	0.18	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
242	4.900	9.50	0.17	0.08	0.47	0.00	0.00	0.00	0.00	0.18	0.18	0.18	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
243	4.800	9.50	0.17	0.08	0.47	0.00	0.00	0.00	0.00	0.18	0.18	0.18	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
244	4.700	9.50	0.17	0.08	0.47	0.00	0.00	0.00	0.00	0.18	0.18	0.18	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
245	4.600	9.51	0.17	0.08	0.47	0.00	0.00	0.00	0.00	0.18	0.18	0.18	0.07	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.18	0.09	0.50	0.00	0.00	0.00	0.00	0.21			0.09	0.10	0.00	0.00	0.00	0.00			0.00	0.00	0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I MG/L	CM-II MG/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO g/m³	COLI #/100mL	NCM
239	5.200	17.78	0.09	15.88	146.71	8.83	0.47	0.00	0.97	0.00	0.15	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
240	5.100	17.78	0.09	15.74	145.63	8.82	0.46	0.00	0.96	0.00	0.15	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
241	5.000	17.78	0.09	15.61	144.54	8.81	0.44	0.00	0.94	0.00	0.14	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
242	4.900	17.78	0.08	15.47	143.44	8.79	0.43	0.00	0.93	0.00	0.14	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
243	4.800	17.78	0.08	15.33	142.33	8.77	0.41	0.00	0.91	0.00	0.14	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
244	4.700	17.78	0.08	15.18	141.21	8.74	0.40	0.00	0.90	0.00	0.14	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
245	4.600	17.78	0.08	15.04	140.08	8.71	0.38	0.00	0.88	0.00	0.14	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00

FINAL REPORT HEADWATER - NBB03A SMITHPORT LAKE WATERSHED MODEL
REACH NO. 5 CLK01 TO SL04 SMITHPORT LAKE WINTER 100% MAN-MADE AND 40% BACKGROUND

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CM-I MG/L	CM-II MG/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM
246	UPR RCH	0.05040	17.78	0.08	15.04	140.08	8.71	0.38	0.00	0.88	0.00	0.14	0.00	0.00	0.00	5.00	0.00	0.00

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m^3/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	DEPTH m	WIDTH m	VOLUME m^3	SURFACE AREA m^2	X-SECT AREA m^2	TIDAL PRISM m^3	TIDAL VELO m/s	DISPRSN m^2/s	MEAN VELO m/s
246	4.60	4.50	0.05040	75.6	0.00009	13.24	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
247	4.50	4.40	0.05040	75.6	0.00009	13.24	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
248	4.40	4.30	0.05040	75.6	0.00009	13.24	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
TOT						39.73			173003.12	44348.40					
AVG					0.0001		3.90	147.83			576.68				
CUM						228.99									

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD#1 DECAY 1/da	BOD#1 SETT 1/da	ABOD#1 DECAY 1/da	BOD#2 DECAY 1/da	BOD#2 SETT 1/da	ABOD#2 DECAY 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORGN DECAY 1/da	ORGN SETT 1/da	NH3 DECAY 1/da	NH3 SRCE *	DENIT RATE 1/da	PO4 SRCE *	ALG PROD **	MAC PROD **	COLI DECAY 1/da	NCM DECAY 1/da	NCM SETT 1/da
246	4.500	9.41	0.17	0.07	0.48	0.00	0.00	0.00	0.00	0.74	0.74	0.74	0.04	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
247	4.400	9.31	0.18	0.07	0.49	0.00	0.00	0.00	0.00	0.76	0.76	0.76	0.05	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
248	4.300	9.21	0.18	0.07	0.49	0.00	0.00	0.00	0.00	0.79	0.79	0.79	0.05	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.18	0.07	0.50	0.00	0.00	0.00	0.00	0.82			0.05	0.10	0.00	0.00	0.00	0.00			0.00	0.00	0.00

* $g/m^2/d$ ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I MG/L	CM-II MG/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO g/m^3	COLI #/100mL	NCM
246	4.500	18.29	0.08	14.90	138.94	8.67	0.35	0.00	0.85	0.00	0.15	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
247	4.400	18.81	0.07	14.75	137.80	8.64	0.34	0.00	0.84	0.00	0.16	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
248	4.300	19.32	0.07	14.60	136.64	8.63	0.33	0.00	0.83	0.00	0.17	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00

FINAL REPORT HEADWATER - NBB03A SMITHPORT LAKE WATERSHED MODEL
REACH NO. 6 SL04 TO SL03 SMITHPORT LAKE WINTER 100% MAN-MADE AND 40% BACKGROUND

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CM-I MG/L	CM-II MG/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM
249	UPR RCH	0.05040	19.32	0.07	14.60	136.64	8.63	0.33	0.00	0.83	0.00	0.17	0.00	0.00	0.00	5.00	0.00	0.00

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
249	4.30	4.20	0.05040	75.6	0.00009	13.24	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
250	4.20	4.10	0.05040	75.6	0.00009	13.24	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
251	4.10	4.00	0.05040	75.6	0.00009	13.24	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
252	4.00	3.90	0.05040	75.6	0.00009	13.24	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
253	3.90	3.80	0.05040	75.6	0.00009	13.24	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
254	3.80	3.70	0.05040	75.6	0.00009	13.24	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
255	3.70	3.60	0.05040	75.6	0.00009	13.24	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
256	3.60	3.50	0.05040	75.6	0.00009	13.24	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
257	3.50	3.40	0.05040	75.6	0.00009	13.24	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
258	3.40	3.30	0.05040	75.6	0.00009	13.24	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
259	3.30	3.20	0.05040	75.6	0.00009	13.24	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
260	3.20	3.10	0.05040	75.6	0.00009	13.24	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
261	3.10	3.00	0.05040	75.6	0.00009	13.24	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
262	3.00	2.90	0.05040	75.6	0.00009	13.24	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
263	2.90	2.80	0.05040	75.6	0.00009	13.24	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
264	2.80	2.70	0.05040	75.6	0.00009	13.24	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
265	2.70	2.60	0.05040	75.6	0.00009	13.24	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
266	2.60	2.50	0.05040	75.6	0.00009	13.24	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
267	2.50	2.40	0.05040	75.6	0.00009	13.24	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
268	2.40	2.30	0.05040	75.6	0.00009	13.24	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
TOT						264.86			1153354.12	295656.00					
AVG					0.0001		3.90	147.83			576.68				
CUM						493.85									

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD#1 DECAY 1/da	BOD#1 SETT 1/da	ABOD#1 DECAY 1/da	BOD#2 DECAY 1/da	BOD#2 SETT 1/da	ABOD#2 DECAY 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORGN DECAY 1/da	ORGN SETT 1/da	NH3 DECAY 1/da	NH3 SRCE *	DENIT RATE 1/da	PO4 SRCE *	ALG PROD **	MAC PROD **	COLI DECAY 1/da	NCM DECAY 1/da	NCM SETT 1/da
249	4.200	9.21	0.18	0.08	0.49	0.00	0.00	0.00	0.00	0.25	0.25	0.25	0.04	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
250	4.100	9.21	0.18	0.08	0.49	0.00	0.00	0.00	0.00	0.25	0.25	0.25	0.04	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
251	4.000	9.21	0.18	0.08	0.49	0.00	0.00	0.00	0.00	0.25	0.25	0.25	0.04	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
252	3.900	9.21	0.18	0.08	0.49	0.00	0.00	0.00	0.00	0.25	0.25	0.25	0.04	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
253	3.800	9.21	0.18	0.08	0.49	0.00	0.00	0.00	0.00	0.25	0.25	0.25	0.04	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
254	3.700	9.21	0.18	0.08	0.49	0.00	0.00	0.00	0.00	0.25	0.25	0.25	0.04	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
255	3.600	9.21	0.18	0.08	0.49	0.00	0.00	0.00	0.00	0.25	0.25	0.25	0.04	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
256	3.500	9.21	0.18	0.08	0.49	0.00	0.00	0.00	0.00	0.25	0.25	0.25	0.04	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
257	3.400	9.21	0.18	0.08	0.49	0.00	0.00	0.00	0.00	0.25	0.25	0.25	0.04	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
258	3.300	9.21	0.18	0.08	0.49	0.00	0.00	0.00	0.00	0.25	0.25	0.25	0.04	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
259	3.200	9.21	0.18	0.08	0.49	0.00	0.00	0.00	0.00	0.25	0.25	0.25	0.04	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
260	3.100	9.21	0.18	0.08	0.49	0.00	0.00	0.00	0.00	0.25	0.25	0.25	0.04	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
261	3.000	9.21	0.18	0.08	0.49	0.00	0.00	0.00	0.00	0.25	0.25	0.25	0.04	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
262	2.900	9.21	0.18	0.08	0.49	0.00	0.00	0.00	0.00	0.25	0.25	0.25	0.04	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
263	2.800	9.21	0.18	0.08	0.49	0.00	0.00	0.00	0.00	0.25	0.25	0.25	0.04	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

264	2.700	9.21	0.18	0.08	0.49	0.00	0.00	0.00	0.00	0.25	0.25	0.25	0.04	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
265	2.600	9.21	0.18	0.08	0.49	0.00	0.00	0.00	0.00	0.25	0.25	0.25	0.04	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
266	2.500	9.21	0.18	0.08	0.49	0.00	0.00	0.00	0.00	0.25	0.25	0.25	0.04	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
267	2.400	9.21	0.18	0.08	0.49	0.00	0.00	0.00	0.00	0.25	0.25	0.25	0.04	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
268	2.300	9.21	0.18	0.08	0.49	0.00	0.00	0.00	0.00	0.25	0.25	0.25	0.04	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.18	0.08	0.50	0.00	0.00	0.00	0.00	0.26			0.04	0.10	0.00	0.00	0.00	0.00			0.00	0.00	0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I MG/L	CM-II MG/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO g/m³	COLI #/100mL	NCM
249	4.200	19.32	0.07	14.46	135.47	8.63	0.34	0.00	0.84	0.00	0.18	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
250	4.100	19.32	0.07	14.31	134.29	8.63	0.34	0.00	0.84	0.00	0.19	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
251	4.000	19.32	0.07	14.16	133.10	8.63	0.35	0.00	0.85	0.00	0.20	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
252	3.900	19.32	0.07	14.00	131.90	8.62	0.35	0.00	0.85	0.00	0.21	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
253	3.800	19.32	0.06	13.85	130.69	8.62	0.35	0.00	0.85	0.00	0.22	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
254	3.700	19.32	0.06	13.69	129.47	8.62	0.35	0.00	0.85	0.00	0.23	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
255	3.600	19.32	0.06	13.54	128.24	8.61	0.36	0.00	0.86	0.00	0.23	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
256	3.500	19.32	0.06	13.38	127.00	8.61	0.36	0.00	0.86	0.00	0.24	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
257	3.400	19.32	0.06	13.22	125.74	8.61	0.36	0.00	0.86	0.00	0.24	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
258	3.300	19.32	0.06	13.06	124.48	8.60	0.36	0.00	0.86	0.00	0.25	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
259	3.200	19.32	0.06	12.90	123.20	8.59	0.36	0.00	0.86	0.00	0.25	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
260	3.100	19.32	0.06	12.74	121.92	8.59	0.37	0.00	0.87	0.00	0.26	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
261	3.000	19.32	0.06	12.57	120.62	8.58	0.37	0.00	0.87	0.00	0.26	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
262	2.900	19.32	0.06	12.41	119.31	8.57	0.37	0.00	0.87	0.00	0.26	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
263	2.800	19.32	0.05	12.24	117.99	8.56	0.38	0.00	0.88	0.00	0.27	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
264	2.700	19.32	0.05	12.07	116.66	8.54	0.38	0.00	0.88	0.00	0.27	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
265	2.600	19.32	0.05	11.90	115.32	8.53	0.39	0.00	0.89	0.00	0.28	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
266	2.500	19.32	0.05	11.73	113.96	8.51	0.40	0.00	0.90	0.00	0.28	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
267	2.400	19.32	0.05	11.55	112.59	8.49	0.42	0.00	0.92	0.00	0.28	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
268	2.300	19.32	0.05	11.38	111.21	8.47	0.43	0.00	0.93	0.00	0.29	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00

FINAL REPORT HEADWATER - NBB03A SMITHPORT LAKE WATERSHED MODEL
REACH NO. 7 SL03 TO SL01 SMITHPORT LAKE WINTER 100% MAN-MADE AND 40% BACKGROUND

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CM-I MG/L	CM-II MG/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM
269	UPR RCH	0.05040	19.32	0.05	11.38	111.21	8.47	0.43	0.00	0.93	0.00	0.29	0.00	0.00	0.00	5.00	0.00	0.00

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
269	2.30	2.20	0.05040	75.6	0.00009	13.24	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
270	2.20	2.10	0.05040	75.6	0.00009	13.24	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
271	2.10	2.00	0.05040	75.6	0.00009	13.24	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000

272	2.00	1.90	0.05040	75.6	0.00009	13.24	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
273	1.90	1.80	0.05040	75.6	0.00009	13.24	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
274	1.80	1.70	0.05040	75.6	0.00009	13.24	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
275	1.70	1.60	0.05040	75.6	0.00009	13.24	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
276	1.60	1.50	0.05040	75.6	0.00009	13.24	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
277	1.50	1.40	0.05040	75.6	0.00009	13.24	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
278	1.40	1.30	0.05040	75.6	0.00009	13.24	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
279	1.30	1.20	0.05040	75.6	0.00009	13.24	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
280	1.20	1.10	0.05040	75.6	0.00009	13.24	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
281	1.10	1.00	0.05040	75.6	0.00009	13.24	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
282	1.00	0.90	0.05040	75.6	0.00009	13.24	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
283	0.90	0.80	0.05040	75.6	0.00009	13.24	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
284	0.80	0.70	0.05040	75.6	0.00009	13.24	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
285	0.70	0.60	0.05040	75.6	0.00009	13.24	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
286	0.60	0.50	0.05040	75.6	0.00009	13.24	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
287	0.50	0.40	0.05040	75.6	0.00009	13.24	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
288	0.40	0.30	0.05040	75.6	0.00009	13.24	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
289	0.30	0.20	0.05040	75.6	0.00009	13.24	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
290	0.20	0.10	0.05040	75.6	0.00009	13.24	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
291	0.10	0.00	0.05040	75.6	0.00009	13.24	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
TOT						304.59			1326357.38	340004.44					
AVG					0.0001		3.90	147.83			576.68				
CUM						798.44									

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD#1 DECAY 1/da	BOD#1 SETT 1/da	ABOD#1 DECAY 1/da	BOD#2 DECAY 1/da	BOD#2 SETT 1/da	ABOD#2 DECAY 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORGN DECAY 1/da	ORGN SETT 1/da	NH3 DECAY 1/da	NH3 SRCE *	DENIT RATE 1/da	PO4 SRCE *	ALG PROD **	MAC PROD **	COLI DECAY 1/da	NCM DECAY 1/da	NCM SETT 1/da
269	2.200	9.21	0.18	0.09	0.49	0.00	0.00	0.00	0.00	0.08	0.08	0.08	0.05	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
270	2.100	9.21	0.18	0.09	0.49	0.00	0.00	0.00	0.00	0.08	0.08	0.08	0.05	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
271	2.000	9.21	0.18	0.09	0.49	0.00	0.00	0.00	0.00	0.08	0.08	0.08	0.05	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
272	1.900	9.21	0.18	0.09	0.49	0.00	0.00	0.00	0.00	0.08	0.08	0.08	0.05	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
273	1.800	9.21	0.18	0.09	0.49	0.00	0.00	0.00	0.00	0.08	0.08	0.08	0.05	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
274	1.700	9.21	0.18	0.09	0.49	0.00	0.00	0.00	0.00	0.08	0.08	0.08	0.05	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
275	1.600	9.21	0.18	0.09	0.49	0.00	0.00	0.00	0.00	0.08	0.08	0.08	0.05	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
276	1.500	9.21	0.18	0.09	0.49	0.00	0.00	0.00	0.00	0.08	0.08	0.08	0.05	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
277	1.400	9.21	0.18	0.09	0.49	0.00	0.00	0.00	0.00	0.08	0.08	0.08	0.05	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
278	1.300	9.21	0.18	0.09	0.49	0.00	0.00	0.00	0.00	0.08	0.08	0.08	0.05	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
279	1.200	9.21	0.18	0.09	0.49	0.00	0.00	0.00	0.00	0.08	0.08	0.08	0.05	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
280	1.100	9.21	0.18	0.09	0.49	0.00	0.00	0.00	0.00	0.08	0.08	0.08	0.05	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
281	1.000	9.21	0.18	0.09	0.49	0.00	0.00	0.00	0.00	0.08	0.08	0.08	0.05	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
282	0.900	9.21	0.18	0.09	0.49	0.00	0.00	0.00	0.00	0.08	0.08	0.08	0.05	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
283	0.800	9.21	0.18	0.09	0.49	0.00	0.00	0.00	0.00	0.08	0.08	0.08	0.05	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
284	0.700	9.21	0.18	0.09	0.49	0.00	0.00	0.00	0.00	0.08	0.08	0.08	0.05	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
285	0.600	9.21	0.18	0.09	0.49	0.00	0.00	0.00	0.00	0.08	0.08	0.08	0.05	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
286	0.500	9.21	0.18	0.09	0.49	0.00	0.00	0.00	0.00	0.08	0.08	0.08	0.05	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
287	0.400	9.22	0.18	0.09	0.49	0.00	0.00	0.00	0.00	0.08	0.08	0.08	0.05	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
288	0.300	9.22	0.18	0.09	0.49	0.00	0.00	0.00	0.00	0.08	0.08	0.08	0.05	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
289	0.200	9.22	0.18	0.09	0.49	0.00	0.00	0.00	0.00	0.08	0.08	0.08	0.05	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
290	0.100	9.22	0.18	0.09	0.49	0.00	0.00	0.00	0.00	0.08	0.08	0.08	0.05	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
291	0.000	9.22	0.18	0.09	0.49	0.00	0.00	0.00	0.00	0.08	0.08	0.08	0.05	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.18	0.09	0.50	0.00	0.00	0.00	0.00	0.08			0.06	0.10	0.00	0.00	0.00	0.00			0.00	0.00	0.00

* $g/m^2/d$ ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I MG/L	CM-II MG/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO g/m³	COLI #/100mL	NCM
269	2.200	19.32	0.05	11.20	109.82	8.45	0.46	0.00	0.96	0.00	0.29	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
270	2.100	19.32	0.05	11.03	108.42	8.42	0.48	0.00	0.98	0.00	0.30	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
271	2.000	19.32	0.05	10.85	107.01	8.38	0.50	0.00	1.00	0.00	0.31	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
272	1.900	19.32	0.04	10.66	105.58	8.33	0.53	0.00	1.03	0.00	0.32	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
273	1.800	19.32	0.04	10.48	104.14	8.28	0.56	0.00	1.06	0.00	0.34	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
274	1.700	19.32	0.04	10.30	102.68	8.21	0.59	0.00	1.09	0.00	0.37	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
275	1.600	19.32	0.04	10.11	101.22	8.14	0.64	0.00	1.14	0.00	0.40	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
276	1.500	19.32	0.04	9.92	99.74	8.05	0.69	0.00	1.19	0.00	0.43	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
277	1.400	19.32	0.04	9.74	98.25	7.95	0.76	0.00	1.26	0.00	0.48	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
278	1.300	19.32	0.04	9.54	96.75	7.84	0.85	0.00	1.35	0.00	0.53	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
279	1.200	19.32	0.04	9.35	95.23	7.72	0.96	0.00	1.46	0.00	0.58	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
280	1.100	19.32	0.03	9.16	93.70	7.57	1.11	0.00	1.61	0.00	0.65	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
281	1.000	19.32	0.03	8.96	92.15	7.41	1.31	0.00	1.81	0.00	0.73	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
282	0.900	19.32	0.03	8.76	90.60	7.24	1.56	0.00	2.06	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
283	0.800	19.32	0.03	8.57	89.02	7.04	1.89	0.00	2.39	0.00	0.92	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
284	0.700	19.32	0.03	8.36	87.44	6.83	2.31	0.00	2.81	0.00	1.04	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
285	0.600	19.32	0.03	8.16	85.84	6.60	2.86	0.00	3.36	0.00	1.18	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
286	0.500	19.32	0.03	7.96	84.23	6.35	3.58	0.00	4.08	0.00	1.34	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
287	0.400	19.32	0.03	7.75	82.60	6.09	4.52	0.00	5.02	0.00	1.52	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
288	0.300	19.32	0.02	7.54	80.96	5.82	5.74	0.00	6.24	0.00	1.72	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
289	0.200	19.32	0.02	7.33	79.30	5.56	7.32	0.00	7.82	0.00	1.96	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
290	0.100	19.32	0.02	7.12	77.63	5.30	9.38	0.00	9.88	0.00	2.23	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
291	0.000	19.32	0.02	6.91	75.95	5.08	12.06	0.00	12.56	0.00	2.55	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00

STREAM SUMMARY
HEADWATER - NBB03A

SMITHPORT LAKE WATERSHED MODEL
SMITHPORT LAKE WINTER 100% MAN-MADE AND 40% BACKGROUND

TRAVEL TIME = 798.44 DAYS

MAXIMUM EFFLUENT = 75.60 PERCENT

FLOW	=	0.01727	TO	0.05040	m³/s
DISPERSION	=	1.0000	TO	1.0000	m²/s
VELOCITY	=	0.00009	TO	0.07227	m/s
DEPTH	=	0.11	TO	3.90	m
WIDTH	=	2.74	TO	147.83	m
BOD DECAY	=	0.03	TO	0.09	per day
NH3 DECAY	=	0.00	TO	0.00	per day
SOD	=	0.06	TO	0.94	g/m²/d
NH3 SOURCE	=	0.00	TO	0.00	g/m²/d
REAERATION	=	0.17	TO	6.30	per day
BOD SETTLING	=	0.47	TO	0.49	per day
NBOD DECAY	=	0.04	TO	0.09	per day
NBOD SETTLING	=	0.09	TO	0.10	per day
TEMPERATURE	=	17.78	TO	19.32	deg C
DISSOLVED OXYGEN	=	5.08	TO	8.85	mg/L

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.....EXECUTION COMPLETED
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Appendix D4 - Winter Justifications

DATA TYPE 3 - PROGRAM CONSTANTS			
CONSTANT NAME	**VALUE**	**UNITS**	**DATA SOURCE**
KL MINIMUM	0.7	m/day	The minimum KL of 2.3 ft/day converted to 0.70 m/day.
INHIBITION CONTROL VALUE	3		The water column dissolved oxygen demand is assumed to come primarily from facultative bacteria under anoxic conditions and SOD is not influenced by modeled dissolved oxygen levels in the upper water column.
K2 MAXIMUM	25	1/day at 20 deg C	EPA Policy in the absence of a measured value.
HYDRAULIC CALCULATION METHOD	2		The low slopes in this waterbody cause a substantial amount of water to be present during critical flow conditions. This method allows the model to predict a more accurate depth and width during low flow conditions.
SETTLING RATE UNITS	2		LAQUAL Default
ALGAE OXYGEN PRODUCTION	0		Standard practice for steady state calibration to a wide variation in DO.
EFFECTIVE BOD DUE TO ALGAE	0.1		Standard practice for steady state calibration to a wide variation in DO.

DATA TYPE 8 - REACH IDENTIFICATION DATA					
Reach	**ID**	**Name**	**Upstream River Kilometer**	**Upstream River Kilometer**	**Element Length, meters**
1	SL	Bayou Na Bonchase at Mansfield STP Discharger to Bayou Na Bonchase at Hwy 175	29.1	21.8	0.1
2	SL	Bayou Na Bonchase at Hwy 175 to Rambin Bayou Intercept	21.8	6.0	0.1
3	SL	Rambin Bayou intercept to Center of Clear Lake	6.0	5.3	0.1
4	SL	Center of Clear Lake to Clear Lake north of Hwy 509	5.3	4.6	0.1
5	SL	Clear lake north of Hwy 509 to Smithport Lake south of Hwy 509	4.6	4.3	0.1
6	SL	Smithport Lake south of hwy 509 to Center of Smithport Lake	4.3	2.3	0.1
7	SL	Center of Smithport lake to Smithport Lake Dam	2.3	0.0	0.1

		DATA TYPE 9 - ADVECTIVE HYDRAULIC COEFFICIENTS			
Reach	**Name**	**Width Coeff. "a"**	**Width Exp. "b"**	**Width Const. "c"**	**Data Source**
1	Bayou Na Bonchase at Mansfield STP Discharger to Bayou Na Bonchase at Hwy 175	0.00	0.10	2.74	Constant - NBB02 and Coefficients and Exponent - calibration
2	Bayou Na Bonchase at Hwy 175 to Rambin Bayou Intercept	0.00	0.10	2.74	Constant - NBB02 and Coefficients and Exponent - calibration
3	Rambin Bayou intercept to Center of Clear Lake	0.00	0.10	147.83	Constant - CLK01 and Coefficients and Exponent - calibration
4	Center of Clear Lake to Clear Lake north of Hwy 509	0.00	0.10	147.83	Constant - CLK01 and Coefficients and Exponent - calibration
5	Clear lake north of Hwy 509 to Smithport Lake south of Hwy 509	0.00	0.10	147.83	Constant - CLK01 and Coefficients and Exponent - calibration
6	Smithport Lake south of hwy 509 to Center of Smithport Lake	0.00	0.10	147.83	Constant - CLK01 and Coefficients and Exponent - calibration
7	Center of Smithport lake to Smithport Lake Dam	0.00	0.10	147.83	Constant - CLK01 and Coefficients and Exponent - calibration

		DATA TYPE 9 - ADVECTIVE HYDRAULIC COEFFICIENTS			
Reach	Name	Depth Coeff. "d"	Depth Exp. "e"	Depth Const. "f"	Data Source
1	Bayou Na Bonchase at Mansfield STP Discharger to Bayou Na Bonchase at Hwy 175	0.00	0.10	0.11	Constant - NBB02 and Coefficients and Exponent - calibration
2	Bayou Na Bonchase at Hwy 175 to Rambin Bayou Intercept	0.00	0.10	0.11	Constant - NBB02 and Coefficients and Exponent - calibration
3	Rambin Bayou intercept to Center of Clear Lake	0.00	0.10	3.90	Constant - CLK01 and Coefficients and Exponent - calibration
4	Center of Clear Lake to Clear Lake north of Hwy 509	0.00	0.10	3.90	Constant - CLK01 and Coefficients and Exponent - calibration
5	Clear lake north of Hwy 509 to Smithport Lake south of Hwy 509	0.00	0.10	3.90	Constant - CLK01 and Coefficients and Exponent - calibration
6	Smithport Lake south of hwy 509 to Center of Smithport Lake	0.00	0.10	3.90	Constant - CLK01 and Coefficients and Exponent - calibration
7	Center of Smithport lake to Smithport Lake Dam	0.00	0.10	3.90	Constant - CLK01 and Coefficients and Exponent - calibration

DATA TYPE 10 - DISPERSIVE HYDRAULIC COEFFICIENTS			
Reach	Name	Dispersion Coeff. "a"	Data Source
1	Bayou Na Bonchase at Mansfield STP Discharger to Bayou Na Bonchase at Hwy 175	1.000	Best professional judgement
2	Bayou Na Bonchase at Hwy 175 to Rambin Bayou Intercept	1.000	Best professional judgement
3	Rambin Bayou intercept to Center of Clear Lake	1.000	Best professional judgement
4	Center of Clear Lake to Clear Lake north of Hwy 509	1.000	Best professional judgement
5	Clear lake north of Hwy 509 to Smithport Lake south of Hwy 509	1.000	Best professional judgement
6	Smithport Lake south of hwy 509 to Center of Smithport Lake	1.000	Best professional judgement
7	Center of Smithport lake to Smithport Lake Dam	1.000	Best professional judgement

		DATA TYPE 11 - INITIAL CONDITIONS							
Reach	Name	Temp, deg C	Data Source	SALINITY	Data Source	DO, mg/l	Data Source	Chl a, ug/l	Data Source
1	Bayou Na Bonchase at Mansfield STP Discharger to Bayou Na Bonchase at Hwy 175	17.78	90th percentile Temperature for WQN Site 0281	0.30	Continuous Monitoring Data Average (NBB03C+NBB02)	5.00	Disolved Oxygen Standard for Subsegment 100605	5.00	Best Professional Judgement
2	Bayou Na Bonchase at Hwy 175 to Rambin Bayou Intercept	17.78	90th percentile Temperature for WQN Site 0281	0.24	NBB02 Continuous Monitoring Data Average	5.00	Disolved Oxygen Standard for Subsegment 100605	5.00	Best Professional Judgement
3	Rambin Bayou intercept to Center of Clear Lake	17.78	90th percentile Temperature for WQN Site 0281	0.24	CLK02 Continuous Monitoring Data Average	5.00	Disolved Oxygen Standard for Subsegment 100605	5.00	Best Professional Judgement
4	Center of Clear Lake to Clear Lake north of Hwy 509	17.78	90th percentile Temperature for WQN Site 0281	0.09	Continuous Monitoring Data Average (CLK02+CLK01)	5.00	Disolved Oxygen Standard for Subsegment 100605	5.00	Best Professional Judgement
5	Clear lake north of Hwy 509 to Smithport Lake south of Hwy 509	17.78	90th percentile Temperature for WQN Site 0281	0.08	CLK01 Continuous Monitoring Data Average	5.00	Disolved Oxygen Standard for Subsegment 100605	5.00	Best Professional Judgement
6	Smithport Lake south of hwy 509 to Center of Smithport Lake	19.32	90th percentile Temperature for WQN Site 1208	0.07	SL03 Continuous Monitoring Data Average	5.00	Disolved Oxygen Standard for Subsegment 100605	5.00	Best Professional Judgement
7	Center of Smithport lake to Smithport Lake Dam	19.32	90th percentile Temperature for WQN Site 1208	0.05	Continuous Monitoring Data Average (SL03+SL02)	5.00	Disolved Oxygen Standard for Subsegment 100605	5.00	Best Professional Judgement

		DATA TYPE 12 - REAERATION, SEDIMENT OXYGEN DEMAND AND BOD COEFFICIENTS						
REACH	NAME	K_2 OPT	K_2 "A"	K_2 "B"	K_2 "C"	Data Source	BKGRND SOD, gmO_2/m^2/day at 20 deg C	Data Source
1	Bayou Na Bonchase at Mansfield STP Discharger to Bayou Na Bonchase at Hwy 175	11				Texas Equation	1.08	100% Reduction of man-made sources and 40% Reduction of natural background
2	Bayou Na Bonchase at Hwy 175 to Rambin Bayou Intercept	11				Texas Equation	1.03	100% Reduction of man-made sources and 40% Reduction of natural background
3	Rambin Bayou intercept to Center of Clear Lake	11				Texas Equation	0.07	100% Reduction of man-made sources and 40% Reduction of natural background
4	Center of Clear Lake to Clear Lake north of Hwy 509	11				Texas Equation	0.21	100% Reduction of man-made sources and 40% Reduction of natural background
5	Clear lake north of Hwy 509 to Smithport Lake south of Hwy 509	11				Texas Equation	0.82	100% Reduction of man-made sources and 40% Reduction of natural background
6	Smithport Lake south of hwy 509 to Center of Smithport Lake	11				Texas Equation	0.26	100% Reduction of man-made sources and 40% Reduction of natural background
7	Center of Smithport lake to Smithport Lake Dam	11				Texas Equation	0.08	100% Reduction of man-made sources and 40% Reduction of natural background

		DATA TYPE 12 - REAERATION, SEDIMENT OXYGEN DEMAND AND BOD COEFFICIENTS			
REACH	NAME	BOD1 Decay Rate (1/Day)	Data Source	BOD1 SETT RATE (1/day)	Data Source
1	Bayou Na Bonchase at Mansfield STP Discharger to Bayou Na Bonchase at Hwy 175	0.0284	Lab Data avg(NBB03c+NBB02)	0.5	Calibration
2	Bayou Na Bonchase at Hwy 175 to Rambin Bayou Intercept	0.0302	Lab Data NBB02	0.5	Calibration
3	Rambin Bayou intercept to Center of Clear Lake	0.0915	Lab Data CLK02	0.5	Calibration
4	Center of Clear Lake to Clear Lake north of Hwy 509	0.0866	Lab Data avg(CLK02+CLK01)	0.5	Calibration
5	Clear lake north of Hwy 509 to Smithport Lake south of Hwy 509	0.0743	Lab Data avg(CLK01+SL04)	0.5	Calibration
6	Smithport Lake south of hwy 509 to Center of Smithport Lake	0.0816	Lab Data avg(SL04+SL03)	0.5	Calibration
7	Center of Smithport lake to Smithport Lake Dam	0.0941	Lab Data avg(SL03+SL02)	0.5	Calibration

DATA TYPE 13 - NITROGEN AND PHOSPHORUS COEFFICIENTS

Reach	Name	NBOD decay rate, 1/day	Data Source	NBOD settling rate, 1/day	Data Source
1	Bayou Na Bonchase at Mansfield STP Discharger to Bayou Na Bonchase at Hwy 175	0.0462	Lab Data avg(NBB03c+NBB02)	0.100	Calibration
2	Bayou Na Bonchase at Hwy 175 to Rambin Bayou Intercept	0.0875	Lab Data NBB02	0.100	Calibration
3	Rambin Bayou intercept to Center of Clear Lake	0.1035	Lab Data CLK02	0.100	Calibration
4	Center of Clear Lake to Clear Lake north of Hwy 509	0.0889	Lab Data avg(CLK02+CLK01)	0.100	Calibration
5	Clear lake north of Hwy 509 to Smithport Lake south of Hwy 509	0.0520	Lab Data avg(CLK01+SL04)	0.100	Calibration
6	Smithport Lake south of hwy 509 to Center of Smithport Lake	0.0414	Lab Data avg(SL04+SL03)	0.100	Calibration
7	Center of Smithport lake to Smithport Lake Dam	0.0575	Lab Data avg(SL03+SL02)	0.100	Calibration

DATA TYPES 16 - INCREMENTAL DATA FOR TEMP AND CONS **DATA TYPES 16 - INCREMENTAL DATA FOR TEMP AND CONS**

Reach	Reach Name	Incr. Ouflow, m3	Incr. Inflow, m3	Data Source	Temp, deg C	Data Source	Chl	Cond	Data Source
1	Bayou Na Bonchase at Mansfield STP Discharger to Bayou Na Bonchase at Hwy 175	0.0000	0.0052	Flow Balance Calculation	17.780	90th Percentile Temperature for WQ site 0281	55	148	Calibration
2	Bayou Na Bonchase at Hwy 175 to Rambin Bayou Intercept	0.0000	0.0000	Flow Balance Calculation	17.780	90th Percentile Temperature for WQ site 0281	0	0	Calibration
3	Rambin Bayou intercept to Center of Clear Lake	0.0000	0.0000	Flow Balance Calculation	17.780	90th Percentile Temperature for WQ site 0281	0	0	Calibration
4	Center of Clear Lake to Clear Lake north of Hwy 509	0.0000	0.0000	Flow Balance Calculation	17.780	90th Percentile Temperature for WQ site 0281	0	0	Calibration
5	Clear lake north of Hwy 509 to Smithport Lake south of Hwy 509	0.0000	0.0000	Flow Balance Calculation	17.780	90th Percentile Temperature for WQ site 0281	0	0	Calibration
6	Smithport Lake south of hwy 509 to Center of Smithport Lake	0.0000	0.0000	Flow Balance Calculation	19.32	90th Percentile Temperature for WQ site 1208	0	0	Calibration
7	Center of Smithport lake to Smithport Lake Dam	0.0000	0.0000	Flow Balance Calculation	19.32	90th Percentile Temperature for WQ site 1208	0	0	Calibration

DATA TYPES 17 - INCREMENTAL DATA FOR DO, BOD, AND NITROGEN			
Reach	**Reach Name**	**DO, mg/l**	**Data Source**
1	Bayou Na Bonchase at Mansfield STP Discharger to Bayou Na Bonchase at Hwy 175	2	Normal Groundwater DO
2	Bayou Na Bonchase at Hwy 175 to Rambin Bayou Intercept	2	Normal Groundwater DO
3	Rambin Bayou intercept to Center of Clear Lake	2	Normal Groundwater DO
4	Center of Clear Lake to Clear Lake north of Hwy 509	2	Normal Groundwater DO
5	Center of Clear Lake to Clear Lake north of Hwy 509	2	Normal Groundwater DO
6	Clear lake north of Hwy 509 to Smithport Lake south of Hwy 509	2	Normal Groundwater DO
7	Smithport Lake south of hwy 509 to Center of Smithport Lake	2	Normal Groundwater DO

DATA TYPE 19 - NONPOINT SOURCES					
Reach	**Reach Name**	**Length of Reach, km**	**UCBOD1, kg/day**	**NBOD, kg/day**	**Data Source**
1	Bayou Na Bonchase at Mansfield STP Discharger to Bayou Na Bonchase at Hwy 175	7.3	0.3	0.35	100% Reduction of man-made sources and 40% Reduction of natural background
2	Bayou Na Bonchase at Hwy 175 to Rambin Bayou Intercept	15.8	6.8	0.68	100% Reduction of man-made sources and 40% Reduction of natural background
3	Rambin Bayou intercept to Center of Clear Lake	0.7	114.5	2.94	100% Reduction of man-made sources and 40% Reduction of natural background
4	Center of Clear Lake to Clear Lake north of Hwy 509	0.7	100.1	2.50	100% Reduction of man-made sources and 40% Reduction of natural background
5	Clear lake north of Hwy 509 to Smithport Lake south of Hwy 509	0.3	16.4	0.33	100% Reduction of man-made sources and 40% Reduction of natural background
6	Smithport Lake south of hwy 509 to Center of Smithport Lake	2.0	235.6	43.53	100% Reduction of man-made sources and 40% Reduction of natural background
7	Center of Smithport lake to Smithport Lake Dam	2.3	366.4	15.43	100% Reduction of man-made sources and 40% Reduction of natural background

DATA TYPES 20 - HEADWATER DATA FOR FLOW, TEMPERATURE, SALINITY, AND CONSERVATIVES

Headwater Name	Element No.	Logical Unit Number	Headwater Flow, cms	Temp, deg C	Salinity	Chlorides	Conductivity	Data Source
Bayou Na Bonchase Headwater upstream from Mansfield STP	1		0.0071	17.78	0.17	38.8	344.4	90th Percentile Temp for WQ Site 0281 Lab Data - Chlorides Insitu - Salinity and Conductivity 7Q10 Flow for Na Bonchase Bayou

Datatype 21

Headwater Name	Dissolved Oxygen, mg/L	Data Source	UCBOD1, mg/l	NBOD, mg/l	Data Source
Bayou Na Bonchase Headwater upstream from Mansfield STP	8.56	90% DO Saturation for WQ site 0281	2.84	0.69	100% Reduction of man-made sources and 40% Reduction of natural background

DATA TYPES 24 - WASTELOAD DATA FOR FLOW, TEMPERATURE, SALINITY, AND CONSERVATIVES

Wasteload / Withdrawal Name	EL #	Flow, cms	Data Source	Temperature, deg C	Data Source	Salinity	Conductivity	Data Source	Chlorides	Data Source
Mansfield STP	1	0.010100	August 2005 DMR	17.78	90th Percentile Temp for WQ Site 0281	0.43	836.3	Insitu Data at NBB03B	82.0	Lab Data at NBB03B
Rambin Bayou	232	0.0280	LTP Minimum flow for Summer	17.78	90th Percentile Temp for WQ Site 0281	0.50	116.8	Insitu Data at RB01	11.3	Lab Data at RB01

DATA TYPES 25 - WASTELOAD DATA FOR DO, BOD, AND NITROGEN						
Wasteload / Withdrawal Name	**EL #**	**DO, mg/l**	**Data Source**	**UCBOD1, mg/l**	**UNBOD, mg/l**	**Data Source**
Mansfield STP	1	5.00	Winter Permit Limits	23.000	43.000	Permit Limits
Rambin Bayou	232	5.00	Disolved Oxygen Standard for Subsegment 100605	3.020	0.510	100% Reduction of man-made sources and 40% Reduction of natural background

DATA TYPES 27 - LOWER BOUNDARY CONDITIONS			
Parameter	**Value**	**Units**	**Data Source**
TEMPERATURE	19.320	^{O}C	90th Percentile Temp from WQ site 1208
SALINITY	0.020	mg/L	SL02 Insitu
CHLORIDES	6.800	ppm	SL02 Lab Data
CONDUCTIVITY	75.100	umhos/cm	SL02 Insitu
DISSOLVED OXYGEN	5.000	mg/L	Disolved Oxygen Standard for Subsegment 100605
CBOD1	14.299	mg/L	SL02 BOD Calculation
NBOD	2.725	mg/L	SL02 BOD Calculation
CHLOROPHYLL A	5.000	ug/L	Best professional Judgement

Appendix E - Projection Model Development

Appendix E1 – Summer Loading

Summer Projection, Non-Point Benthic Load Input and TMDL Calculations:

Modeled stream or water body: **LAKE EDWARDS SMITHPORT LAKE (Subsegment 100605)**

Shaded cells are input values for calculations.
Values to be used in the projection models.

MARGIN OF SAFETY (MOS) (%) = [MOG + MOU] = **20%**

Note: Margin of Safety applies only to Man-Made loads, not Background loads.

	Calibration Model Values													
Reach Number and Description	Non-Point UCBOD1	Non-Point UCBOD2	Total Non-Point UCBOD	Total Nonpoint Organic-N	Calibration Model Benthic Source Rate for Ammonia	Total Non-Point UNBOD	SOD @ 20°C	Total Calb. Benthic Load (TCBL)	Calibration Model Benthic Source Rate for Phosphorus	Reach Length	Proj. Model Avg. Reach Width	Proj. Temp.	Background Benthic Load	Background Benthic Phosphorus
	g O_2 / [(m^2)(day)]	g O_2 / [(m^2)(day)]	g O_2 / [(m^2)(day)]	g / [(m^2)(day)]	g / [(m^2)(day)]	g O_2 / [(m^2)(day)]	g O_2 / [(m^2)(day)]	g O_2 / [(m^2)(day)]	g / [(m^2)(day)]	Kilo-meters	Meters	(deg Celcius)	g O_2 / [(m^2)(day)]	g / [(m^2)(day)]
REACH 1: NBB03c (downstream Bayou Na Bonchase from Mansfield STP) - NBB02 (Bayou Na Bonchase @ State Hwy 175)	0.025	0.000	0.025	0.000	0.000	0.029	1.80	1.854		7.30	2.74	30.36	2.00	
REACH 2: NBB02 (Bayou Na Bonchase at State Hwy 175) - RB01 intersect (Inflow of Rambin Bayou)	0.231	0.000	0.231	0.000	0.000	0.046	2.00	2.277		15.80	2.74	30.36	2.00	
REACH 3: RB01 intersects (In flow of Rambin Bayou) - CLK02 (Center of Clear lake)	11.596	0.000	11.596	0.000	0.000	0.947	2.00	14.544		0.70	147.83	30.36	2.00	
REACH 4: CLK02 (Center of Clear Lake) - CLK01 (Clear lake north of Hwy 509)	1.933	0.000	1.933	0.000	0.000	0.106	2.00	4.039		0.70	147.83	30.36	2.00	
REACH 5: CLK01 (Clear Lake North of Hwy 509) - SL04 (Smithport lake south of Hwy 509)	1.127	0.000	1.127	0.000	0.000	0.225	2.00	3.353		0.30	147.83	30.36	2.00	
REACH 6: SL04 (Smithport Lake south of Hwy 509) - SL03 (Center of Smithport Lake)	6.088	0.000	6.088	0.000	0.000	1.488	2.00	9.576		2.00	147.83	28.89	2.00	
REACH 7: SL03 (Center of Smithport Lake) - SL01 (Smithport Lake Dam)	0.294	0.000	0.294	0.000	0.000	1.471	2.00	3.765		2.30	147.83	28.89	2.00	
Sub-Total														

Lake Edwards/Smithport Lake Watershed TMDL
Subsegment 100605
Originated: June 13, 2007
Final: August 31, 2007
Modeled stream or water body

Shaded cells are input values
Values to be used in the projection models.

Reach Number and Description	Effective Background Benthic Load	Man-Made Benthic Load	Effective Background Benthic Phosphorus	Man-Made Benthic Phosphorus	Background percentage reduction	Percentage Reduction of man-made sources	Reduced Background Benthic Load	Reduced Man-Made Benthic Load	Reduced TCBL adjusted for MOS	Reduced Man-Made Loads: Reduced UCBOD1 Load	Reduced UCBOD2 Load	Reduced Total UCBOD Load	Reduced Organic-N Load	Reduced Ammonia-N Load	Reduced UNBOD Load	Reduced SOD Load at Projection Temp.
	g O_2 / [(m^2)(day)]	g O_2 / [(m^2)(day)]	g / [(m2)(day)]	g / [(m2)(day)]	%	%	g O_2 / [(m^2)(day)]	g O_2 / [(m^2)(day)]	g O_2 / [(m^2)(day)]	kg O_2/day	kg O_2/day	kg O_2/day	kg/day	kg/day	kg O_2/day	kg O_2/day
REACH 1: NBB03c (downstream Bayou Na Bonchase from Mansfield STP) - NBB02 (Bayou Na Bonchase @ State Hwy 175)	1.85	0.00	0.00	0.00	35%	100%	1.21	0.00	1.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00
REACH 2: NBB02 (Bayou Na Bonchase at State Hwy 175) - RB01 intersect (Inflow of Rambin Bayou)	2.00	0.28	0.00	0.00	35%	100%	1.30	0.00	1.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00
REACH 3: RB01 intersects (In flow of Rambin Bayou) - CLK02 (Center of Clear lake)	2.00	12.54	0.00	0.00	35%	100%	1.30	0.00	1.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00
REACH 4: CLK02 (Center of Clear Lake) - CLK01 (Clear lake north of Hwy 509)	2.00	2.04	0.00	0.00	35%	100%	1.30	0.00	1.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00
REACH 5: CLK01 (Clear Lake North of Hwy 509) - SL04 (Smithport lake south of Hwy 509)	2.00	1.35	0.00	0.00	35%	100%	1.30	0.00	1.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00
REACH 6: SL04 (Smithport Lake south of Hwy 509) - SL03 (Center of Smithport Lake)	2.00	7.58	0.00	0.00	35%	100%	1.30	0.00	1.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00
REACH 7: SL03 (Center of Smithport Lake) - SL01 (Smithport Lake Dam)	2.00	1.76	0.00	0.00	35%	100%	1.30	0.00	1.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sub-Total	13.85	25.55	0.00	0.00			9.01	0.00	9.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Lake Edwards/Smithport Lake Watershed TMDL
Subsegment 100605
Originated: June 13, 2007
Final: August 31, 2007

Shaded cells are input values
Values to be used in the projection models.

Reach Number and Description	Benthic Phosphorus adjusted for % reduction	SOD @ 20°C	Projected Model Loads: Non-Point UCBOD1 INPUTS	Non-Point UCBOD2 INPUTS	Total Non-Point UCBOD INPUTS	Non-Point Organic-N INPUTS	Benthic Source Rate for Ammonia	Non-Point UNBOD INPUTS	Total MOS at Projection Temp.	Non-Point UCBOD1 LA	Non-Point UCBOD2 LA	Non-Point UCBOD LA	Non-Point Organic-N LA	Benthic Ammonia LA	Non-Point UNBOD LA	Benthic Phosphorus LA	SOD LA at Projection Temp.
	g / [(m^2)(day)]	g O_2 / [(m^2)(day)]	kg O_2/day	kg O_2/day	kg O_2/day	kg/day	g / [(m^2)(day)]	kg O_2/day	kg O_2/day	kg O_2/day	kg O_2/day	kg O_2/day	kg/day	kg/day	kg O_2/day	kg/day	kg O_2/day
REACH 1: NBB03c (downstream Bayou Na Bonchase from Mansfield STP) - NBB02 (Bayou Na Bonchase @ State Hwy 175)	0.00	1.17	0.33	0.00	0.33	0.00	0.00	0.38	0.00	0.33	0.00	0.33	0.00	0.00	0.38	0.00	44.99
REACH 2: NBB02 (Bayou Na Bonchase at State Hwy 175) - RB01 intersect (Inflow of Rambin Bayou)	0.00	1.14	5.71	0.00	5.71	0.00	0.00	1.14	0.00	5.71	0.00	5.71	0.00	0.00	1.14	0.00	95.03
REACH 3: RB01 intersects (In flow of Rambin Bayou) - CLK02 (Center of Clear lake)	0.00	0.18	107.26	0.00	107.26	0.00	0.00	8.76	0.00	107.26	0.00	107.26	0.00	0.00	8.76	0.00	35.52
REACH 4: CLK02 (Center of Clear Lake) - CLK01 (Clear lake north of Hwy 509)	0.00	0.64	64.37	0.00	64.37	0.00	0.00	3.54	0.00	64.37	0.00	64.37	0.00	0.00	3.54	0.00	127.91
REACH 5: CLK01 (Clear Lake North of Hwy 509) - SL04 (Smithport lake south of Hwy 509)	0.00	0.78	19.39	0.00	19.39	0.00	0.00	3.88	0.00	19.39	0.00	19.39	0.00	0.00	3.88	0.00	66.03
REACH 6: SL04 (Smithport Lake south of Hwy 509) - SL03 (Center of Smithport Lake)	0.00	0.27	244.35	0.00	244.35	0.00	0.00	59.73	0.00	244.35	0.00	244.35	0.00	0.00	59.73	0.00	140.51
REACH 7: SL03 (Center of Smithport Lake) - SL01 (Smithport Lake Dam)	0.00	0.69	34.53	0.00	34.53	0.00	0.00	172.66	0.00	34.53	0.00	34.53	0.00	0.00	172.66	0.00	411.02
Sub-Total	0.00		475.94	0.00	475.94	0.00	0.00	250.09	0.00	**475.94**	**0.00**	**475.94**	**0.00**	**0.00**	**250.09**	**0.00**	**921.01**

Summer TMDL Calculations for Point Source loads:

LAKE EDWARDS SMITHPORT LAKE (Subsegment 100605)

Input data into the shaded cells.

Point Source Loading Calculations					Proposed Permit Limits				Point Source Loading Calculations: UCBOD				UNBOD				Sub-Total of Point Source Phosphorus Loads			Sub-Total of Point Source BOD Loads		
Pt. Source / Facility Description and Reach #	Receiving Stream	Included in the Projection Model (Yes/No)	Anticipated/ design flow (cms)	Flow with MOS (cms)	$CBOD_5$ (mg/l)	NH_3N (mg/l)	PHOSPHORUS (mg/L)	MOS (%)	Ultimate Conc. (mg/l) (2)	Loads (kg/day) (1)	WLA (kg/day)	Reserve/ MOS Load (kg/day)	Ultimate Conc. (mg/l) (2)	Loads (kg/day) (1)	WLA (kg/day)	Reserve/ MOS Load (kg/day)	Loads (kg/day)	WLA (kg/day)	Reserve/ MOS Load (kg/day)	Loads (kg/day)	WLA (kg/day)	Reserve/ MOS (kg/day)
			A	A1 = A/(1-E)	B	C	D	E	F = 2.3 x B	G = (86.4)(A1)(F)	H = (1-E) x G	I = (E)(G)	J = 4.3 x C	K = (86.4)(A1)(J)	L = (1-E) x K	M = (D)(K)	N = 86.4(A1)(D)	O = (1-E) x N	P = E x N	G + K + N	H + L +O	I + M + P
Mansfield STP - Reach #1	Na Bonchasse Bayou	Yes	0.0101	0.012625	10.0	5.0		20%	23.0	25	20	5	21.5	23	19	5	0	0	0	49	39	10
SUB-TOTAL Loads										**25.09**	**20.07**	**5.02**		**23.45**	**18.76**	**4.69**	**0.00**	**0.00**	**0.00**	**48.54**	**38.83**	**9.71**

Summer TMDL calculations and Projection model calculations for Headwater / Tributary loads:

LAKE EDWARDS SMITHPORT LAKE (Subsegment 100605)

Shaded cells are input values for calculations.
Values to be used in the projection models.

N OF SAFETY (MOS) (%) =
ies, be sure that columns "H",

Headwater / Tributary Load Determinations	FROM CALIBRATION	BACKGROUND VALUES										Reduced Background Loads			Reduced Man-Made Loads			PROJECTION VALUES							
Headwater / Tributary Description and Reach #	Seasonal Critical flow (cms)	UCBOD1 (mg O_2/L)	Total UCBOD (mg O_2/L)	UNBOD (mg O_2/L)	Total UNBOD (mg O_2/L)	Background UCBOD1 conc. (mg O_2/L)	Background UCBOD conc. (mg O_2/L)	Background UNBOD conc. (mg O_2/L)	Background UNBOD conc. (mg O_2/L)	Background % Reduction	Percent reduction of Man-Made loads	Reduced Background UCBOD1 load (kg O_2/day)	Total reduced Background UCBOD load (kg O_2/day)	Reduced Background UNBOD load (kg O_2/day)	Reduced UCBOD1 load (kg O_2/day)	Reduced UCBOD load (kg O_2/day)	Reduced UNBOD load (kg O_2/day)	Projection UCBOD1 input conc. (mg O_2/L)	Projection UCBOD input conc. (mg O_2/L)	Projection UNBOD input conc. (mg O_2/L)	**Total MOS (kg O_2/day)**	**Total CBOD1 LA (kg O_2/day)**	**Total CBOD LA (kg O_2/day)**	**Total NBOD LA (kg O_2/day)**	**Total Chlorophyll A LA (g/day)**
NBB03a - Upstream Na Bonchasse Bayou from the Mansfield STP - Reach #1	0.0071	6.278	**6.278**	1.878	**1.878**	4.726	**4.726**	1.157	**1.157**	35%	100%	1.88	1.88	0.46	0.00	0.00	0.00	3.072	3.072	0.752	**0.00**	**1.88**	**1.88**	**0.46**	**0.00**
RB01 - Rambin Bayou - Begins Reach #3	0.0028	9.244	**9.244**	1.687	**1.687**	5.037	**5.037**	0.846	**0.846**	35%	100%	0.79	0.79	0.13	0.00	0.00	0.00	3.274	3.274	0.550	**0.00**	**0.79**	**0.79**	**0.13**	**0.00**
SUB-TOTAL TMDL LOADING												**2.68**	**2.68**	**0.59**	**0.00**	**0.00**	**0.00**				**0.00**	**2.68**	**2.68**	**0.59**	**0.00**

Appendix E2 – Winter Loading

Winter Projection, Non-Point Benthic Load Input and TMDL Calculations:

Modeled stream or water body: **LAKE EDWARDS SMITHPORT LAKE (Subsegment 100605)**

Shaded cells are input values for calculations. MARGIN OF SAFETY (MOS) (%) = [MOG + MOU] = **20%**
Values to be used in the projection models.

Reach Number and Description	Calibration Model Values: Non-Point UCBOD1	Total Non-Point UCBOD	Total Non-Point UNBOD	SOD @ 20°C	Total Calb. Benthic Load (TCBL)	Reach Length	Proj. Model Avg. Reach Width	Proj. Temp.	Background Benthic Load	Effective Background Benthic Load	Man-Made Benthic Load	Background percentage reduction	Percentage Reduction of man-made sources	Reduced Background Benthic Load	Reduced TCBL adjusted for MOS	Reduced Man-Made Loads: Reduced UCBOD1 Load	Reduced Total UCBOD Load	Reduced UNBOD Load	Reduced SOD Load at Projection Temp.	SOD @ 20°C	Projected Model Loads: Non-Point UCBOD1 INPUTS	Total Non-Point UCBOD INPUTS	Non-Point UNBOD INPUTS	**Total MOS at Projection Temp.**	**Non-Point UCBOD1 LA**	**Non-Point UCBOD LA**	**Non-Point UNBOD LA**	**SOD LA at Projection Temp.**
	$g\ O_2/[(m^2)(day)]$	$g\ O_2/[(m^2)(day)]$	$g\ O_2/[(m^2)(day)]$	$g\ O_2/[(m^2)(day)]$	$g\ O_2/[(m^2)(day)]$	Kilo-meters	Meters	(deg Celcius)	$g\ O_2/[(m^2)(day)]$	$g\ O_2/[(m^2)(day)]$	$g\ O_2/[(m^2)(day)]$	%	%	$g\ O_2/[(m^2)(day)]$	$g\ O_2/[(m^2)(day)]$	$kg\ O_2/day$	$kg\ O_2/day$	$kg\ O_2/day$	$kg\ O_2/day$	$g\ O_2/[(m^2)(day)]$	$kg\ O_2/day$	$kg\ O_2/day$	$kg\ O_2/day$	$kg\ O_2/day$	$kg\ O_2/day$	$kg\ O_2/day$	$kg\ O_2/day$	$kg\ O_2/day$
REACH 1: NBB03c (downstream Bayou Na Bonchase from Mansfield STP) - NBB02 (Bayou Na Bonchase @ State Hwy 175)	0.025	0.025	0.029	1.80	1.854	7.30	2.74	17.78	2.00	1.85	0.00	35%	100%	1.21	1.21	0.00	0.00	0.00	0.00	1.17	0.33	0.33	0.38	0.00	0.33	0.33	0.38	20.37
REACH 2: NBB02 (Bayou Na Bonchase at State Hwy 175) - RB01 intersect (Inflow of Rambin Bayou)	0.231	0.231	0.046	2.00	2.277	15.80	2.74	17.78	2.00	2.00	0.28	35%	100%	1.30	1.30	0.00	0.00	0.00	0.00	1.14	5.71	5.71	1.14	0.00	5.71	5.71	1.14	43.03
REACH 3: RB01 intersects (In flow of Rambin Bayou) - CLK02 (Center of Clear lake)	11.596	11.596	0.947	2.00	14.544	0.70	147.83	17.78	2.00	2.00	12.54	35%	100%	1.30	1.30	0.00	0.00	0.00	0.00	0.18	107.26	107.26	8.76	0.00	107.26	107.26	8.76	16.09
REACH 4: CLK02 (Center of Clear Lake) - CLK01 (Clear lake north of Hwy 509)	1.933	1.933	0.106	2.00	4.039	0.70	147.83	17.78	2.00	2.00	2.04	35%	100%	1.30	1.30	0.00	0.00	0.00	0.00	0.64	64.37	64.37	3.54	0.00	64.37	64.37	3.54	57.92
REACH 5: CLK01 (Clear Lake North of Hwy 509) - SL04 (Smithport lake south of Hwy 509)	1.127	1.127	0.225	2.00	3.353	0.30	147.83	17.78	2.00	2.00	1.35	35%	100%	1.30	1.30	0.00	0.00	0.00	0.00	0.78	19.39	19.39	3.88	0.00	19.39	19.39	3.88	29.90
REACH 6: SL04 (Smithport Lake south of Hwy 509) - SL03 (Center of Smithport Lake)	6.088	6.088	1.488	2.00	9.576	2.00	147.83	19.32	2.00	2.00	7.58	35%	100%	1.30	1.30	0.00	0.00	0.00	0.00	0.27	244.35	244.35	59.73	0.00	244.35	244.35	59.73	76.91
REACH 7: SL03 (Center of Smithport Lake) - SL01 (Smithport Lake Dam)	0.294	0.294	1.471	2.00	3.765	2.30	147.83	19.32	2.00	2.00	1.76	35%	100%	1.30	1.30	0.00	0.00	0.00	0.00	0.69	34.53	34.53	172.66	0.00	34.53	34.53	172.66	224.98
Sub-Total										13.85	25.55			9.01	9.01	0.00	0.00	0.00	0.00		475.94	475.94	250.09	0.00	**475.94**	**475.94**	**250.09**	**469.20**

Winter TMDL Calculations for Point Source loads:

LAKE EDWARDS SMITHPORT LAKE (Subsegment 100605)

Input data into the shaded cells.

Point Source Loading Calculations

Pt. Source / Facility Description and Reach #	Receiving Stream	Included in the Projection Model (Yes/No)	Anticipated/ design flow (cms)	Flow with MOS (cms)	Proposed Permit Limits: $CBOD_5$ (mg/l)	NH_3N (mg/l)	MOS (%)	UCBOD: Ultimate Conc. (mg/l) (2)	Loads (kg/day) (1)	WLA (kg/day)	Reserve/ MOS Load (kg/day)	UNBOD: Ultimate Conc. (mg/l) (2)	Loads (kg/day) (1)	WLA (kg/day)	Reserve/ MOS Load (kg/day)	Sub-Total of Point Source Phosphorus Loads: **Loads (kg/day)**	**WLA (kg/day)**	**Reserve/ MOS Load (kg/day)**	Sub-Total of Point Source BOD Loads: **Loads (kg/day)**	**WLA (kg/day)**	**Reserve/ MOS (kg/day)**
			A	**A1 = A/(1-E)**	**B**	**C**	**E**	**F = 2.3 x B**	**G = (86.4)(A1)(F)**	**H = (1-E) x G**	**I = (E)(G)**	**J = 4.3 x C**	**K = (86.4)(A1)(J)**	**L = (1-E) x K**	**M = (D)(K)**	**N = 86.4(A1)(D)**	**O = (1-E) x N**	**P = E x N**	**G + K + N**	**H + L +O**	**I + M + P**
Mansfield STP - Reach #1	Na Bonchasse Bayou	Yes	0.0329	0.041125	10.0	10.0	20%	23.0	82	65	16	43.0	153	122	31	**0**	**0**	**0**	**235**	**188**	**47**
SUB-TOTAL Loads									**81.72**	**65.38**	**16.34**		**152.79**	**122.23**	**30.56**	**0.00**	**0.00**	**0.00**	**234.51**	**187.61**	**46.90**

(1) - Load(kg/day) = 86.4 x Ultimate Conc.(mg/l) x Modeled Flow(cms)
(2) - [UCBOD conc. = CBOD5(mg/l) x 2.3] and [UNBOD conc. = NH3N(mg/l) x 4.3]

Winter TMDL calculations and Projection model calculations for Headwater / Tributary loads:

LAKE EDWARDS SMITHPORT LAKE (Subsegment 100605)

Shaded cells are input values for calculations. ARGIN OF SAFETY (MOS) (%)
Values to be used in the projection models. ries, be sure that columns "H" &

Headwater / Tributary Description and Reach #	FROM CALIBRATION: Seasonal Critical flow (cms)	UCBOD1 ($mg\ O_2/L$)	Total UCBOD ($mg\ O_2/L$)	UNBOD ($mg\ O_2/L$)	Total UNBOD ($mg\ O_2/L$)	BACKGROUND VALUES: Background UCBOD1 conc. ($mg\ O_2/L$)	Background UCBOD conc. ($mg\ O_2/L$)	Background UNBOD conc. ($mg\ O_2/L$)	Background UNBOD conc. ($mg\ O_2/L$)	Background % Reduction	Percent reduction of Man-Made loads	Reduced Background Loads: Reduced Background UCBOD1 load ($kg\ O_2/day$)	Total reduced Background UCBOD load ($kg\ O_2/day$)	Reduced Background UNBOD load ($kg\ O_2/day$)	Reduced Man-Made Loads: Reduced UCBOD1 load ($kg\ O_2/day$)	Reduced UCBOD load ($kg\ O_2/day$)	Reduced UNBOD load ($kg\ O_2/day$)	PROJECTION VALUES: Projection UCBOD1 input conc. ($mg\ O_2/L$)	Projection UCBOD input conc. ($mg\ O_2/L$)	Projection UNBOD input conc. ($mg\ O_2/L$)	**Total MOS ($kg\ O_2/day$)**	**Total CBOD1 LA ($kg\ O_2/day$)**	**Total CBOD LA ($kg\ O_2/day$)**	**Total NBOD LA ($kg\ O_2/day$)**	**Total Nit-Nit LA (kg/day)**
NBB03a - Upstream Na Bonchasse Bayou from the Mansfield STP - Reach #1	0.2500	6.278	6.278	1.878	1.88	4.726	4.73	1.157	1.16	35%	100%	66.36	66.36	16.24	0.00	0.00	0.00	3.07	3.072	0.752	**0.00**	**66.36**	**66.36**	**16.24**	**0.00**
RB01 - Rambin Bayou - Begins Reach #3	0.0280	9.244	9.244	1.687	1.69	5.037	5.04	0.846	0.85	35%	100%	7.92	7.92	1.33	0.00	0.00	0.00	3.27	3.274	0.550	**0.00**	**7.92**	**7.92**	**1.33**	**0.00**
SUB-TOTAL TMDL LOADING												**74.28**	**74.28**	**17.58**	**0**	**0.00**	**0.00**				**0.00**	**74.28**	**74.28**	**17.58**	**0.00**

Appendix E3 – Critical Flow Calculations

Lake Edwards and Smithport Lake 100605 Flow Input		Reach Length (km)	Calculation	Flow (cms)
Headwater			NBB03a	0.0001
Incremental Inflow	Reach 1	7.3	NBB02 - NBB03a - NBB03b	0.0052
No Incremental flow	Reach 2	15.8	Continuous Flow	0.0000
No Incremental flow	Reach 3	0.7	Continuous Flow	0.0000
No Incremental flow	Reach 4	0.7	Continuous Flow	0.0000
No Incremental flow	Reach 5	0.3	Continuous Flow	0.0000
No Incremental flow	Reach 6	2	Continuous Flow	0.0000
No Incremental flow	Reach 7	2.3	Continuous Flow	0.0000
Discharger	NBB03b		NBB03b	0.0101
Tributary	RB01		SL01 - NBB02	0.0302

PERMITTEE NAME/ADDRESS
(Include Facility Name/Location if different)

NAME City of Mansfield
ADDRESS P.O. Box 773
Mansfield, LA 71052

FACILITY Mansfield Wastewater Treatment Facility
LOCATION George Hunt Road; Mansfield; DeSoto Parish

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM *(NPDES)*
DISCHARGE MONITORING REPORT *(DMR)*

(2-14) PERMIT NUMBER	(17-19) DISCHARGE NUMBER
LA0038962	001 A

MAJOR
F - FINAL
TREATED SANITARY WASTEWATER
PCU

MONITORING PERIOD						
FROM	YEAR	MO	DAY	TO	YEAR	MO	DAY
	05	08	01		05	08	31
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

_____ NO DISCHARGE

NOTE: Read Instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
BOD, 5-DAY	SAMPLE MEASUREMENT	9.12	XXXXXX	(26)	XXXXXX	6.45	7.65	(19)	0	WEEKLY	3 HR COMP.
00310 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	63 MONTHLY AVG.	XXXXXX	#/DAY	XXXXXX	10 MONTHLY AVG.	15 WEEKLY AVG.	mg/l		WEEKLY	3 HR COMP.
pH	SAMPLE MEASUREMENT	XXXXXX	XXXXXX		7.4	XXXXXX	7.6	(12)	0	WEEKLY	GRAB
00400 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	XXXXXX	XXXXXX	XX	6.0 MINIMUM	XXXXXX	9.0 MAXIUM	SU		WEEKLY	GRAB
SOLIDS, TOTAL SUSPENDED	SAMPLE MEASUREMENT	31.19	XXXXXX	(26)	XXXXXX	24.96	45.20	(19)	1	WEEKLY	3 HR COMP.
00530 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	94 MONTHLY AVG.	XXXXX	#/DAY	XXXXXX	15 MONTHLY AVG.	23 WEEKLY AVG.	mg/L		WEEKLY	3 HR COMP.
FLOW, IN CONDUIT OR THRU TREATMENT PLANT	SAMPLE MEASUREMENT	0.230	0.462	(03)	XXXXXX	XXXXXX	XXXXXX			CONT.	RECORDER
50050 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	REPORT MONTHLY AVG.	REPORT WEEKLY AVG.	MGD	XXXXXX	XXXXXX	XXXXXX	XX	X	CONTIN-UOUS	RECORDER
COLIFORM, FECAL GENERAL	SAMPLE MEASUREMENT	XXXXXX	XXXXXX		XXXXXX	191.8	484	(13) # / 100 ml	1	WEEKLY	GRAB
74055 1 0 0	PERMIT REQUIREMENT	XXXXXX	XXXXXX	XX	XXXXXX	200 MONTHLY GEO.	400 WEEKLY GEO.			WEEKLY	GRAB
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Curtis W. McCay, Mayor
Gail Mitchell
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE		DATE		
318	872-0406	2005	09	13
AREA CODE	NUMBER	YEAR	MO	DAY

COMMENT AND EXPLANATION OF ANY VIOLATIONS *(Reference all attachments here)*

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PAGE 1 OF 1

	SN	Station Name	Lat	Long	7Q10	DA	RATIO	YR	TS	
33	7348800	FLAT LICK BAYOU NEAR LETON	324611	931558	0	66.9	0.0000	10	D	
34	7348900	Brushy Creek near Hortman	324140	932240	0	16.1	0.0000	12	L	
35	7348970	Sausman's Creek near Minden	323850	932210	0	12 8	0 0000	4	L	
36	7349000	BAYOU DORCHEAT NEAR MINDEN	323555	931959	0	1097	0.0000	35	D	Loss to Aqu
37	7349030	Boone Creek near Doyline	323220	932230	0 5	19.5	0.0256	4	L	
38	7349100	Brushy Creek near Sibley	322850	931800	0.6	43.6	0.0138	9	L	
39	7349200	Clark Bayou near Haughton	323405	932910	0 2	35 1	0 0057	9	L	
40	7349374	FLAT RIVER NEAR CURTIS	322620	933737	1 9	*		8	D	
41	7349460	Martin Creek near Springhill	325912	933325	0	80.6	0.0000	4	L	
42	7349500	BODCAU BAYOU NEAR SAREPTA	325418	932858	0 3	546	0.0005	57	D	SI regulated
43	7349600	Caney Creek near Cotton Valley	324920	932915	0	63 9	0.0000	5	L	
44	7349795	CYPRESS BAYOU ABOVE BENTON	324715	934227	0	88.9	0.0000	11	D	
45	7349796	Caney Creek near Benton	324545	934015	0	31 9	0.0000	4	L	
46	7349840	Black Bayou at Benton	324140	934340	0	17 2	0.0000	7	L	
47	7349845	Black Bayou near Benton	323855	934135	0	26	0.0000	4	L	
48	7349860	RED CHUTE BAYOU NEAR SLIGO	322650	933540	4 4	980	0.0045	18	D	
49	7350000	LOGGY BAYOU NEAR NINOCK	321410	932535	0	2628	0.0000	12	D	SI regulated
50	7350020	LOGGY BAYOU NEAR EAST POINT	321140	932630	25 2	2648	0.0095	4	D	
51	7350500	RED RIVER AT COUSHATTA	320045	932110	1330	63362	0.0210	13	D	Regulated
52	7350800	Bayou Pierre at Forbing	322335	934325	0.4	19	0.0211	6	L	
53	7351000	BOGGY BAYOU NEAR KEITHVILLE	322235	934917	0	79	0.0000	43	D	
54	7351250	Brush Bayou at Mt. Zion Road near Shreveport	302445	934625	0.3	19 7	0.0152	6	L	
55	7351500	CYPRESS BAYOU NEAR KEITHVILLE	321800	934940	0	66	0.0000	34	D	
56	7351600	BAYOU PIERRE NEAR GRAND BAYOU	320441	933036	6.1	661	0.0092	6	D	
56	7351670	Rambin Bayou near Frierson	321325	934210	0	59 6	0.0000	9	L	
57	7351700	BAYOU NA BONCHASSE NEAR MANSFIELD	320605	934145	0.2	19 5	0 0103	10	D	
58	7351703	Little Bayou Na Bonchasse near Mansfield	320725	934205	0.1	10.9	0 0092	6	L	
59	7351720	Buffalo Bayou near Naborton	320430	933545	0	17.7	0.0000	7	L	
60	7351748	WEST BRANCH DOLET BAYOU AT RAMBIN	315735	932705	0	32.3	0.0000	21	D	
61	7351750	BAYOU PIERRE NEAR LAKE END	315340	932030	20 5	860	0.0238	17	D	
62	7351760	Bayou Terre Blanc near Allen	314620	931755	0	26.6	0.0000	8	L	
63	7352000	SALINE BAYOU NEAR LUCKY	321500	925835	4.4	154	0.0286	58	D	
64	7352040	Readhimer Creek near Lucky	321250	930100	0 4	4.4	0.0909	4	L	

07351700 BAYOU NA BONCHASSE NEAR MANSFIELD

Analysis for -- 12 month period
starting April 1
ending March 31
1940-1968

Parameter is 7 day low value.

0 zero values in data

10 non-zero values in data

0.357	0.757	0.814	0.914	0.314
0.300	0.243	0.300	0.557	0.543

The following 7 statistics are based on non-zero values.

Mean (logs)	-0.338
Variance (logs)	0.044
Standard Deviation (logs)	0.209
Skewness (logs)	0.206
Standard Error of Skewness (logs)	0.687
Serial Correlation Coefficient (logs)	0.466
Coefficient of Variation (logs)	-0.620

Non exceedance Probability	Recurrence Interval	Parameter Value
0.0100	100.00	0.161
0.0200	50.00	0.180
0.0500	20.00	0.214
0.1000	10.00	0.250
0.2000	5.00	0.305
0.5000	2.00	0.452
0.8000	1.25	0.685
0.9000	1.11	0.860
0.9600	1.04	1.105
0.9800	1.02	1.303
0.9900	1.01	1.516

Appendix F – Survey Data Measurements and Analysis Results

Appendix F1 – Water Quality Data

LAB WQ CROSS TAB REPORT

PROJECT **Lake Edwards/ Smithport Lake**
PROJECT N ES2005004

SITE ID NUMBER	COLLECTION DATE	COLLECTION TIME	Chloride, mg/L	Sulfate, mg/L	Hardness, mg/L	Alkalinity	Specific Conductance, mg/L	Sodium mg/L	TOC, mg/L	TP, mg/L	TDS mg/L	TSS, mg/L	Ammonia mg/L	Nitrate+Nitrite mg/L	TKN, mg/L	Color	Chlorophyll a, ug/L
CB01	8/17/2005	9:30:00 AM	14.2	10.2	36.5	30.4	130	12.3	10.3	0.17	192	48	ND	ND	1.67		
CLK01	8/17/2005	9:15:00 AM	18.4	2	36.1	43.6	148	16	11	0.09	101	4.7	0.12	ND	0.8		44.9
CLK02	8/17/2005	8:45:00 AM	21.7	2	43.3	49.5	172	19.1	12	0.13	116	9.3	ND	ND	0.97		
NBB02	8/17/2005	10:15:00 AM	61.4	27.3	77.7	126	520	75.5	10.8	0.6	310	46	0.11	1.27	2.03		15.1
NBB03A	8/17/2005	12:30:00 PM															28.5
NBB03A	8/17/2005	11:30:00 AM	38.8	33.7	68.4	87.7	382	46	7.1	0.11	274	66	0.18	0.22	1.3		
NBB03B	8/17/2005	11:30:00 AM	106	39.6	86.9	240	910	131	17.1	0.55	496	18	13.4	0.05	15		
NBB03C	8/17/2005	11:30:00 AM	82	39.1	86.3	186	735	102	13.3	0.97	378	25	9.28	0.11	9.98		
RB01	8/17/2005	9:00:00 AM	11.3	9.1	34.9	35	133	11.1	9.6	0.23	136	16	0.2	0.08	0.99		
SL03	8/17/2005	10:00:00 AM	16.1	2	35.3	41.7	136	14.8	10.7	0.12	101	11	ND	ND	1.03		89.3
SL04	8/18/2005	9:40:00 AM															
SL04	8/17/2005	9:40:00 AM	18.4	2	36.5	44.6	151	16.3	11.2	0.09	105	4.7	ND	ND	0.74		
SLO2	8/17/2005	11:30:00 AM	6.8	2.7	24.1	28.5	84	8.9	11.6	0.11	72	8	ND	ND	1.22		27.6

Lake Edwards / Smithport Lake Lab Data

Site_ Number	Site_Description	Site_Location	Lab_ID	Lab_ Sample _Type	Analysis_Name	Result	Units	Reference_ Method	MDL	Analysis _Set_Up	Analysis _Read	Date_ Nitrates_ Sampled
SLO2	Smithport Lake	Smithport Lake north at the dam	AH28714	TRG	TSS	8.0	ppm	160.2	4.00	8/19/2005	8/22/2005	
SLO2	Smithport Lake	Smithport Lake north at the dam	AH28714	TRG	TDS	72.0	ppm	160.1	10.00	8/18/2005	8/19/2005	
SLO2	Smithport Lake	Smithport Lake north at the dam	AH28714	TRG	Alkalinity	28.5	ppm	310.1	2.0	8/25/2005	8/25/2005	
SLO2	Smithport Lake	Smithport Lake north at the dam	AH28714	TRG	Turbidity	5.1	NTU	SM 2130B	1.00	8/18/2005	8/18/2005	
SLO2	Smithport Lake	Smithport Lake north at the dam	AH28714	TRG	Specific Conductance	84.0	umhos/cm	120.1	10.0	8/25/2005	8/25/2005	
SLO2	Smithport Lake	Smithport Lake north at the dam	AH28714	TRG	True Color	60	PCU	110.2	5.00	8/17/2005	8/17/2005	
SLO2	Smithport Lake	Smithport Lake north at the dam	AH28714	TRG	Chloride, Ion Chromatograph	6.8	ppm	300.0	1.25	9/6/2005	9/6/2005	
SLO2	Smithport Lake	Smithport Lake north at the dam	AH28714	TRG	Sulfate	2.7	ppm	300.0	1.3	9/6/2005	9/6/2005	
SLO2	Smithport Lake	Smithport Lake north at the dam	AH28715	TRG	Sodium	8.9	ppm	200.7	1.0	9/18/2005	9/19/2005	
SLO2	Smithport Lake	Smithport Lake north at the dam	AH28716	TRG	Hardness	24.1	ppm	130.2	5.0	9/14/2005	9/14/2005	
SLO2	Smithport Lake	Smithport Lake north at the dam	AH28716	TRG	Nitrate+Nitrite Nitrogen	ND	ppm	353.2	0.05	8/22/2005	8/22/2005	
SLO2	Smithport Lake	Smithport Lake north at the dam	AH28716	TRG	TP	0.11	ppm	365.4	0.05	9/8/2005	9/8/2005	
SLO2	Smithport Lake	Smithport Lake north at the dam	AH28716	TRG	TKN	1.22	ppm	351.2	0.10	8/23/2005	8/23/2005	
SLO2	Smithport Lake	Smithport Lake north at the dam	AH28716	TRG	Ammonia-Nitrogen	ND	ppm	350.3	0.10	9/8/2005	9/8/2005	
SLO2	Smithport Lake	Smithport Lake north at the dam	AH28717	TRG	TOC	11.6	ppm	415.1	2.00	9/7/2005	9/8/2005	
SLO2	Smithport Lake	Smithport Lake north at the dam	AH28718	TRG	pH, Ultimate BOD survey	6.87	pH units	150.1	0.01	10/17/2005	10/17/2005	
SLO2	Smithport Lake	Smithport Lake north at the dam	AH28718	TRG	TOC (60 Day BOD)	9.8	ppm	415.1	2.0	10/20/2005	10/21/2005	
SLO2	Smithport Lake	Smithport Lake north at the dam	AH28718	TRG	TKN (60 Day BOD)	0.69	ppm	351.2	0.10	10/19/2005	10/19/2005	
SLO2	Smithport Lake	Smithport Lake north at the dam	AH28718	TRG	NO2NO3 - Initial Reading	ND	ppm	353.2	0.05	8/19/2005	8/19/2005	8/18/2005
SLO2	Smithport Lake	Smithport Lake north at the dam	AH28718	TRG	NO2NO3 - Reading 1	ND	ppm	353.2	0.05	9/9/2005	9/9/2005	8/19/2005
SLO2	Smithport Lake	Smithport Lake north at the dam	AH28718	TRG	NO2NO3 - Reading 2	ND	ppm	353.2	0.05	9/9/2005	9/9/2005	8/22/2005
SLO2	Smithport Lake	Smithport Lake north at the dam	AH28718	TRG	NO2NO3 - Reading 3	ND	ppm	353.2	0.05	9/9/2005	9/9/2005	8/24/2005
SLO2	Smithport Lake	Smithport Lake north at the dam	AH28718	TRG	NO2NO3 - Reading 4	ND	ppm	353.2	0.05	9/14/2005	9/14/2005	8/26/2005
SLO2	Smithport Lake	Smithport Lake north at the dam	AH28718	TRG	NO2NO3 - Reading 5	ND	ppm	353.2	0.05	9/13/2005	9/13/2005	8/30/2005
SLO2	Smithport Lake	Smithport Lake north at the dam	AH28718	TRG	NO2NO3 - Reading 6	ND	ppm	353.2	0.05	9/13/2005	9/13/2005	9/2/2005
SLO2	Smithport Lake	Smithport Lake north at the dam	AH28718	TRG	NO2NO3 - Reading 7	0.08	ppm	353.2	0.05	9/13/2005	9/13/2005	9/7/2005
SLO2	Smithport Lake	Smithport Lake north at the dam	AH28718	TRG	NO2NO3 - Reading 8	0.28	ppm	353.2	0.05	9/28/2005	9/28/2005	9/16/2005
SLO2	Smithport Lake	Smithport Lake north at the dam	AH28718	TRG	NO2NO3 - Reading 9	0.47	ppm	353.2	0.05	9/28/2005	9/28/2005	9/27/2005
SLO2	Smithport Lake	Smithport Lake north at the dam	AH28718	TRG	NO2NO3 - Reading 10	0.52	ppm	353.2	0.05	10/21/2005	10/21/2005	10/7/2005
SLO2	Smithport Lake	Smithport Lake north at the dam	AH28718	TRG	NO2NO3 - Final	0.53	ppm	353.2	0.05	10/21/2005	10/21/2005	10/17/2005
SLO2	Smithport Lake	Smithport Lake north at the dam	AH28718	TRG	Non-Filtered BOD 60 - Reading 1	1.3	ppm	5210B	2.0	8/18/2005	8/19/2005	
SLO2	Smithport Lake	Smithport Lake north at the dam	AH28718	TRG	Non-Filtered BOD 60 - Reading 2	5.1	ppm	5210B	2.0	8/18/2005	8/22/2005	

SLO2	Smithport Lake	Smithport Lake north at the dam	AH28718	TRG	Non-Filtered BOD 60 - Reading 3	6.6	ppm	5210B	2.0	8/18/2005	8/24/2005	
SLO2	Smithport Lake	Smithport Lake north at the dam	AH28718	TRG	Non-Filtered BOD 60 - Reading 4	7.9	ppm	5210B	2.0	8/18/2005	8/26/2005	
SLO2	Smithport Lake	Smithport Lake north at the dam	AH28718	TRG	Non-Filtered BOD 60 - Reading 5	9.4	ppm	5210B	2.0	8/18/2005	8/30/2005	
SLO2	Smithport Lake	Smithport Lake north at the dam	AH28718	TRG	Non-Filtered BOD 60 - Reading 6	10.2	ppm	5210B	2.0	8/18/2005	9/2/2005	
SLO2	Smithport Lake	Smithport Lake north at the dam	AH28718	TRG	Non-Filtered BOD 60 - Reading 7	11.8	ppm	5210B	2.0	8/18/2005	9/7/2005	
SLO2	Smithport Lake	Smithport Lake north at the dam	AH28718	TRG	Non-Filtered BOD 60 - Reading 8	13.9	ppm	5210B	2.0	8/18/2005	9/16/2005	
SLO2	Smithport Lake	Smithport Lake north at the dam	AH28718	TRG	Non-Filtered BOD 60 - Reading 9	15.8	ppm	5210B	2.0	8/18/2005	9/27/2005	
SLO2	Smithport Lake	Smithport Lake north at the dam	AH28718	TRG	Non-Filtered BOD 60 - Reading 10	16.8	ppm	5210B	2.0	8/18/2005	10/7/2005	
SLO2	Smithport Lake	Smithport Lake north at the dam	AH28718	TRG	Non-Filtered BOD 60 - Final	17.6	ppm	5210B	2.0	8/18/2005	10/17/2005	
SLO2	Smithport Lake	Smithport Lake north at the dam	AH28719	TRG	Chlorophyll A (calculated)	27.6	ug/L	445 (modifie	1.0	9/8/2005	9/9/2005	
SLO2	Smithport Lake	Smithport Lake north at the dam	AH28719	TRG	Chlorophyll A (raw)	552	ug/L	445 (modifie	0.0	9/8/2005	9/9/2005	
SLO2	Smithport Lake	Smithport Lake north at the dam	AH28719	TRG	Volume of sample, Chlorophyll A (raw)	200	ml	445 (modifie	0.0	9/8/2005	9/9/2005	
SL03	Smithport Lake	Center of Smithport Lake	AH28720	TRG	TSS	11.0	ppm	160.2	4.00	8/19/2005	8/22/2005	
SL03	Smithport Lake	Center of Smithport Lake	AH28720	TRG	TDS	101	ppm	160.1	10.00	8/18/2005	8/19/2005	
SL03	Smithport Lake	Center of Smithport Lake	AH28720	TRG	Alkalinity	41.7	ppm	310.1	2.0	8/25/2005	8/25/2005	
SL03	Smithport Lake	Center of Smithport Lake	AH28720	TRG	Turbidity	4.8	NTU	SM 2130B	1.00	8/18/2005	8/18/2005	
SL03	Smithport Lake	Center of Smithport Lake	AH28720	TRG	Specific Conductance	136	umhos/cm	120.1	10.0	8/25/2005	8/25/2005	
SL03	Smithport Lake	Center of Smithport Lake	AH28720	TRG	True Color	49	PCU	110.2	5.00	8/17/2005	8/17/2005	
SL03	Smithport Lake	Center of Smithport Lake	AH28720	TRG	Chloride, Ion Chromatograph	16.1	ppm	300.0	1.25	9/6/2005	9/6/2005	
SL03	Smithport Lake	Center of Smithport Lake	AH28720	TRG	Sulfate	2.0	ppm	300.0	1.3	9/6/2005	9/6/2005	
SL03	Smithport Lake	Center of Smithport Lake	AH28721	TRG	Sodium	14.8	ppm	200.7	1.0	9/18/2005	9/19/2005	
SL03	Smithport Lake	Center of Smithport Lake	AH28722	TRG	Hardness	35.3	ppm	130.2	5.0	9/14/2005	9/14/2005	
SL03	Smithport Lake	Center of Smithport Lake	AH28722	TRG	Nitrate+Nitrite Nitrogen	ND	ppm	353.2	0.05	8/22/2005	8/22/2005	
SL03	Smithport Lake	Center of Smithport Lake	AH28722	TRG	TP	0.12	ppm	365.4	0.05	9/8/2005	9/8/2005	
SL03	Smithport Lake	Center of Smithport Lake	AH28722	TRG	TKN	1.03	ppm	351.2	0.10	8/23/2005	8/23/2005	
SL03	Smithport Lake	Center of Smithport Lake	AH28722	TRG	Ammonia-Nitrogen	ND	ppm	350.3	0.10	9/8/2005	9/8/2005	
SL03	Smithport Lake	Center of Smithport Lake	AH28723	TRG	TOC	10.7	ppm	415.1	2.00	9/7/2005	9/8/2005	
SL03	Smithport Lake	Center of Smithport Lake	AH28724	TRG	pH, Ultimate BOD survey	7.06	pH units	150.1	0.01	10/17/2005	10/17/2005	
SL03	Smithport Lake	Center of Smithport Lake	AH28724	TRG	TOC (60 Day BOD)	9.5	ppm	415.1	2.0	10/20/2005	10/21/2005	
SL03	Smithport Lake	Center of Smithport Lake	AH28724	TRG	TKN (60 Day BOD)	0.91	ppm	351.2	0.10	10/19/2005	10/19/2005	
SL03	Smithport Lake	Center of Smithport Lake	AH28724	TRG	NO2NO3 - Initial Reading	0.06	ppm	353.2	0.05	8/19/2005	8/19/2005	8/18/2005
SL03	Smithport Lake	Center of Smithport Lake	AH28724	TRG	NO2NO3 - Reading 1	ND	ppm	353.2	0.05	9/9/2005	9/9/2005	8/19/2005
SL03	Smithport Lake	Center of Smithport Lake	AH28724	TRG	NO2NO3 - Reading 2	ND	ppm	353.2	0.05	9/9/2005	9/9/2005	8/22/2005
SL03	Smithport Lake	Center of Smithport Lake	AH28724	TRG	NO2NO3 - Reading 3	ND	ppm	353.2	0.05	9/9/2005	9/9/2005	8/24/2005
SL03	Smithport Lake	Center of Smithport Lake	AH28724	TRG	NO2NO3 - Reading 4	ND	ppm	353.2	0.05	9/14/2005	9/14/2005	8/26/2005
SL03	Smithport Lake	Center of Smithport Lake	AH28724	TRG	NO2NO3 - Reading 5	ND	ppm	353.2	0.05	9/13/2005	9/13/2005	8/30/2005

SL03	Smithport Lake	Center of Smithport Lake	AH28724	TRG	NO2NO3 - Reading 6	ND	ppm	353.2	0.05	9/13/2005	9/13/2005	9/2/2005
SL03	Smithport Lake	Center of Smithport Lake	AH28724	TRG	NO2NO3 - Reading 7	0.25	ppm	353.2	0.05	9/13/2005	9/13/2005	9/7/2005
SL03	Smithport Lake	Center of Smithport Lake	AH28724	TRG	NO2NO3 - Reading 8	0.32	ppm	353.2	0.05	9/28/2005	9/28/2005	9/16/2005
SL03	Smithport Lake	Center of Smithport Lake	AH28724	TRG	NO2NO3 - Reading 9	0.50	ppm	353.2	0.05	9/28/2005	9/28/2005	9/27/2005
SL03	Smithport Lake	Center of Smithport Lake	AH28724	TRG	NO2NO3 - Reading 10	0.55	ppm	353.2	0.05	10/21/2005	10/21/2005	10/7/2005
SL03	Smithport Lake	Center of Smithport Lake	AH28724	TRG	NO2NO3 - Final	0.57	ppm	353.2	0.05	10/21/2005	10/21/2005	10/17/2005
SL03	Smithport Lake	Center of Smithport Lake	AH28724	TRG	Non-Filtered BOD 60 - Reading 1	1.8	ppm	5210B	2.0	8/18/2005	8/19/2005	
SL03	Smithport Lake	Center of Smithport Lake	AH28724	TRG	Non-Filtered BOD 60 - Reading 2	6.2	ppm	5210B	2.0	8/18/2005	8/22/2005	
SL03	Smithport Lake	Center of Smithport Lake	AH28724	TRG	Non-Filtered BOD 60 - Reading 3	7.5	ppm	5210B	2.0	8/18/2005	8/24/2005	
SL03	Smithport Lake	Center of Smithport Lake	AH28724	TRG	Non-Filtered BOD 60 - Reading 4	8.8	ppm	5210B	2.0	8/18/2005	8/26/2005	
SL03	Smithport Lake	Center of Smithport Lake	AH28724	TRG	Non-Filtered BOD 60 - Reading 5	10.6	ppm	5210B	2.0	8/18/2005	8/30/2005	
SL03	Smithport Lake	Center of Smithport Lake	AH28724	TRG	Non-Filtered BOD 60 - Reading 6	11.7	ppm	5210B	2.0	8/18/2005	9/2/2005	
SL03	Smithport Lake	Center of Smithport Lake	AH28724	TRG	Non-Filtered BOD 60 - Reading 7	13.9	ppm	5210B	2.0	8/18/2005	9/7/2005	
SL03	Smithport Lake	Center of Smithport Lake	AH28724	TRG	Non-Filtered BOD 60 - Reading 8	15.4	ppm	5210B	2.0	8/18/2005	9/16/2005	
SL03	Smithport Lake	Center of Smithport Lake	AH28724	TRG	Non-Filtered BOD 60 - Reading 9	17.4	ppm	5210B	2.0	8/18/2005	9/27/2005	
SL03	Smithport Lake	Center of Smithport Lake	AH28724	TRG	Non-Filtered BOD 60 - Reading 10	18.4	ppm	5210B	2.0	8/18/2005	10/7/2005	
SL03	Smithport Lake	Center of Smithport Lake	AH28724	TRG	Non-Filtered BOD 60 - Final	19.2	ppm	5210B	2.0	8/18/2005	10/17/2005	
SL03	Smithport Lake	Center of Smithport Lake	AH28725	TRG	Chlorophyll A (raw)	1072	ug/L	445 (modifie	0.0	9/8/2005	9/9/2005	
SL03	Smithport Lake	Center of Smithport Lake	AH28725	TRG	Volume of sample, Chlorophyll A (raw)	120	ml	445 (modifie	0.0	9/8/2005	9/9/2005	
SL03	Smithport Lake	Center of Smithport Lake	AH28725	TRG	Chlorophyll A (calculated)	89.3	ug/L	445 (modifie	1.0	9/8/2005	9/9/2005	
SL04	Smithport Lake	Just S of Hwy 509	AH28726	TRG	TSS	4.7	ppm	160.2	4.00	8/19/2005	8/22/2005	
SL04	Smithport Lake	Just S of Hwy 509	AH28726	TRG	TDS	105	ppm	160.1	10.00	8/18/2005	8/19/2005	
SL04	Smithport Lake	Just S of Hwy 509	AH28726	TRG	Alkalinity	44.6	ppm	310.1	2.0	8/25/2005	8/25/2005	
SL04	Smithport Lake	Just S of Hwy 509	AH28726	TRG	Turbidity	5.2	NTU	SM 2130B	1.00	8/18/2005	8/18/2005	
SL04	Smithport Lake	Just S of Hwy 509	AH28726	TRG	Specific Conductance	151	umhos/cm	120.1	10.0	8/25/2005	8/25/2005	
SL04	Smithport Lake	Just S of Hwy 509	AH28726	TRG	True Color	50	PCU	110.2	5.00	8/17/2005	8/17/2005	
SL04	Smithport Lake	Just S of Hwy 509	AH28726	TRG	Chloride, Ion Chromatograph	18.4	ppm	300.0	1.25	9/6/2005	9/6/2005	
SL04	Smithport Lake	Just S of Hwy 509	AH28726	TRG	Sulfate	2.0	ppm	300.0	1.3	9/6/2005	9/6/2005	
SL04	Smithport Lake	Just S of Hwy 509	AH28727	TRG	Sodium	16.3	ppm	200.7	1.0	9/18/2005	9/19/2005	
SL04	Smithport Lake	Just S of Hwy 509	AH28728	TRG	Hardness	36.5	ppm	130.2	5.0	9/14/2005	9/14/2005	
SL04	Smithport Lake	Just S of Hwy 509	AH28728	TRG	Nitrate+Nitrite Nitrogen	ND	ppm	353.2	0.05	8/22/2005	8/22/2005	
SL04	Smithport Lake	Just S of Hwy 509	AH28728	TRG	TP	0.09	ppm	365.4	0.05	9/8/2005	9/8/2005	
SL04	Smithport Lake	Just S of Hwy 509	AH28728	TRG	TKN	0.74	ppm	351.2	0.10	8/23/2005	8/23/2005	
SL04	Smithport Lake	Just S of Hwy 509	AH28728	TRG	Ammonia-Nitrogen	ND	ppm	350.3	0.10	9/8/2005	9/8/2005	
SL04	Smithport Lake	Just S of Hwy 509	AH28729	TRG	TOC	11.2	ppm	415.1	2.00	9/7/2005	9/8/2005	
SL04	Smithport Lake	Just S of Hwy 509	AH28730	TRG	pH, Ultimate BOD survey	7.14	pH units	150.1	0.01	10/17/2005	10/17/2005	

SL04	Smithport Lake	Just S of Hwy 509	AH28730	TRG	TOC (60 Day BOD)	9.5	ppm	415.1	2.0	10/20/2005	10/21/2005	
SL04	Smithport Lake	Just S of Hwy 509	AH28730	TRG	TKN (60 Day BOD)	0.70	ppm	351.2	0.10	10/19/2005	10/19/2005	
SL04	Smithport Lake	Just S of Hwy 509	AH28730	TRG	NO2NO3 - Initial Reading	0.06	ppm	353.2	0.05	8/19/2005	8/19/2005	8/18/2005
SL04	Smithport Lake	Just S of Hwy 509	AH28730	TRG	NO2NO3 - Reading 1	ND	ppm	353.2	0.05	9/9/2005	9/9/2005	8/19/2005
SL04	Smithport Lake	Just S of Hwy 509	AH28730	TRG	NO2NO3 - Reading 2	ND	ppm	353.2	0.05	9/9/2005	9/9/2005	8/22/2005
SL04	Smithport Lake	Just S of Hwy 509	AH28730	TRG	NO2NO3 - Reading 3	ND	ppm	353.2	0.05	9/9/2005	9/9/2005	8/24/2005
SL04	Smithport Lake	Just S of Hwy 509	AH28730	TRG	NO2NO3 - Reading 4	ND	ppm	353.2	0.05	9/14/2005	9/14/2005	8/26/2005
SL04	Smithport Lake	Just S of Hwy 509	AH28730	TRG	NO2NO3 - Reading 5	ND	ppm	353.2	0.05	9/13/2005	9/13/2005	8/30/2005
SL04	Smithport Lake	Just S of Hwy 509	AH28730	TRG	NO2NO3 - Reading 6	ND	ppm	353.2	0.05	9/13/2005	9/13/2005	9/2/2005
SL04	Smithport Lake	Just S of Hwy 509	AH28730	TRG	NO2NO3 - Reading 7	0.11	ppm	353.2	0.05	9/13/2005	9/13/2005	9/7/2005
SL04	Smithport Lake	Just S of Hwy 509	AH28730	TRG	NO2NO3 - Reading 8	0.15	ppm	353.2	0.05	9/28/2005	9/28/2005	9/16/2005
SL04	Smithport Lake	Just S of Hwy 509	AH28730	TRG	NO2NO3 - Reading 9	0.21	ppm	353.2	0.05	9/28/2005	9/28/2005	9/27/2005
SL04	Smithport Lake	Just S of Hwy 509	AH28730	TRG	NO2NO3 - Reading 10	0.26	ppm	353.2	0.05	10/21/2005	10/21/2005	10/7/2005
SL04	Smithport Lake	Just S of Hwy 509	AH28730	TRG	NO2NO3 - Final	0.27	ppm	353.2	0.05	10/21/2005	10/21/2005	10/17/2005
SL04	Smithport Lake	Just S of Hwy 509	AH28730	TRG	Non-Filtered BOD 60 - Reading 1	0.9	ppm	5210B	2.0	8/18/2005	8/19/2005	
SL04	Smithport Lake	Just S of Hwy 509	AH28730	TRG	Non-Filtered BOD 60 - Reading 2	2.7	ppm	5210B	2.0	8/18/2005	8/22/2005	
SL04	Smithport Lake	Just S of Hwy 509	AH28730	TRG	Non-Filtered BOD 60 - Reading 3	3.3	ppm	5210B	2.0	8/18/2005	8/24/2005	
SL04	Smithport Lake	Just S of Hwy 509	AH28730	TRG	Non-Filtered BOD 60 - Reading 4	3.9	ppm	5210B	2.0	8/18/2005	8/26/2005	
SL04	Smithport Lake	Just S of Hwy 509	AH28730	TRG	Non-Filtered BOD 60 - Reading 5	4.8	ppm	5210B	2.0	8/18/2005	8/30/2005	
SL04	Smithport Lake	Just S of Hwy 509	AH28730	TRG	Non-Filtered BOD 60 - Reading 6	5.2	ppm	5210B	2.0	8/18/2005	9/2/2005	
SL04	Smithport Lake	Just S of Hwy 509	AH28730	TRG	Non-Filtered BOD 60 - Reading 7	6.3	ppm	5210B	2.0	8/18/2005	9/7/2005	
SL04	Smithport Lake	Just S of Hwy 509	AH28730	TRG	Non-Filtered BOD 60 - Reading 8	7.4	ppm	5210B	2.0	8/18/2005	9/16/2005	
SL04	Smithport Lake	Just S of Hwy 509	AH28730	TRG	Non-Filtered BOD 60 - Reading 9	8.6	ppm	5210B	2.0	8/18/2005	9/27/2005	
SL04	Smithport Lake	Just S of Hwy 509	AH28730	TRG	Non-Filtered BOD 60 - Reading 10	9.4	ppm	5210B	2.0	8/18/2005	10/7/2005	
SL04	Smithport Lake	Just S of Hwy 509	AH28730	TRG	Non-Filtered BOD 60 - Final	10.1	ppm	5210B	2.0	8/18/2005	10/17/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28731	FB	TSS	ND	ppm	160.2	4.00	8/19/2005	8/22/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28731	FB	TDS	ND	ppm	160.1	10.00	8/18/2005	8/19/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28731	FB	Alkalinity	ND	ppm	310.1	2.0	8/25/2005	8/25/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28731	FB	Turbidity	ND	NTU	SM 2130B	1.00	8/18/2005	8/18/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28731	FB	Specific Conductance	ND	umhos/cm	120.1	10.0	8/25/2005	8/25/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28731	FB	True Color	ND	PCU	110.2	5.00	8/17/2005	8/17/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28731	FB	Chloride, Ion Chromatograph	ND	ppm	300.0	1.25	9/6/2005	9/6/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28731	FB	Sulfate	ND	ppm	300.0	1.25	9/6/2005	9/6/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28732	FB	Sodium	ND	ppm	200.7	1.0	9/18/2005	9/19/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28733	FB	Hardness	ND	ppm	130.2	5.0	9/14/2005	9/14/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28733	FB	Nitrate+Nitrite Nitrogen	ND	ppm	353.2	0.05	8/22/2005	8/22/2005	

CLK02	Clear Lake	Center of Clear Lake	AH28733	FB	TP	ND	ppm	365.4	0.05	9/8/2005	9/8/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28733	FB	TKN	ND	ppm	351.2	0.10	8/23/2005	8/23/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28733	FB	Ammonia-Nitrogen	ND	ppm	350.3	0.10	9/9/2005	9/9/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28734	FB	TOC	ND	ppm	415.1	2.00	9/7/2005	9/8/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28735	FB	pH, Ultimate BOD survey	7.92	pH units	150.1	0.01	10/17/2005	10/17/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28735	FB	TOC (60 Day BOD)	ND	ppm	415.1	2.0	10/20/2005	10/21/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28735	FB	TKN (60 Day BOD)	ND	ppm	351.2	0.10	10/19/2005	10/19/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28735	FB	NO2NO3 - Initial Reading	0.08	ppm	353.2	0.05	8/19/2005	8/19/2005	8/18/2005
CLK02	Clear Lake	Center of Clear Lake	AH28735	FB	NO2NO3 - Reading 1	ND	ppm	353.2	0.05	9/9/2005	9/9/2005	8/19/2005
CLK02	Clear Lake	Center of Clear Lake	AH28735	FB	NO2NO3 - Reading 2	ND	ppm	353.2	0.05	9/9/2005	9/9/2005	8/22/2005
CLK02	Clear Lake	Center of Clear Lake	AH28735	FB	NO2NO3 - Reading 3	ND	ppm	353.2	0.05	9/9/2005	9/9/2005	8/24/2005
CLK02	Clear Lake	Center of Clear Lake	AH28735	FB	NO2NO3 - Reading 4	ND	ppm	353.2	0.05	9/14/2005	9/14/2005	8/26/2005
CLK02	Clear Lake	Center of Clear Lake	AH28735	FB	NO2NO3 - Reading 5	ND	ppm	353.2	0.05	9/13/2005	9/13/2005	8/30/2005
CLK02	Clear Lake	Center of Clear Lake	AH28735	FB	NO2NO3 - Reading 6	ND	ppm	353.2	0.05	9/13/2005	9/13/2005	9/2/2005
CLK02	Clear Lake	Center of Clear Lake	AH28735	FB	NO2NO3 - Reading 7	ND	ppm	353.2	0.05	9/13/2005	9/13/2005	9/7/2005
CLK02	Clear Lake	Center of Clear Lake	AH28735	FB	NO2NO3 - Reading 8	ND	ppm	353.2	0.05	9/28/2005	9/28/2005	9/16/2005
CLK02	Clear Lake	Center of Clear Lake	AH28735	FB	NO2NO3 - Reading 9	ND	ppm	353.2	0.05	9/28/2005	9/28/2005	9/27/2005
CLK02	Clear Lake	Center of Clear Lake	AH28735	FB	NO2NO3 - Reading 10	ND	ppm	353.2	0.05	10/21/2005	10/21/2005	10/7/2005
CLK02	Clear Lake	Center of Clear Lake	AH28735	FB	NO2NO3 - Final	ND	ppm	353.2	0.05	10/21/2005	10/21/2005	10/17/2005
CLK02	Clear Lake	Center of Clear Lake	AH28735	FB	Non-Filtered BOD 60 - Reading 1	0.0	ppm	5210B	2.0	8/18/2005	8/19/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28735	FB	Non-Filtered BOD 60 - Reading 2	0.0	ppm	5210B	2.0	8/18/2005	8/22/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28735	FB	Non-Filtered BOD 60 - Reading 3	0.0	ppm	5210B	2.0	8/18/2005	8/24/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28735	FB	Non-Filtered BOD 60 - Reading 4	0.1	ppm	5210B	2.0	8/18/2005	8/26/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28735	FB	Non-Filtered BOD 60 - Reading 5	0.2	ppm	5210B	2.0	8/18/2005	8/30/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28735	FB	Non-Filtered BOD 60 - Reading 6	0.2	ppm	5210B	2.0	8/18/2005	9/2/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28735	FB	Non-Filtered BOD 60 - Reading 7	0.3	ppm	5210B	2.0	8/18/2005	9/7/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28735	FB	Non-Filtered BOD 60 - Reading 8	0.4	ppm	5210B	2.0	8/18/2005	9/16/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28735	FB	Non-Filtered BOD 60 - Reading 9	0.4	ppm	5210B	2.0	8/18/2005	9/27/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28735	FB	Non-Filtered BOD 60 - Reading 10	0.4	ppm	5210B	2.0	8/18/2005	10/7/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28735	FB	Non-Filtered BOD 60 - Final	0.4	ppm	5210B	2.0	8/18/2005	10/17/2005	
CLK01	Clear Lake	Just N of Hwy 509	AH28736	TRG	TSS	4.7	ppm	160.2	4.00	8/19/2005	8/22/2005	
CLK01	Clear Lake	Just N of Hwy 509	AH28736	TRG	TDS	101	ppm	160.1	10.00	8/18/2005	8/19/2005	
CLK01	Clear Lake	Just N of Hwy 509	AH28736	TRG	Alkalinity	43.6	ppm	310.1	2.0	8/25/2005	8/25/2005	
CLK01	Clear Lake	Just N of Hwy 509	AH28736	TRG	Turbidity	3.4	NTU	SM 2130B	1.00	8/18/2005	8/18/2005	
CLK01	Clear Lake	Just N of Hwy 509	AH28736	TRG	Specific Conductance	148	umhos/cm	120.1	10.0	8/25/2005	8/25/2005	
CLK01	Clear Lake	Just N of Hwy 509	AH28736	TRG	True Color	50	PCU	110.2	5.00	8/17/2005	8/17/2005	

CLK01	Clear Lake	Just N of Hwy 509	AH28736	TRG	Chloride, Ion Chromatograph	18.4	ppm	300.0	1.25	9/6/2005	9/6/2005	
CLK01	Clear Lake	Just N of Hwy 509	AH28736	TRG	Sulfate	2.0	ppm	300.0	1.3	9/6/2005	9/6/2005	
CLK01	Clear Lake	Just N of Hwy 509	AH28737	TRG	Sodium	16.0	ppm	200.7	1.0	9/18/2005	9/19/2005	
CLK01	Clear Lake	Just N of Hwy 509	AH28738	TRG	Hardness	36.1	ppm	130.2	5.0	9/16/2005	9/16/2005	
CLK01	Clear Lake	Just N of Hwy 509	AH28738	TRG	Nitrate+Nitrite Nitrogen	ND	ppm	353.2	0.05	8/22/2005	8/22/2005	
CLK01	Clear Lake	Just N of Hwy 509	AH28738	TRG	TP	0.09	ppm	365.4	0.05	9/8/2005	9/8/2005	
CLK01	Clear Lake	Just N of Hwy 509	AH28738	TRG	TKN	0.80	ppm	351.2	0.10	8/23/2005	8/23/2005	
CLK01	Clear Lake	Just N of Hwy 509	AH28738	TRG	Ammonia-Nitrogen	0.12	ppm	350.3	0.10	9/9/2005	9/9/2005	
CLK01	Clear Lake	Just N of Hwy 509	AH28739	TRG	TOC	11.0	ppm	415.1	2.00	9/7/2005	9/8/2005	
CLK01	Clear Lake	Just N of Hwy 509	AH28740	TRG	pH, Ultimate BOD survey	7.07	pH units	150.1	0.01	10/17/2005	10/17/2005	
CLK01	Clear Lake	Just N of Hwy 509	AH28740	TRG	TOC (60 Day BOD)	9.7	ppm	415.1	2.0	10/20/2005	10/21/2005	
CLK01	Clear Lake	Just N of Hwy 509	AH28740	TRG	TKN (60 Day BOD)	0.72	ppm	351.2	0.10	10/19/2005	10/19/2005	
CLK01	Clear Lake	Just N of Hwy 509	AH28740	TRG	NO2NO3 - Initial Reading	0.06	ppm	353.2	0.05	8/19/2005	8/19/2005	8/18/2005
CLK01	Clear Lake	Just N of Hwy 509	AH28740	TRG	NO2NO3 - Reading 1	ND	ppm	353.2	0.05	9/9/2005	9/9/2005	8/19/2005
CLK01	Clear Lake	Just N of Hwy 509	AH28740	TRG	NO2NO3 - Reading 2	ND	ppm	353.2	0.05	9/9/2005	9/9/2005	8/22/2005
CLK01	Clear Lake	Just N of Hwy 509	AH28740	TRG	NO2NO3 - Reading 3	ND	ppm	353.2	0.05	9/9/2005	9/9/2005	8/24/2005
CLK01	Clear Lake	Just N of Hwy 509	AH28740	TRG	NO2NO3 - Reading 4	ND	ppm	353.2	0.05	9/14/2005	9/14/2005	8/26/2005
CLK01	Clear Lake	Just N of Hwy 509	AH28740	TRG	NO2NO3 - Reading 5	ND	ppm	353.2	0.05	9/13/2005	9/13/2005	8/30/2005
CLK01	Clear Lake	Just N of Hwy 509	AH28740	TRG	NO2NO3 - Reading 6	ND	ppm	353.2	0.05	9/13/2005	9/13/2005	9/2/2005
CLK01	Clear Lake	Just N of Hwy 509	AH28740	TRG	NO2NO3 - Reading 7	0.11	ppm	353.2	0.05	9/13/2005	9/13/2005	9/7/2005
CLK01	Clear Lake	Just N of Hwy 509	AH28740	TRG	NO2NO3 - Reading 8	0.23	ppm	353.2	0.05	9/28/2005	9/28/2005	9/16/2005
CLK01	Clear Lake	Just N of Hwy 509	AH28740	TRG	NO2NO3 - Reading 9	0.31	ppm	353.2	0.05	9/28/2005	9/28/2005	9/27/2005
CLK01	Clear Lake	Just N of Hwy 509	AH28740	TRG	NO2NO3 - Reading 10	0.33	ppm	353.2	0.05	10/21/2005	10/21/2005	10/7/2005
CLK01	Clear Lake	Just N of Hwy 509	AH28740	TRG	NO2NO3 - Final	0.35	ppm	353.2	0.05	10/21/2005	10/21/2005	10/17/2005
CLK01	Clear Lake	Just N of Hwy 509	AH28740	TRG	Non-Filtered BOD 60 - Reading 1	0.9	ppm	5210B	2.0	8/18/2005	8/19/2005	
CLK01	Clear Lake	Just N of Hwy 509	AH28740	TRG	Non-Filtered BOD 60 - Reading 2	3.2	ppm	5210B	2.0	8/18/2005	8/22/2005	
CLK01	Clear Lake	Just N of Hwy 509	AH28740	TRG	Non-Filtered BOD 60 - Reading 3	3.8	ppm	5210B	2.0	8/18/2005	8/24/2005	
CLK01	Clear Lake	Just N of Hwy 509	AH28740	TRG	Non-Filtered BOD 60 - Reading 4	4.5	ppm	5210B	2.0	8/18/2005	8/26/2005	
CLK01	Clear Lake	Just N of Hwy 509	AH28740	TRG	Non-Filtered BOD 60 - Reading 5	5.4	ppm	5210B	2.0	8/18/2005	8/30/2005	
CLK01	Clear Lake	Just N of Hwy 509	AH28740	TRG	Non-Filtered BOD 60 - Reading 6	5.8	ppm	5210B	2.0	8/18/2005	9/2/2005	
CLK01	Clear Lake	Just N of Hwy 509	AH28740	TRG	Non-Filtered BOD 60 - Reading 7	6.9	ppm	5210B	2.0	8/18/2005	9/7/2005	
CLK01	Clear Lake	Just N of Hwy 509	AH28740	TRG	Non-Filtered BOD 60 - Reading 8	8.2	ppm	5210B	2.0	8/18/2005	9/16/2005	
CLK01	Clear Lake	Just N of Hwy 509	AH28740	TRG	Non-Filtered BOD 60 - Reading 9	9.3	ppm	5210B	2.0	8/18/2005	9/27/2005	
CLK01	Clear Lake	Just N of Hwy 509	AH28740	TRG	Non-Filtered BOD 60 - Reading 10	10.1	ppm	5210B	2.0	8/18/2005	10/7/2005	
CLK01	Clear Lake	Just N of Hwy 509	AH28740	TRG	Non-Filtered BOD 60 - Final	10.7	ppm	5210B	2.0	8/18/2005	10/17/2005	
CLK01	Clear Lake	Just N of Hwy 509	AH28741	TRG	Volume of sample, Chlorophyll A (raw)	180	ml	445 (modifie	0.0	9/8/2005	9/9/2005	

CLK01	Clear Lake	Just N of Hwy 509	AH28741	TRG	Chlorophyll A (calculated)	44.9	ug/L	445 (modifie	1.0	9/8/2005	9/9/2005	
CLK01	Clear Lake	Just N of Hwy 509	AH28741	TRG	Chlorophyll A (raw)	808	ug/L	445 (modifie	0.0	9/8/2005	9/9/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28742	TRG	TSS	9.3	ppm	160.2	4.00	8/19/2005	8/22/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28742	TRG	TDS	116	ppm	160.1	10.00	8/18/2005	8/19/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28742	TRG	Alkalinity	49.5	ppm	310.1	2.0	8/25/2005	8/25/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28742	TRG	Turbidity	9.2	NTU	SM 2130B	1.00	8/18/2005	8/18/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28742	TRG	Specific Conductance	172	umhos/cm	120.1	10.0	8/25/2005	8/25/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28742	TRG	True Color	60	PCU	110.2	5.00	8/17/2005	8/17/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28742	TRG	Chloride, Ion Chromatograph	21.7	ppm	300.0	1.25	9/6/2005	9/6/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28742	TRG	Sulfate	2.0	ppm	300.0	1.3	9/6/2005	9/6/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28743	TRG	Sodium	19.1	ppm	200.7	1.0	9/18/2005	9/19/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28744	TRG	Hardness	43.3	ppm	130.2	5.0	9/16/2005	9/16/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28744	TRG	Nitrate+Nitrite Nitrogen	ND	ppm	353.2	0.05	8/22/2005	8/22/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28744	TRG	TP	0.13	ppm	365.4	0.05	9/8/2005	9/8/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28744	TRG	TKN	0.97	ppm	351.2	0.10	8/23/2005	8/23/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28744	TRG	Ammonia-Nitrogen	ND	ppm	350.3	0.10	9/9/2005	9/9/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28745	TRG	TOC	12.0	ppm	415.1	2.00	9/7/2005	9/8/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28746	TRG	pH, Ultimate BOD survey	7.42	pH units	150.1	0.01	10/17/2005	10/17/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28746	TRG	TOC (60 Day BOD)	9.8	ppm	415.1	2.0	10/20/2005	10/21/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28746	TRG	TKN (60 Day BOD)	0.90	ppm	351.2	0.10	10/19/2005	10/19/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28746	TRG	NO2NO3 - Initial Reading	0.10	ppm	353.2	0.05	8/19/2005	8/19/2005	8/18/2005
CLK02	Clear Lake	Center of Clear Lake	AH28746	TRG	NO2NO3 - Reading 1	ND	ppm	353.2	0.05	9/9/2005	9/9/2005	8/19/2005
CLK02	Clear Lake	Center of Clear Lake	AH28746	TRG	NO2NO3 - Reading 2	ND	ppm	353.2	0.05	9/9/2005	9/9/2005	8/22/2005
CLK02	Clear Lake	Center of Clear Lake	AH28746	TRG	NO2NO3 - Reading 3	ND	ppm	353.2	0.05	9/9/2005	9/9/2005	8/24/2005
CLK02	Clear Lake	Center of Clear Lake	AH28746	TRG	NO2NO3 - Reading 4	ND	ppm	353.2	0.05	9/14/2005	9/14/2005	8/26/2005
CLK02	Clear Lake	Center of Clear Lake	AH28746	TRG	NO2NO3 - Reading 5	ND	ppm	353.2	0.05	9/13/2005	9/13/2005	8/30/2005
CLK02	Clear Lake	Center of Clear Lake	AH28746	TRG	NO2NO3 - Reading 6	ND	ppm	353.2	0.05	9/13/2005	9/13/2005	9/2/2005
CLK02	Clear Lake	Center of Clear Lake	AH28746	TRG	NO2NO3 - Reading 7	0.16	ppm	353.2	0.05	9/13/2005	9/13/2005	9/7/2005
CLK02	Clear Lake	Center of Clear Lake	AH28746	TRG	NO2NO3 - Reading 8	0.32	ppm	353.2	0.05	9/28/2005	9/28/2005	9/16/2005
CLK02	Clear Lake	Center of Clear Lake	AH28746	TRG	NO2NO3 - Reading 9	0.36	ppm	353.2	0.05	9/28/2005	9/28/2005	9/27/2005
CLK02	Clear Lake	Center of Clear Lake	AH28746	TRG	NO2NO3 - Reading 10	0.40	ppm	353.2	0.05	10/21/2005	10/21/2005	10/7/2005
CLK02	Clear Lake	Center of Clear Lake	AH28746	TRG	NO2NO3 - Final	0.41	ppm	353.2	0.05	10/21/2005	10/21/2005	10/17/2005
CLK02	Clear Lake	Center of Clear Lake	AH28746	TRG	Non-Filtered BOD 60 - Reading 1	1.7	ppm	5210B	2.0	8/18/2005	8/19/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28746	TRG	Non-Filtered BOD 60 - Reading 2	5.1	ppm	5210B	2.0	8/18/2005	8/22/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28746	TRG	Non-Filtered BOD 60 - Reading 3	6.1	ppm	5210B	2.0	8/18/2005	8/24/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28746	TRG	Non-Filtered BOD 60 - Reading 4	7.3	ppm	5210B	2.0	8/18/2005	8/26/2005	

CLK02	Clear Lake	Center of Clear Lake	AH28746	TRG	Non-Filtered BOD 60 - Reading 5	8.6	ppm	5210B	2.0	8/18/2005	8/30/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28746	TRG	Non-Filtered BOD 60 - Reading 6	9.4	ppm	5210B	2.0	8/18/2005	9/2/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28746	TRG	Non-Filtered BOD 60 - Reading 7	11.0	ppm	5210B	2.0	8/18/2005	9/7/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28746	TRG	Non-Filtered BOD 60 - Reading 8	12.6	ppm	5210B	2.0	8/18/2005	9/16/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28746	TRG	Non-Filtered BOD 60 - Reading 9	14.0	ppm	5210B	2.0	8/18/2005	9/27/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28746	TRG	Non-Filtered BOD 60 - Reading 10	14.9	ppm	5210B	2.0	8/18/2005	10/7/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28746	TRG	Non-Filtered BOD 60 - Final	15.6	ppm	5210B	2.0	8/18/2005	10/17/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28747	FD	TSS	9.3	ppm	160.2	4.00	8/19/2005	8/22/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28747	FD	TDS	122	ppm	160.1	10.00	8/18/2005	8/19/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28747	FD	Alkalinity	49.8	ppm	310.1	2.0	8/25/2005	8/25/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28747	FD	Turbidity	9.2	NTU	SM 2130B	1.00	8/18/2005	8/18/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28747	FD	Specific Conductance	172	umhos/cm	120.1	10.0	8/25/2005	8/25/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28747	FD	True Color	60	PCU	110.2	5.00	8/17/2005	8/17/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28747	FD	Chloride, Ion Chromatograph	21.6	ppm	300.0	1.25	9/6/2005	9/6/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28747	FD	Sulfate	2.0	ppm	300.0	1.3	9/6/2005	9/6/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28748	FD	Sodium	19.3	ppm	200.7	1.0	9/18/2005	9/19/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28749	FD	Hardness	42.4	ppm	130.2	5.0	9/16/2005	9/16/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28749	FD	Nitrate+Nitrite Nitrogen	ND	ppm	353.2	0.05	8/22/2005	8/22/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28749	FD	TP	0.11	ppm	365.4	0.05	9/8/2005	9/8/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28749	FD	TKN	0.96	ppm	351.2	0.10	8/23/2005	8/23/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28749	FD	Ammonia-Nitrogen	ND	ppm	350.3	0.10	9/9/2005	9/9/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28750	FD	TOC	12.2	ppm	415.1	2.00	9/7/2005	9/8/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28751	FD	pH, Ultimate BOD survey	7.45	pH units	150.1	0.01	10/17/2005	10/17/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28751	FD	TOC (60 Day BOD)	9.8	ppm	415.1	2.0	10/20/2005	10/21/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28751	FD	TKN (60 Day BOD)	0.97	ppm	351.2	0.10	10/19/2005	10/19/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28751	FD	NO2NO3 - Initial Reading	0.06	ppm	353.2	0.05	8/19/2005	8/19/2005	8/18/2005
CLK02	Clear Lake	Center of Clear Lake	AH28751	FD	NO2NO3 - Reading 1	ND	ppm	353.2	0.05	9/9/2005	9/9/2005	8/19/2005
CLK02	Clear Lake	Center of Clear Lake	AH28751	FD	NO2NO3 - Reading 2	ND	ppm	353.2	0.05	9/9/2005	9/9/2005	8/22/2005
CLK02	Clear Lake	Center of Clear Lake	AH28751	FD	NO2NO3 - Reading 3	ND	ppm	353.2	0.05	9/9/2005	9/9/2005	8/24/2005
CLK02	Clear Lake	Center of Clear Lake	AH28751	FD	NO2NO3 - Reading 4	ND	ppm	353.2	0.05	9/14/2005	9/14/2005	8/26/2005
CLK02	Clear Lake	Center of Clear Lake	AH28751	FD	NO2NO3 - Reading 5	ND	ppm	353.2	0.05	9/13/2005	9/13/2005	8/30/2005
CLK02	Clear Lake	Center of Clear Lake	AH28751	FD	NO2NO3 - Reading 6	ND	ppm	353.2	0.05	9/13/2005	9/13/2005	9/2/2005
CLK02	Clear Lake	Center of Clear Lake	AH28751	FD	NO2NO3 - Reading 7	0.16	ppm	353.2	0.05	9/13/2005	9/13/2005	9/7/2005
CLK02	Clear Lake	Center of Clear Lake	AH28751	FD	NO2NO3 - Reading 8	0.30	ppm	353.2	0.05	9/28/2005	9/28/2005	9/16/2005
CLK02	Clear Lake	Center of Clear Lake	AH28751	FD	NO2NO3 - Reading 9	0.37	ppm	353.2	0.05	9/28/2005	9/28/2005	9/27/2005
CLK02	Clear Lake	Center of Clear Lake	AH28751	FD	NO2NO3 - Reading 10	0.38	ppm	353.2	0.05	10/21/2005	10/21/2005	10/7/2005

CLK02	Clear Lake	Center of Clear Lake	AH28751	FD	NO2NO3 - Final	0.41	ppm	353.2	0.05	10/21/2005	10/21/2005	10/17/2005
CLK02	Clear Lake	Center of Clear Lake	AH28751	FD	Non-Filtered BOD 60 - Reading 1	1.7	ppm	5210B	2.0	8/18/2005	8/19/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28751	FD	Non-Filtered BOD 60 - Reading 2	5.0	ppm	5210B	2.0	8/18/2005	8/22/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28751	FD	Non-Filtered BOD 60 - Reading 3	6.1	ppm	5210B	2.0	8/18/2005	8/24/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28751	FD	Non-Filtered BOD 60 - Reading 4	7.1	ppm	5210B	2.0	8/18/2005	8/26/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28751	FD	Non-Filtered BOD 60 - Reading 5	8.5	ppm	5210B	2.0	8/18/2005	8/30/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28751	FD	Non-Filtered BOD 60 - Reading 6	9.3	ppm	5210B	2.0	8/18/2005	9/2/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28751	FD	Non-Filtered BOD 60 - Reading 7	10.9	ppm	5210B	2.0	8/18/2005	9/7/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28751	FD	Non-Filtered BOD 60 - Reading 8	12.5	ppm	5210B	2.0	8/18/2005	9/16/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28751	FD	Non-Filtered BOD 60 - Reading 9	13.9	ppm	5210B	2.0	8/18/2005	9/27/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28751	FD	Non-Filtered BOD 60 - Reading 10	14.9	ppm	5210B	2.0	8/18/2005	10/7/2005	
CLK02	Clear Lake	Center of Clear Lake	AH28751	FD	Non-Filtered BOD 60 - Final	15.6	ppm	5210B	2.0	8/18/2005	10/17/2005	
CB01	Canney Bayou	Off of Bradshaw Rd	AH28752	TRG	TSS	48.0	ppm	160.2	4.00	8/19/2005	8/22/2005	
CB01	Canney Bayou	Off of Bradshaw Rd	AH28752	TRG	TDS	192	ppm	160.1	10.00	8/18/2005	8/19/2005	
CB01	Canney Bayou	Off of Bradshaw Rd	AH28752	TRG	Alkalinity	30.4	ppm	310.1	2.0	8/25/2005	8/25/2005	
CB01	Canney Bayou	Off of Bradshaw Rd	AH28752	TRG	Turbidity	116	NTU	SM 2130B	1.00	8/18/2005	8/18/2005	
CB01	Canney Bayou	Off of Bradshaw Rd	AH28752	TRG	Specific Conductance	130	umhos/cm	120.1	10.0	8/25/2005	8/25/2005	
CB01	Canney Bayou	Off of Bradshaw Rd	AH28752	TRG	True Color	140	PCU	110.2	15.00	8/17/2005	8/17/2005	
CB01	Canney Bayou	Off of Bradshaw Rd	AH28752	TRG	Chloride, Ion Chromatograph	14.2	ppm	300.0	1.25	9/6/2005	9/6/2005	
CB01	Canney Bayou	Off of Bradshaw Rd	AH28752	TRG	Sulfate	10.2	ppm	300.0	1.3	9/6/2005	9/6/2005	
CB01	Canney Bayou	Off of Bradshaw Rd	AH28753	TRG	Sodium	12.3	ppm	200.7	1.0	9/18/2005	9/19/2005	
CB01	Canney Bayou	Off of Bradshaw Rd	AH28754	TRG	Hardness	36.5	ppm	130.2	5.0	9/16/2005	9/16/2005	
CB01	Canney Bayou	Off of Bradshaw Rd	AH28754	TRG	Nitrate+Nitrite Nitrogen	ND	ppm	353.2	0.05	8/22/2005	8/22/2005	
CB01	Canney Bayou	Off of Bradshaw Rd	AH28754	TRG	TP	0.17	ppm	365.4	0.05	9/8/2005	9/8/2005	
CB01	Canney Bayou	Off of Bradshaw Rd	AH28754	TRG	TKN	1.67	ppm	351.2	0.10	8/23/2005	8/23/2005	
CB01	Canney Bayou	Off of Bradshaw Rd	AH28754	TRG	Ammonia-Nitrogen	ND	ppm	350.3	0.10	9/9/2005	9/9/2005	
CB01	Canney Bayou	Off of Bradshaw Rd	AH28755	TRG	TOC	10.3	ppm	415.1	2.00	9/7/2005	9/8/2005	
CB01	Canney Bayou	Off of Bradshaw Rd	AH28756	TRG	pH, Ultimate BOD survey	7.20	pH units	150.1	0.01	10/17/2005	10/17/2005	
CB01	Canney Bayou	Off of Bradshaw Rd	AH28756	TRG	TOC (60 Day BOD)	7.2	ppm	415.1	2.0	10/20/2005	10/21/2005	
CB01	Canney Bayou	Off of Bradshaw Rd	AH28756	TRG	TKN (60 Day BOD)	1.57	ppm	351.2	0.10	10/19/2005	10/19/2005	
CB01	Canney Bayou	Off of Bradshaw Rd	AH28756	TRG	NO2NO3 - Initial Reading	0.05	ppm	353.2	0.05	8/19/2005	8/19/2005	8/18/2005
CB01	Canney Bayou	Off of Bradshaw Rd	AH28756	TRG	NO2NO3 - Reading 1	ND	ppm	353.2	0.05	9/9/2005	9/9/2005	8/19/2005
CB01	Canney Bayou	Off of Bradshaw Rd	AH28756	TRG	NO2NO3 - Reading 2	ND	ppm	353.2	0.05	9/9/2005	9/9/2005	8/22/2005
CB01	Canney Bayou	Off of Bradshaw Rd	AH28756	TRG	NO2NO3 - Reading 3	ND	ppm	353.2	0.05	9/9/2005	9/9/2005	8/24/2005
CB01	Canney Bayou	Off of Bradshaw Rd	AH28756	TRG	NO2NO3 - Reading 4	ND	ppm	353.2	0.05	9/14/2005	9/14/2005	8/26/2005
CB01	Canney Bayou	Off of Bradshaw Rd	AH28756	TRG	NO2NO3 - Reading 5	0.21	ppm	353.2	0.05	9/13/2005	9/13/2005	8/30/2005

CB01	Canney Bayou	Off of Bradshaw Rd	AH28756	TRG	NO2NO3 - Reading 6	0.40	ppm	353.2	0.05	9/13/2005	9/13/2005	9/2/2005
CB01	Canney Bayou	Off of Bradshaw Rd	AH28756	TRG	NO2NO3 - Reading 7	0.57	ppm	353.2	0.05	9/13/2005	9/13/2005	9/7/2005
CB01	Canney Bayou	Off of Bradshaw Rd	AH28756	TRG	NO2NO3 - Reading 8	0.73	ppm	353.2	0.05	9/28/2005	9/28/2005	9/16/2005
CB01	Canney Bayou	Off of Bradshaw Rd	AH28756	TRG	NO2NO3 - Reading 9	0.75	ppm	353.2	0.05	9/28/2005	9/28/2005	9/27/2005
CB01	Canney Bayou	Off of Bradshaw Rd	AH28756	TRG	NO2NO3 - Reading 10	0.80	ppm	353.2	0.05	10/21/2005	10/21/2005	10/7/2005
CB01	Canney Bayou	Off of Bradshaw Rd	AH28756	TRG	NO2NO3 - Final	0.81	ppm	353.2	0.05	10/21/2005	10/21/2005	10/17/2005
CB01	Canney Bayou	Off of Bradshaw Rd	AH28756	TRG	Non-Filtered BOD 60 - Reading 1	1.7	ppm	5210B	2.0	8/18/2005	8/19/2005	
CB01	Canney Bayou	Off of Bradshaw Rd	AH28756	TRG	Non-Filtered BOD 60 - Reading 2	5.0	ppm	5210B	2.0	8/18/2005	8/22/2005	
CB01	Canney Bayou	Off of Bradshaw Rd	AH28756	TRG	Non-Filtered BOD 60 - Reading 3	6.2	ppm	5210B	2.0	8/18/2005	8/24/2005	
CB01	Canney Bayou	Off of Bradshaw Rd	AH28756	TRG	Non-Filtered BOD 60 - Reading 4	7.4	ppm	5210B	2.0	8/18/2005	8/26/2005	
CB01	Canney Bayou	Off of Bradshaw Rd	AH28756	TRG	Non-Filtered BOD 60 - Reading 5	10.2	ppm	5210B	2.0	8/18/2005	8/30/2005	
CB01	Canney Bayou	Off of Bradshaw Rd	AH28756	TRG	Non-Filtered BOD 60 - Reading 6	12.5	ppm	5210B	2.0	8/18/2005	9/2/2005	
CB01	Canney Bayou	Off of Bradshaw Rd	AH28756	TRG	Non-Filtered BOD 60 - Reading 7	15.1	ppm	5210B	2.0	8/18/2005	9/7/2005	
CB01	Canney Bayou	Off of Bradshaw Rd	AH28756	TRG	Non-Filtered BOD 60 - Reading 8	17.4	ppm	5210B	2.0	8/18/2005	9/16/2005	
CB01	Canney Bayou	Off of Bradshaw Rd	AH28756	TRG	Non-Filtered BOD 60 - Reading 9	19.2	ppm	5210B	2.0	8/18/2005	9/27/2005	
CB01	Canney Bayou	Off of Bradshaw Rd	AH28756	TRG	Non-Filtered BOD 60 - Reading 10	20.5	ppm	5210B	2.0	8/18/2005	10/7/2005	
CB01	Canney Bayou	Off of Bradshaw Rd	AH28756	TRG	Non-Filtered BOD 60 - Final	21.6	ppm	5210B	2.0	8/18/2005	10/17/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28757	FB	TSS	ND	ppm	160.2	4.00	8/19/2005	8/22/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28757	FB	TDS	ND	ppm	160.1	10.00	8/18/2005	8/19/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28757	FB	Alkalinity	ND	ppm	310.1	2.0	8/25/2005	8/25/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28757	FB	Turbidity	ND	NTU	SM 2130B	1.00	8/18/2005	8/18/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28757	FB	Specific Conductance	ND	umhos/cm	120.1	10.0	8/25/2005	8/25/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28757	FB	True Color	ND	PCU	110.2	5.00	8/17/2005	8/17/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28757	FB	Chloride, Ion Chromatograph	ND	ppm	300.0	1.25	9/6/2005	9/6/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28757	FB	Sulfate	ND	ppm	300.0	1.25	9/6/2005	9/6/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28758	FB	Sodium	ND	ppm	200.7	1.0	9/18/2005	9/19/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28759	FB	Hardness	ND	ppm	130.2	5.0	9/16/2005	9/16/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28759	FB	Nitrate+Nitrite Nitrogen	ND	ppm	353.2	0.05	8/22/2005	8/22/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28759	FB	TP	ND	ppm	365.4	0.05	9/8/2005	9/8/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28759	FB	TKN	ND	ppm	351.2	0.10	8/23/2005	8/23/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28759	FB	Ammonia-Nitrogen	ND	ppm	350.3	0.10	9/9/2005	9/9/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28760	FB	TOC	ND	ppm	415.1	2.00	9/7/2005	9/8/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28761	FB	pH, Ultimate BOD survey	7.64	pH units	150.1	0.01	10/17/2005	10/17/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28761	FB	TOC (60 Day BOD)	ND	ppm	415.1	2.0	10/20/2005	10/21/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28761	FB	TKN (60 Day BOD)	ND	ppm	351.2	0.10	10/19/2005	10/19/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28761	FB	NO2NO3 - Initial Reading	0.07	ppm	353.2	0.05	8/19/2005	8/19/2005	8/18/2005

NBB02	Na Bonchasse Bayou	At Hwy 175	AH28761	FB	NO2NO3 - Reading 1	ND	ppm	353.2	0.05	9/9/2005	9/9/2005	8/19/2005
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28761	FB	NO2NO3 - Reading 2	ND	ppm	353.2	0.05	9/9/2005	9/9/2005	8/22/2005
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28761	FB	NO2NO3 - Reading 3	ND	ppm	353.2	0.05	9/9/2005	9/9/2005	8/24/2005
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28761	FB	NO2NO3 - Reading 4	ND	ppm	353.2	0.05	9/14/2005	9/14/2005	8/26/2005
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28761	FB	NO2NO3 - Reading 5	ND	ppm	353.2	0.05	9/13/2005	9/13/2005	8/30/2005
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28761	FB	NO2NO3 - Reading 6	ND	ppm	353.2	0.05	9/13/2005	9/13/2005	9/2/2005
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28761	FB	NO2NO3 - Reading 7	ND	ppm	353.2	0.05	9/13/2005	9/13/2005	9/7/2005
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28761	FB	NO2NO3 - Reading 8	ND	ppm	353.2	0.05	9/28/2005	9/28/2005	9/16/2005
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28761	FB	NO2NO3 - Reading 9	ND	ppm	353.2	0.05	9/28/2005	9/28/2005	9/27/2005
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28761	FB	NO2NO3 - Reading 10	ND	ppm	353.2	0.05	10/21/2005	10/21/2005	10/7/2005
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28761	FB	NO2NO3 - Final	ND	ppm	353.2	0.05	10/21/2005	10/21/2005	10/17/2005
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28761	FB	Non-Filtered BOD 60 - Reading 1	0.0	ppm	5210B	2.0	8/18/2005	8/19/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28761	FB	Non-Filtered BOD 60 - Reading 2	0.0	ppm	5210B	2.0	8/18/2005	8/22/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28761	FB	Non-Filtered BOD 60 - Reading 3	0.0	ppm	5210B	2.0	8/18/2005	8/24/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28761	FB	Non-Filtered BOD 60 - Reading 4	0.1	ppm	5210B	2.0	8/18/2005	8/26/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28761	FB	Non-Filtered BOD 60 - Reading 5	0.1	ppm	5210B	2.0	8/18/2005	8/30/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28761	FB	Non-Filtered BOD 60 - Reading 6	0.2	ppm	5210B	2.0	8/18/2005	9/2/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28761	FB	Non-Filtered BOD 60 - Reading 7	0.3	ppm	5210B	2.0	8/18/2005	9/7/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28761	FB	Non-Filtered BOD 60 - Reading 8	0.3	ppm	5210B	2.0	8/18/2005	9/16/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28761	FB	Non-Filtered BOD 60 - Reading 9	0.0	ppm	5210B	2.0	8/18/2005	9/27/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28761	FB	Non-Filtered BOD 60 - Reading 10	0.1	ppm	5210B	2.0	8/18/2005	10/7/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28761	FB	Non-Filtered BOD 60 - Final	0.0	ppm	5210B	2.0	8/18/2005	10/17/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28808	TRG	TSS	46.0	ppm	160.2	4.00	8/19/2005	8/22/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28808	TRG	TDS	310	ppm	160.1	10.00	8/19/2005	8/23/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28808	TRG	Alkalinity	126	ppm	310.1	2.0	8/25/2005	8/25/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28808	TRG	Turbidity	28	NTU	SM 2130B	1.00	8/18/2005	8/18/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28808	TRG	Specific Conductance	520	umhos/cm	120.1	10.0	8/25/2005	8/25/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28808	TRG	True Color	50	PCU	110.2	5.00	8/17/2005	8/17/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28808	TRG	Chloride, Ion Chromatograph	61.4	ppm	300.0	1.25	9/7/2005	9/7/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28808	TRG	Sulfate	27.3	ppm	300.0	1.3	9/7/2005	9/7/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28809	TRG	Sodium	75.5	ppm	200.7	1.0	9/18/2005	9/19/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28810	TRG	Hardness	77.7	ppm	130.2	5.0	9/17/2005	9/17/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28810	TRG	Nitrate+Nitrite Nitrogen	1.27	ppm	353.2	0.05	8/22/2005	8/22/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28810	TRG	TP	0.60	ppm	365.4	0.05	9/8/2005	9/8/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28810	TRG	TKN	2.03	ppm	351.2	0.10	8/24/2005	8/24/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28810	TRG	Ammonia-Nitrogen	0.11	ppm	350.3	0.10	9/9/2005	9/9/2005	

NBB02	Na Bonchasse Bayou	At Hwy 175	AH28811	TRG	TOC	10.8	ppm	415.1	2.00	9/7/2005	9/8/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28812	TRG	pH, Ultimate BOD survey	7.74	pH units	150.1	0.01	10/17/2005	10/17/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28812	TRG	TOC (60 Day BOD)	9.1	ppm	415.1	2.0	10/20/2005	10/21/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28812	TRG	TKN (60 Day BOD)	0.75	ppm	351.2	0.10	10/19/2005	10/19/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28812	TRG	NO2NO3 - Initial Reading	1.38	ppm	353.2	0.05	8/19/2005	8/19/2005	8/18/2005
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28812	TRG	NO2NO3 - Reading 1	1.39	ppm	353.2	0.05	9/9/2005	9/9/2005	8/19/2005
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28812	TRG	NO2NO3 - Reading 2	1.38	ppm	353.2	0.05	9/9/2005	9/9/2005	8/22/2005
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28812	TRG	NO2NO3 - Reading 3	1.40	ppm	353.2	0.05	9/9/2005	9/9/2005	8/24/2005
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28812	TRG	NO2NO3 - Reading 4	1.42	ppm	353.2	0.05	9/9/2005	9/9/2005	8/26/2005
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28812	TRG	NO2NO3 - Reading 5	1.50	ppm	353.2	0.05	9/13/2005	9/13/2005	8/30/2005
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28812	TRG	NO2NO3 - Reading 6	1.43	ppm	353.2	0.05	9/13/2005	9/13/2005	9/2/2005
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28812	TRG	NO2NO3 - Reading 7	1.52	ppm	353.2	0.05	9/14/2005	9/14/2005	9/7/2005
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28812	TRG	NO2NO3 - Reading 8	1.49	ppm	353.2	0.05	9/28/2005	9/28/2005	9/16/2005
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28812	TRG	NO2NO3 - Reading 9	1.55	ppm	353.2	0.05	9/28/2005	9/28/2005	9/27/2005
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28812	TRG	NO2NO3 - Reading 10	1.52	ppm	353.2	0.05	10/21/2005	10/21/2005	10/7/2005
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28812	TRG	NO2NO3 - Final	1.54	ppm	353.2	0.05	10/21/2005	10/21/2005	10/17/2005
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28812	TRG	Non-Filtered BOD 60 - Reading 1	0.2	ppm	5210B	2.0	8/18/2005	8/19/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28812	TRG	Non-Filtered BOD 60 - Reading 2	0.9	ppm	5210B	2.0	8/18/2005	8/22/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28812	TRG	Non-Filtered BOD 60 - Reading 3	1.3	ppm	5210B	2.0	8/18/2005	8/24/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28812	TRG	Non-Filtered BOD 60 - Reading 4	1.9	ppm	5210B	2.0	8/18/2005	8/26/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28812	TRG	Non-Filtered BOD 60 - Reading 5	2.7	ppm	5210B	2.0	8/18/2005	8/30/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28812	TRG	Non-Filtered BOD 60 - Reading 6	3.3	ppm	5210B	2.0	8/18/2005	9/2/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28812	TRG	Non-Filtered BOD 60 - Reading 7	4.3	ppm	5210B	2.0	8/18/2005	9/7/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28812	TRG	Non-Filtered BOD 60 - Reading 8	5.6	ppm	5210B	2.0	8/18/2005	9/16/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28812	TRG	Non-Filtered BOD 60 - Reading 9	6.8	ppm	5210B	2.0	8/18/2005	9/27/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28812	TRG	Non-Filtered BOD 60 - Reading 10	7.7	ppm	5210B	2.0	8/18/2005	10/7/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28812	TRG	Non-Filtered BOD 60 - Final	8.3	ppm	5210B	2.0	8/18/2005	10/17/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28813	TRG	Chlorophyll A (calculated)	15.1	ug/L	445 (modifie	1.0	9/8/2005	9/9/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28813	TRG	Chlorophyll A (raw)	377	ug/L	445 (modifie	0.0	9/8/2005	9/9/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28813	TRG	Volume of sample, Chlorophyll A (raw)	250	ml	445 (modifie	0.0	9/8/2005	9/9/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28814	FD	TSS	53.3	ppm	160.2	4.00	8/19/2005	8/22/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28814	FD	TDS	328	ppm	160.1	10.00	8/19/2005	8/22/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28814	FD	Alkalinity	127	ppm	310.1	2.0	8/25/2005	8/25/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28814	FD	Turbidity	36	NTU	SM 2130B	1.00	8/18/2005	8/18/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28814	FD	Specific Conductance	524	umhos/cm	120.1	10.0	8/25/2005	8/25/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28814	FD	True Color	50	PCU	110.2	5.00	8/17/2005	8/17/2005	

NBB02	Na Bonchasse Bayou	At Hwy 175	AH28814	FD	Chloride, Ion Chromatograph	61.5	ppm	300.0	1.25	9/7/2005	9/7/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28814	FD	Sulfate	27.4	ppm	300.0	1.3	9/7/2005	9/7/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28815	FD	Sodium	74.1	ppm	200.7	1.0	9/18/2005	9/19/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28816	FD	Hardness	78.0	ppm	130.2	5.0	9/17/2005	9/17/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28816	FD	Nitrate+Nitrite Nitrogen	1.28	ppm	353.2	0.05	8/22/2005	8/22/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28816	FD	TP	0.60	ppm	365.4	0.05	9/8/2005	9/8/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28816	FD	TKN	2.11	ppm	351.2	0.10	8/24/2005	8/24/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28816	FD	Ammonia-Nitrogen	0.11	ppm	350.3	0.10	9/9/2005	9/9/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28817	FD	TOC	11.0	ppm	415.1	2.00	9/7/2005	9/8/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28818	FD	pH, Ultimate BOD survey	7.69	pH units	150.1	0.01	10/17/2005	10/17/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28818	FD	TOC (60 Day BOD)	9.0	ppm	415.1	2.0	10/20/2005	10/21/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28818	FD	TKN (60 Day BOD)	0.74	ppm	351.2	0.10	10/19/2005	10/19/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28818	FD	NO2NO3 - Initial Reading	1.38	ppm	353.2	0.05	8/19/2005	8/19/2005	8/18/2005
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28818	FD	NO2NO3 - Reading 1	1.36	ppm	353.2	0.05	9/9/2005	9/9/2005	8/19/2005
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28818	FD	NO2NO3 - Reading 2	1.36	ppm	353.2	0.05	9/9/2005	9/9/2005	8/22/2005
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28818	FD	NO2NO3 - Reading 3	1.40	ppm	353.2	0.05	9/14/2005	9/14/2005	8/24/2005
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28818	FD	NO2NO3 - Reading 4	1.42	ppm	353.2	0.05	9/9/2005	9/9/2005	8/26/2005
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28818	FD	NO2NO3 - Reading 5	1.51	ppm	353.2	0.05	9/13/2005	9/13/2005	8/30/2005
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28818	FD	NO2NO3 - Reading 6	1.43	ppm	353.2	0.05	9/13/2005	9/13/2005	9/2/2005
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28818	FD	NO2NO3 - Reading 7	1.49	ppm	353.2	0.05	9/14/2005	9/14/2005	9/7/2005
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28818	FD	NO2NO3 - Reading 8	1.49	ppm	353.2	0.05	9/28/2005	9/28/2005	9/16/2005
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28818	FD	NO2NO3 - Reading 9	1.54	ppm	353.2	0.05	9/28/2005	9/28/2005	9/27/2005
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28818	FD	NO2NO3 - Reading 10	1.51	ppm	353.2	0.05	10/21/2005	10/21/2005	10/7/2005
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28818	FD	NO2NO3 - Final	1.52	ppm	353.2	0.05	10/21/2005	10/21/2005	10/17/2005
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28818	FD	Non-Filtered BOD 60 - Reading 1	0.2	ppm	5210B	2.0	8/18/2005	8/19/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28818	FD	Non-Filtered BOD 60 - Reading 2	0.9	ppm	5210B	2.0	8/18/2005	8/22/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28818	FD	Non-Filtered BOD 60 - Reading 3	1.4	ppm	5210B	2.0	8/18/2005	8/24/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28818	FD	Non-Filtered BOD 60 - Reading 4	1.9	ppm	5210B	2.0	8/18/2005	8/26/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28818	FD	Non-Filtered BOD 60 - Reading 5	2.7	ppm	5210B	2.0	8/18/2005	8/30/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28818	FD	Non-Filtered BOD 60 - Reading 6	3.3	ppm	5210B	2.0	8/18/2005	9/2/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28818	FD	Non-Filtered BOD 60 - Reading 7	4.3	ppm	5210B	2.0	8/18/2005	9/7/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28818	FD	Non-Filtered BOD 60 - Reading 8	5.6	ppm	5210B	2.0	8/18/2005	9/16/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28818	FD	Non-Filtered BOD 60 - Reading 9	6.8	ppm	5210B	2.0	8/18/2005	9/27/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28818	FD	Non-Filtered BOD 60 - Reading 10	7.7	ppm	5210B	2.0	8/18/2005	10/7/2005	
NBB02	Na Bonchasse Bayou	At Hwy 175	AH28818	FD	Non-Filtered BOD 60 - Final	8.5	ppm	5210B	2.0	8/18/2005	10/17/2005	
NBB03A	Na Bonchasse Bayou	Upstream of Mansfield STP outfall	AH28819	TRG	TSS	66.0	ppm	160.2	4.00	8/19/2005	8/22/2005	

NBB03A	Na Bonchasse Bayou	Upstream of Mansfield STP outfall	AH28819	TRG	TDS	274	ppm	160.1	10.00	8/19/2005	8/22/2005	
NBB03A	Na Bonchasse Bayou	Upstream of Mansfield STP outfall	AH28819	TRG	Alkalinity	87.7	ppm	310.1	2.0	8/25/2005	8/25/2005	
NBB03A	Na Bonchasse Bayou	Upstream of Mansfield STP outfall	AH28819	TRG	Turbidity	36	NTU	SM 2130B	1.00	8/18/2005	8/18/2005	
NBB03A	Na Bonchasse Bayou	Upstream of Mansfield STP outfall	AH28819	TRG	Specific Conductance	382	umhos/cm	120.1	10.0	8/25/2005	8/25/2005	
NBB03A	Na Bonchasse Bayou	Upstream of Mansfield STP outfall	AH28819	TRG	True Color	55	PCU	110.2	5.00	8/17/2005	8/17/2005	
NBB03A	Na Bonchasse Bayou	Upstream of Mansfield STP outfall	AH28819	TRG	Chloride, Ion Chromatograph	38.8	ppm	300.0	1.25	9/7/2005	9/7/2005	
NBB03A	Na Bonchasse Bayou	Upstream of Mansfield STP outfall	AH28819	TRG	Sulfate	33.7	ppm	300.0	1.3	9/7/2005	9/7/2005	
NBB03A	Na Bonchasse Bayou	Upstream of Mansfield STP outfall	AH28820	TRG	Sodium	46.0	ppm	200.7	1.0	9/18/2005	9/19/2005	
NBB03A	Na Bonchasse Bayou	Upstream of Mansfield STP outfall	AH28821	TRG	Hardness	68.4	ppm	130.2	5.0	9/17/2005	9/17/2005	
NBB03A	Na Bonchasse Bayou	Upstream of Mansfield STP outfall	AH28821	TRG	Nitrate+Nitrite Nitrogen	0.22	ppm	353.2	0.05	8/22/2005	8/22/2005	
NBB03A	Na Bonchasse Bayou	Upstream of Mansfield STP outfall	AH28821	TRG	TP	0.11	ppm	365.4	0.05	9/8/2005	9/8/2005	
NBB03A	Na Bonchasse Bayou	Upstream of Mansfield STP outfall	AH28821	TRG	TKN	1.30	ppm	351.2	0.10	8/24/2005	8/24/2005	
NBB03A	Na Bonchasse Bayou	Upstream of Mansfield STP outfall	AH28821	TRG	Ammonia-Nitrogen	0.18	ppm	350.3	0.10	9/9/2005	9/9/2005	
NBB03A	Na Bonchasse Bayou	Upstream of Mansfield STP outfall	AH28822	TRG	TOC	7.1	ppm	415.1	2.00	9/7/2005	9/8/2005	
NBB03A	Na Bonchasse Bayou	Upstream of Mansfield STP outfall	AH28823	TRG	pH, Ultimate BOD survey	7.79	pH units	150.1	0.01	10/17/2005	10/17/2005	
NBB03A	Na Bonchasse Bayou	Upstream of Mansfield STP outfall	AH28823	TRG	TOC (60 Day BOD)	5.7	ppm	415.1	2.0	10/20/2005	10/21/2005	
NBB03A	Na Bonchasse Bayou	Upstream of Mansfield STP outfall	AH28823	TRG	TKN (60 Day BOD)	0.48	ppm	351.2	0.10	10/19/2005	10/19/2005	
NBB03A	Na Bonchasse Bayou	Upstream of Mansfield STP outfall	AH28823	TRG	NO2NO3 - Initial Reading	0.31	ppm	353.2	0.05	8/19/2005	8/19/2005	8/18/2005
NBB03A	Na Bonchasse Bayou	Upstream of Mansfield STP outfall	AH28823	TRG	NO2NO3 - Reading 1	0.27	ppm	353.2	0.05	9/9/2005	9/9/2005	8/19/2005
NBB03A	Na Bonchasse Bayou	Upstream of Mansfield STP outfall	AH28823	TRG	NO2NO3 - Reading 2	0.30	ppm	353.2	0.05	9/9/2005	9/9/2005	8/22/2005
NBB03A	Na Bonchasse Bayou	Upstream of Mansfield STP outfall	AH28823	TRG	NO2NO3 - Reading 3	0.39	ppm	353.2	0.05	9/14/2005	9/14/2005	8/24/2005
NBB03A	Na Bonchasse Bayou	Upstream of Mansfield STP outfall	AH28823	TRG	NO2NO3 - Reading 4	0.51	ppm	353.2	0.05	9/9/2005	9/9/2005	8/26/2005
NBB03A	Na Bonchasse Bayou	Upstream of Mansfield STP outfall	AH28823	TRG	NO2NO3 - Reading 5	0.65	ppm	353.2	0.05	9/13/2005	9/13/2005	8/30/2005
NBB03A	Na Bonchasse Bayou	Upstream of Mansfield STP outfall	AH28823	TRG	NO2NO3 - Reading 6	0.64	ppm	353.2	0.05	9/13/2005	9/13/2005	9/2/2005
NBB03A	Na Bonchasse Bayou	Upstream of Mansfield STP outfall	AH28823	TRG	NO2NO3 - Reading 7	0.70	ppm	353.2	0.05	9/14/2005	9/14/2005	9/7/2005
NBB03A	Na Bonchasse Bayou	Upstream of Mansfield STP outfall	AH28823	TRG	NO2NO3 - Reading 8	0.69	ppm	353.2	0.05	9/28/2005	9/28/2005	9/16/2005
NBB03A	Na Bonchasse Bayou	Upstream of Mansfield STP outfall	AH28823	TRG	NO2NO3 - Reading 9	0.75	ppm	353.2	0.05	9/28/2005	9/28/2005	9/27/2005
NBB03A	Na Bonchasse Bayou	Upstream of Mansfield STP outfall	AH28823	TRG	NO2NO3 - Reading 10	0.71	ppm	353.2	0.05	10/21/2005	10/21/2005	10/7/2005
NBB03A	Na Bonchasse Bayou	Upstream of Mansfield STP outfall	AH28823	TRG	NO2NO3 - Final	0.75	ppm	353.2	0.05	10/21/2005	10/21/2005	10/17/2005
NBB03A	Na Bonchasse Bayou	Upstream of Mansfield STP outfall	AH28823	TRG	Non-Filtered BOD 60 - Reading 1	1.0	ppm	5210B	2.0	8/18/2005	8/19/2005	
NBB03A	Na Bonchasse Bayou	Upstream of Mansfield STP outfall	AH28823	TRG	Non-Filtered BOD 60 - Reading 2	2.5	ppm	5210B	2.0	8/18/2005	8/22/2005	
NBB03A	Na Bonchasse Bayou	Upstream of Mansfield STP outfall	AH28823	TRG	Non-Filtered BOD 60 - Reading 3	3.4	ppm	5210B	2.0	8/18/2005	8/24/2005	
NBB03A	Na Bonchasse Bayou	Upstream of Mansfield STP outfall	AH28823	TRG	Non-Filtered BOD 60 - Reading 4	4.3	ppm	5210B	2.0	8/18/2005	8/26/2005	
NBB03A	Na Bonchasse Bayou	Upstream of Mansfield STP outfall	AH28823	TRG	Non-Filtered BOD 60 - Reading 5	5.2	ppm	5210B	2.0	8/18/2005	8/30/2005	
NBB03A	Na Bonchasse Bayou	Upstream of Mansfield STP outfall	AH28823	TRG	Non-Filtered BOD 60 - Reading 6	5.7	ppm	5210B	2.0	8/18/2005	9/2/2005	
NBB03A	Na Bonchasse Bayou	Upstream of Mansfield STP outfall	AH28823	TRG	Non-Filtered BOD 60 - Reading 7	6.4	ppm	5210B	2.0	8/18/2005	9/7/2005	

NBB03A	Na Bonchasse Bayou	Upstream of Mansfield STP outfall	AH28823	TRG	Non-Filtered BOD 60 - Reading 8	7.2	ppm	5210B	2.0	8/18/2005	9/16/2005	
NBB03A	Na Bonchasse Bayou	Upstream of Mansfield STP outfall	AH28823	TRG	Non-Filtered BOD 60 - Reading 9	7.8	ppm	5210B	2.0	8/18/2005	9/27/2005	
NBB03A	Na Bonchasse Bayou	Upstream of Mansfield STP outfall	AH28823	TRG	Non-Filtered BOD 60 - Reading 10	8.4	ppm	5210B	2.0	8/18/2005	10/7/2005	
NBB03A	Na Bonchasse Bayou	Upstream of Mansfield STP outfall	AH28823	TRG	Non-Filtered BOD 60 - Final	8.6	ppm	5210B	2.0	8/18/2005	10/17/2005	
NBB03B	Na Bonchasse Bayou	Mansfield STP outfall	AH28831	TRG	TSS	18.0	ppm	160.2	4.00	8/19/2005	8/22/2005	
NBB03B	Na Bonchasse Bayou	Mansfield STP outfall	AH28831	TRG	TDS	496	ppm	160.1	10.00	8/19/2005	8/22/2005	
NBB03B	Na Bonchasse Bayou	Mansfield STP outfall	AH28831	TRG	Alkalinity	240	ppm	310.1	2.0	8/25/2005	8/25/2005	
NBB03B	Na Bonchasse Bayou	Mansfield STP outfall	AH28831	TRG	Turbidity	95	NTU	SM 2130B	1.00	8/18/2005	8/18/2005	
NBB03B	Na Bonchasse Bayou	Mansfield STP outfall	AH28831	TRG	Specific Conductance	910	umhos/cm	120.1	10.0	8/25/2005	8/25/2005	
NBB03B	Na Bonchasse Bayou	Mansfield STP outfall	AH28831	TRG	True Color	60	PCU	110.2	5.00	8/17/2005	8/17/2005	
NBB03B	Na Bonchasse Bayou	Mansfield STP outfall	AH28831	TRG	Chloride, Ion Chromatograph	106	ppm	300.0	1.25	9/7/2005	9/7/2005	
NBB03B	Na Bonchasse Bayou	Mansfield STP outfall	AH28831	TRG	Sulfate	39.6	ppm	300.0	1.3	9/7/2005	9/7/2005	
NBB03B	Na Bonchasse Bayou	Mansfield STP outfall	AH28832	TRG	Sodium	131	ppm	200.7	1.0	9/18/2005	9/19/2005	
NBB03B	Na Bonchasse Bayou	Mansfield STP outfall	AH28833	TRG	Hardness	86.9	ppm	130.2	5.0	9/17/2005	9/17/2005	
NBB03B	Na Bonchasse Bayou	Mansfield STP outfall	AH28833	TRG	Nitrate+Nitrite Nitrogen	0.05	ppm	353.2	0.05	8/22/2005	8/22/2005	
NBB03B	Na Bonchasse Bayou	Mansfield STP outfall	AH28833	TRG	TP	0.55	ppm	365.4	0.05	9/8/2005	9/8/2005	
NBB03B	Na Bonchasse Bayou	Mansfield STP outfall	AH28833	TRG	TKN	15.00	ppm	351.2	1.00	8/24/2005	8/24/2005	
NBB03B	Na Bonchasse Bayou	Mansfield STP outfall	AH28833	TRG	Ammonia-Nitrogen	13.4	ppm	350.3	0.10	9/9/2005	9/9/2005	
NBB03B	Na Bonchasse Bayou	Mansfield STP outfall	AH28834	TRG	TOC	17.1	ppm	415.1	2.00	9/7/2005	9/8/2005	
NBB03B	Na Bonchasse Bayou	Mansfield STP outfall	AH28835	TRG	pH, Ultimate BOD survey	NR	pH units	150.1	0.01	9/13/2005	9/13/2005	
NBB03B	Na Bonchasse Bayou	Mansfield STP outfall	AH28835	TRG	TOC (60 Day BOD)	NR	ppm	415.1	2.0	9/13/2005	9/13/2005	
NBB03B	Na Bonchasse Bayou	Mansfield STP outfall	AH28835	TRG	TKN (60 Day BOD)	NR	ppm	351.2	0.1	9/13/2005	9/13/2005	
NBB03B	Na Bonchasse Bayou	Mansfield STP outfall	AH28835	TRG	NO2NO3 - Initial Reading	0.08	ppm	353.2	0.05	8/19/2005	8/19/2005	8/18/2005
NBB03B	Na Bonchasse Bayou	Mansfield STP outfall	AH28835	TRG	NO2NO3 - Reading 1	0.15	ppm	353.2	0.05	9/9/2005	9/9/2005	8/19/2005
NBB03B	Na Bonchasse Bayou	Mansfield STP outfall	AH28835	TRG	NO2NO3 - Reading 2	0.14	ppm	353.2	0.05	9/9/2005	9/9/2005	8/22/2005
NBB03B	Na Bonchasse Bayou	Mansfield STP outfall	AH28835	TRG	NO2NO3 - Reading 3	0.13	ppm	353.2	0.05	9/14/2005	9/14/2005	8/24/2005
NBB03B	Na Bonchasse Bayou	Mansfield STP outfall	AH28835	TRG	NO2NO3 - Reading 4	0.17	ppm	353.2	0.05	9/9/2005	9/9/2005	8/26/2005
NBB03B	Na Bonchasse Bayou	Mansfield STP outfall	AH28835	TRG	NO2NO3 - Reading 5	1.00	ppm	353.2	0.05	9/13/2005	9/13/2005	8/30/2005
NBB03B	Na Bonchasse Bayou	Mansfield STP outfall	AH28835	TRG	NO2NO3 - Reading 6	>1.99	ppm	353.2	0.05	9/13/2005	9/13/2005	9/2/2005
NBB03B	Na Bonchasse Bayou	Mansfield STP outfall	AH28835	TRG	NO2NO3 - Reading 7	>15.0	ppm	353.2	0.10	9/13/2005	9/13/2005	9/7/2005
NBB03B	Na Bonchasse Bayou	Mansfield STP outfall	AH28835	TRG	NO2NO3 - Reading 8	>14.9	ppm	353.2	0.20	9/28/2005	9/28/2005	9/16/2005
NBB03B	Na Bonchasse Bayou	Mansfield STP outfall	AH28835	TRG	NO2NO3 - Reading 9	NR	ppm	353.2	0.05	9/13/2005	9/13/2005	9/27/2005
NBB03B	Na Bonchasse Bayou	Mansfield STP outfall	AH28835	TRG	NO2NO3 - Reading 10	NR	ppm	353.2	0.05	9/13/2005	9/13/2005	10/7/2005
NBB03B	Na Bonchasse Bayou	Mansfield STP outfall	AH28835	TRG	NO2NO3 - Final	NR	ppm	353.2	0.05	9/13/2005	9/13/2005	10/17/2005
NBB03B	Na Bonchasse Bayou	Mansfield STP outfall	AH28835	TRG	Non-Filtered BOD 60 - Reading 1	3.6	ppm	5210B	2.0	8/18/2005	8/19/2005	
NBB03B	Na Bonchasse Bayou	Mansfield STP outfall	AH28835	TRG	Non-Filtered BOD 60 - Reading 2	8.4	ppm	5210B	2.0	8/18/2005	8/22/2005	

NBB03B	Na Bonchasse Bayou	Mansfield STP outfall	AH28835	TRG	Non-Filtered BOD 60 - Reading 3	13.6	ppm	5210B	2.0	8/18/2005	8/24/2005	
NBB03B	Na Bonchasse Bayou	Mansfield STP outfall	AH28835	TRG	Non-Filtered BOD 60 - Reading 4	19.2	ppm	5210B	2.0	8/18/2005	8/26/2005	
NBB03B	Na Bonchasse Bayou	Mansfield STP outfall	AH28835	TRG	Non-Filtered BOD 60 - Reading 5	30.0	ppm	5210B	2.0	8/18/2005	8/30/2005	
NBB03B	Na Bonchasse Bayou	Mansfield STP outfall	AH28835	TRG	Non-Filtered BOD 60 - Reading 6	>59.2	ppm	5210B	2.0	8/18/2005	9/2/2005	
NBB03B	Na Bonchasse Bayou	Mansfield STP outfall	AH28835	TRG	Non-Filtered BOD 60 - Reading 7	>81.6	ppm	5210B	2.0	8/18/2005	9/7/2005	
NBB03B	Na Bonchasse Bayou	Mansfield STP outfall	AH28835	TRG	Non-Filtered BOD 60 - Reading 8	>104	ppm	5210B	2.0	8/18/2005	9/16/2005	
NBB03B	Na Bonchasse Bayou	Mansfield STP outfall	AH28835	TRG	Non-Filtered BOD 60 - Reading 9	NR	ppm	5210B	2.0	9/13/2005	9/13/2005	
NBB03B	Na Bonchasse Bayou	Mansfield STP outfall	AH28835	TRG	Non-Filtered BOD 60 - Reading 10	NR	ppm	5210B	2.0	9/13/2005	9/13/2005	
NBB03B	Na Bonchasse Bayou	Mansfield STP outfall	AH28835	TRG	Non-Filtered BOD 60 - Final	NR	ppm	5210B	2.0	9/13/2005	9/13/2005	
NBB03C	Na Bonchasse Bayou	Downstream of Mansfield STP outfall	AH28836	TRG	TSS	25.0	ppm	160.2	4.00	8/19/2005	8/22/2005	
NBB03C	Na Bonchasse Bayou	Downstream of Mansfield STP outfall.	AH28836	TRG	TDS	378	ppm	160.1	10.00	8/19/2005	8/23/2005	
NBB03C	Na Bonchasse Bayou	Downstream of Mansfield STP outfall.	AH28836	TRG	Alkalinity	186	ppm	310.1	2.0	8/26/2005	8/26/2005	
NBB03C	Na Bonchasse Bayou	Downstream of Mansfield STP outfall.	AH28836	TRG	Turbidity	52	NTU	SM 2130B	1.00	8/18/2005	8/18/2005	
NBB03C	Na Bonchasse Bayou	Downstream of Mansfield STP outfall.	AH28836	TRG	Specific Conductance	735	umhos/cm	120.1	10.0	8/26/2005	8/26/2005	
NBB03C	Na Bonchasse Bayou	Downstream of Mansfield STP outfall.	AH28836	TRG	True Color	55	PCU	110.2	5.00	8/17/2005	8/17/2005	
NBB03C	Na Bonchasse Bayou	Downstream of Mansfield STP outfall.	AH28836	TRG	Chloride, Ion Chromatograph	82.0	ppm	300.0	1.25	9/7/2005	9/7/2005	
NBB03C	Na Bonchasse Bayou	Downstream of Mansfield STP outfall.	AH28836	TRG	Sulfate	39.1	ppm	300.0	1.3	9/7/2005	9/7/2005	
NBB03C	Na Bonchasse Bayou	Downstream of Mansfield STP outfall.	AH28837	TRG	Sodium	102	ppm	200.7	1.0	9/18/2005	9/19/2005	
NBB03C	Na Bonchasse Bayou	Downstream of Mansfield STP outfall.	AH28838	TRG	Hardness	86.3	ppm	130.2	5.0	9/17/2005	9/17/2005	
NBB03C	Na Bonchasse Bayou	Downstream of Mansfield STP outfall.	AH28838	TRG	Nitrate+Nitrite Nitrogen	0.11	ppm	353.2	0.05	8/22/2005	8/22/2005	
NBB03C	Na Bonchasse Bayou	Downstream of Mansfield STP outfall.	AH28838	TRG	TP	0.97	ppm	365.4	0.05	9/8/2005	9/8/2005	
NBB03C	Na Bonchasse Bayou	Downstream of Mansfield STP outfall.	AH28838	TRG	TKN	9.98	ppm	351.2	0.50	8/24/2005	8/24/2005	
NBB03C	Na Bonchasse Bayou	Downstream of Mansfield STP outfall.	AH28838	TRG	Ammonia-Nitrogen	9.28	ppm	350.3	0.10	9/9/2005	9/9/2005	
NBB03C	Na Bonchasse Bayou	Downstream of Mansfield STP outfall.	AH28839	TRG	TOC	13.3	ppm	415.1	2.00	9/7/2005	9/8/2005	
NBB03C	Na Bonchasse Bayou	Downstream of Mansfield STP outfall.	AH28840	TRG	pH, Ultimate BOD survey	NR	pH units	150.1	0.01	9/13/2005	9/13/2005	
NBB03C	Na Bonchasse Bayou	Downstream of Mansfield STP outfall.	AH28840	TRG	TOC (60 Day BOD)	NR	ppm	415.1	2.0	9/13/2005	9/13/2005	
NBB03C	Na Bonchasse Bayou	Downstream of Mansfield STP outfall.	AH28840	TRG	TKN (60 Day BOD)	NR	ppm	351.2	0.1	9/13/2005	9/13/2005	
NBB03C	Na Bonchasse Bayou	Downstream of Mansfield STP outfall.	AH28840	TRG	NO2NO3 - Initial Reading	0.09	ppm	353.2	0.05	8/19/2005	8/19/2005	8/18/2005
NBB03C	Na Bonchasse Bayou	Downstream of Mansfield STP outfall.	AH28840	TRG	NO2NO3 - Reading 1	0.16	ppm	353.2	0.05	9/9/2005	9/9/2005	8/19/2005
NBB03C	Na Bonchasse Bayou	Downstream of Mansfield STP outfall.	AH28840	TRG	NO2NO3 - Reading 2	0.20	ppm	353.2	0.05	9/9/2005	9/9/2005	8/22/2005
NBB03C	Na Bonchasse Bayou	Downstream of Mansfield STP outfall.	AH28840	TRG	NO2NO3 - Reading 3	0.50	ppm	353.2	0.05	9/14/2005	9/14/2005	8/24/2005
NBB03C	Na Bonchasse Bayou	Downstream of Mansfield STP outfall.	AH28840	TRG	NO2NO3 - Reading 4	1.00	ppm	353.2	0.05	9/9/2005	9/9/2005	8/26/2005
NBB03C	Na Bonchasse Bayou	Downstream of Mansfield STP outfall.	AH28840	TRG	NO2NO3 - Reading 5	>2.83	ppm	353.2	0.05	9/13/2005	9/13/2005	8/30/2005
NBB03C	Na Bonchasse Bayou	Downstream of Mansfield STP outfall.	AH28840	TRG	NO2NO3 - Reading 6	>3.91	ppm	353.2	0.05	9/13/2005	9/13/2005	9/2/2005
NBB03C	Na Bonchasse Bayou	Downstream of Mansfield STP outfall.	AH28840	TRG	NO2NO3 - Reading 7	>6.55	ppm	353.2	0.20	9/13/2005	9/13/2005	9/7/2005
NBB03C	Na Bonchasse Bayou	Downstream of Mansfield STP outfall.	AH28840	TRG	NO2NO3 - Reading 8	>7.57	ppm	353.2	0.30	9/28/2005	9/28/2005	9/16/2005

NBB03C	Na Bonchasse Bayou	Downstream of Mansfield STP outfall.	AH28840	TRG	NO2NO3 - Reading 9	NR	ppm	353.2	0.05	9/13/2005	9/13/2005	9/27/2005
NBB03C	Na Bonchasse Bayou	Downstream of Mansfield STP outfall.	AH28840	TRG	NO2NO3 - Reading 10	NR	ppm	353.2	0.05	9/13/2005	9/13/2005	10/7/2005
NBB03C	Na Bonchasse Bayou	Downstream of Mansfield STP outfall.	AH28840	TRG	NO2NO3 - Final	NR	ppm	353.2	0.05	9/13/2005	9/13/2005	10/17/2005
NBB03C	Na Bonchasse Bayou	Downstream of Mansfield STP outfall.	AH28840	TRG	Non-Filtered BOD 60 - Reading 1	2.1	ppm	5210B	2.0	8/18/2005	8/19/2005	
NBB03C	Na Bonchasse Bayou	Downstream of Mansfield STP outfall.	AH28840	TRG	Non-Filtered BOD 60 - Reading 2	6.7	ppm	5210B	2.0	8/18/2005	8/22/2005	
NBB03C	Na Bonchasse Bayou	Downstream of Mansfield STP outfall.	AH28840	TRG	Non-Filtered BOD 60 - Reading 3	10.8	ppm	5210B	2.0	8/18/2005	8/24/2005	
NBB03C	Na Bonchasse Bayou	Downstream of Mansfield STP outfall.	AH28840	TRG	Non-Filtered BOD 60 - Reading 4	17.1	ppm	5210B	2.0	8/18/2005	8/26/2005	
NBB03C	Na Bonchasse Bayou	Downstream of Mansfield STP outfall.	AH28840	TRG	Non-Filtered BOD 60 - Reading 5	>25.4	ppm	5210B	2.0	8/18/2005	8/30/2005	
NBB03C	Na Bonchasse Bayou	Downstream of Mansfield STP outfall.	AH28840	TRG	Non-Filtered BOD 60 - Reading 6	>33.9	ppm	5210B	2.0	8/18/2005	9/2/2005	
NBB03C	Na Bonchasse Bayou	Downstream of Mansfield STP outfall.	AH28840	TRG	Non-Filtered BOD 60 - Reading 7	>42.2	ppm	5210B	2.0	8/18/2005	9/7/2005	
NBB03C	Na Bonchasse Bayou	Downstream of Mansfield STP outfall.	AH28840	TRG	Non-Filtered BOD 60 - Reading 8	>50.5	ppm	5210B	2.0	8/18/2005	9/16/2005	
NBB03C	Na Bonchasse Bayou	Downstream of Mansfield STP outfall.	AH28840	TRG	Non-Filtered BOD 60 - Reading 9	NR	ppm	5210B	2.0	8/18/2005	8/30/2005	
NBB03C	Na Bonchasse Bayou	Downstream of Mansfield STP outfall.	AH28840	TRG	Non-Filtered BOD 60 - Reading 10	NR	ppm	5210B	2.0	9/13/2005	9/13/2005	
NBB03C	Na Bonchasse Bayou	Downstream of Mansfield STP outfall.	AH28840	TRG	Non-Filtered BOD 60 - Final	NR	ppm	5210B	2.0	8/18/2005	8/30/2005	
RB01	Rambin Bayou	Off of Mount Zion Rd	AH28841	TRG	TSS	16.0	ppm	160.2	4.00	8/19/2005	8/22/2005	
RB01	Rambin Bayou	Off of Mount Zion Rd	AH28841	TRG	TDS	136	ppm	160.1	10.00	8/19/2005	8/22/2005	
RB01	Rambin Bayou	Off of Mount Zion Rd	AH28841	TRG	Alkalinity	35.0	ppm	310.1	2.0	8/26/2005	8/26/2005	
RB01	Rambin Bayou	Off of Mount Zion Rd	AH28841	TRG	Turbidity	41	NTU	SM 2130B	1.00	8/18/2005	8/18/2005	
RB01	Rambin Bayou	Off of Mount Zion Rd	AH28841	TRG	Specific Conductance	133	umhos/cm	120.1	10.0	8/26/2005	8/26/2005	
RB01	Rambin Bayou	Off of Mount Zion Rd	AH28841	TRG	True Color	100	PCU	110.2	10.00	8/17/2005	8/17/2005	
RB01	Rambin Bayou	Off of Mount Zion Rd	AH28841	TRG	Chloride, Ion Chromatograph	11.3	ppm	300.0	1.25	9/7/2005	9/7/2005	
RB01	Rambin Bayou	Off of Mount Zion Rd	AH28841	TRG	Sulfate	9.1	ppm	300.0	1.3	9/7/2005	9/7/2005	
RB01	Rambin Bayou	Off of Mount Zion Rd	AH28842	TRG	Sodium	11.1	ppm	200.7	1.0	9/18/2005	9/19/2005	
RB01	Rambin Bayou	Off of Mount Zion Rd	AH28843	TRG	Hardness	34.9	ppm	130.2	5.0	9/17/2005	9/17/2005	
RB01	Rambin Bayou	Off of Mount Zion Rd	AH28843	TRG	Nitrate+Nitrite Nitrogen	0.08	ppm	353.2	0.05	8/22/2005	8/22/2005	
RB01	Rambin Bayou	Off of Mount Zion Rd	AH28843	TRG	TP	0.23	ppm	365.4	0.05	9/8/2005	9/8/2005	
RB01	Rambin Bayou	Off of Mount Zion Rd	AH28843	TRG	TKN	0.99	ppm	351.2	0.10	8/24/2005	8/24/2005	
RB01	Rambin Bayou	Off of Mount Zion Rd	AH28843	TRG	Ammonia-Nitrogen	0.20	ppm	350.3	0.10	9/9/2005	9/9/2005	
RB01	Rambin Bayou	Off of Mount Zion Rd	AH28844	TRG	TOC	9.6	ppm	415.1	2.00	9/7/2005	9/8/2005	
RB01	Rambin Bayou	Off of Mount Zion Rd	AH28845	TRG	pH, Ultimate BOD survey	7.30	pH units	150.1	0.01	10/17/2005	10/17/2005	
RB01	Rambin Bayou	Off of Mount Zion Rd	AH28845	TRG	TOC (60 Day BOD)	7.8	ppm	415.1	2.0	10/20/2005	10/21/2005	
RB01	Rambin Bayou	Off of Mount Zion Rd	AH28845	TRG	TKN (60 Day BOD)	0.69	ppm	351.2	0.10	10/19/2005	10/19/2005	
RB01	Rambin Bayou	Off of Mount Zion Rd	AH28845	TRG	NO2NO3 - Initial Reading	0.15	ppm	353.2	0.05	8/19/2005	8/19/2005	8/18/2005
RB01	Rambin Bayou	Off of Mount Zion Rd	AH28845	TRG	NO2NO3 - Reading 1	0.10	ppm	353.2	0.05	9/9/2005	9/9/2005	8/19/2005
RB01	Rambin Bayou	Off of Mount Zion Rd	AH28845	TRG	NO2NO3 - Reading 2	0.11	ppm	353.2	0.05	9/9/2005	9/9/2005	8/22/2005
RB01	Rambin Bayou	Off of Mount Zion Rd	AH28845	TRG	NO2NO3 - Reading 3	0.11	ppm	353.2	0.05	9/14/2005	9/14/2005	8/24/2005

RB01	Rambin Bayou	Off of Mount Zion Rd	AH28845	TRG	NO2NO3 - Reading 4	0.11	ppm	353.2	0.05	9/9/2005	9/9/2005	8/26/2005
RB01	Rambin Bayou	Off of Mount Zion Rd	AH28845	TRG	NO2NO3 - Reading 5	0.23	ppm	353.2	0.05	9/14/2005	9/14/2005	8/30/2005
RB01	Rambin Bayou	Off of Mount Zion Rd	AH28845	TRG	NO2NO3 - Reading 6	0.27	ppm	353.2	0.05	9/13/2005	9/13/2005	9/2/2005
RB01	Rambin Bayou	Off of Mount Zion Rd	AH28845	TRG	NO2NO3 - Reading 7	0.37	ppm	353.2	0.05	9/14/2005	9/14/2005	9/7/2005
RB01	Rambin Bayou	Off of Mount Zion Rd	AH28845	TRG	NO2NO3 - Reading 8	0.44	ppm	353.2	0.05	9/28/2005	9/28/2005	9/16/2005
RB01	Rambin Bayou	Off of Mount Zion Rd	AH28845	TRG	NO2NO3 - Reading 9	0.46	ppm	353.2	0.05	9/28/2005	9/28/2005	9/27/2005
RB01	Rambin Bayou	Off of Mount Zion Rd	AH28845	TRG	NO2NO3 - Reading 10	0.50	ppm	353.2	0.05	10/21/2005	10/21/2005	10/7/2005
RB01	Rambin Bayou	Off of Mount Zion Rd	AH28845	TRG	NO2NO3 - Final	0.52	ppm	353.2	0.05	10/21/2005	10/21/2005	10/17/2005
RB01	Rambin Bayou	Off of Mount Zion Rd	AH28845	TRG	Non-Filtered BOD 60 - Reading 1	0.6	ppm	5210B	2.0	8/18/2005	8/19/2005	
RB01	Rambin Bayou	Off of Mount Zion Rd	AH28845	TRG	Non-Filtered BOD 60 - Reading 2	1.8	ppm	5210B	2.0	8/18/2005	8/22/2005	
RB01	Rambin Bayou	Off of Mount Zion Rd	AH28845	TRG	Non-Filtered BOD 60 - Reading 3	2.4	ppm	5210B	2.0	8/18/2005	8/24/2005	
RB01	Rambin Bayou	Off of Mount Zion Rd	AH28845	TRG	Non-Filtered BOD 60 - Reading 4	3.0	ppm	5210B	2.0	8/18/2005	8/26/2005	
RB01	Rambin Bayou	Off of Mount Zion Rd	AH28845	TRG	Non-Filtered BOD 60 - Reading 5	4.4	ppm	5210B	2.0	8/18/2005	8/30/2005	
RB01	Rambin Bayou	Off of Mount Zion Rd	AH28845	TRG	Non-Filtered BOD 60 - Reading 6	5.1	ppm	5210B	2.0	8/18/2005	9/2/2005	
RB01	Rambin Bayou	Off of Mount Zion Rd	AH28845	TRG	Non-Filtered BOD 60 - Reading 7	6.3	ppm	5210B	2.0	8/18/2005	9/7/2005	
RB01	Rambin Bayou	Off of Mount Zion Rd	AH28845	TRG	Non-Filtered BOD 60 - Reading 8	7.8	ppm	5210B	2.0	8/18/2005	9/16/2005	
RB01	Rambin Bayou	Off of Mount Zion Rd	AH28845	TRG	Non-Filtered BOD 60 - Reading 9	8.9	ppm	5210B	2.0	8/18/2005	9/27/2005	
RB01	Rambin Bayou	Off of Mount Zion Rd	AH28845	TRG	Non-Filtered BOD 60 - Reading 10	9.9	ppm	5210B	2.0	8/18/2005	10/7/2005	
RB01	Rambin Bayou	Off of Mount Zion Rd	AH28845	TRG	Non-Filtered BOD 60 - Final	10.6	ppm	5210B	2.0	8/18/2005	10/17/2005	
NBB03A	Na Bonchasse Bayou	Upstream of Mansfield STP outfall	AH28940	TRG	Volume of sample, Chlorophyll A (raw)	170	ml	445 (modifie	0.0	9/8/2005	9/9/2005	
NBB03A	Na Bonchasse Bayou	Upstream of Mansfield STP outfall	AH28940	TRG	Chlorophyll A (calculated)	28.5	ug/L	445 (modifie	1.0	9/8/2005	9/9/2005	
NBB03A	Na Bonchasse Bayou	Upstream of Mansfield STP outfall	AH28940	TRG	Chlorophyll A (raw)	484	ug/L	445 (modifie	0.0	9/8/2005	9/9/2005	

Lake Edwards and Smithport Lake Insitu Data

Lake Edwards and Smithport Lake (Subsegment 100605) Insitu Report										
SITE ID NUMBER	Date	Time	DEPTH, m	TEMPERATURE, deg C	DISSOLVED OXYGEN CONCENTRATION, mg/L	DISSOLVED OXYGEN PERCENT SATURATION (100% = 1)	pH, Standard Units	SPECIFIC CONDUCTANCE, umhos/cm	SECCHI DISK DEPTH, inches	SALINITY, ug/L
CB01	17-Aug-05	9:30:00 AM	1	26	2.38	29.1	6.51	118.3	2	0.05
CLK01	17-Aug-05	9:15:00 AM	1	27.98	1.84	23.5	6.65	172.4	48	0.08
CLK01	17-Aug-05	9:20:00 AM	3	24.81	0.12	1.5	6.12	266.6		0.13
CLK01	17-Aug-05	9:24:00AM	5	20.3	0.1	1.1	5.97	458.9		0.23
CLK02	17-Aug-05	8:45:00 AM	1	27.01	0.36	4.5	6.21	199.9	30	0.09
NBB02	17-Aug-05	10:15:00 AM	0.3	25.12	4.53	55	6.93	475.1	12	0.24
NBB03A	17-Aug-05	11:30:00 AM	1	24.22	2.25	26.9	6.92	344.4	18	0.17
NBB03B	17-Aug-05	11:30:00 AM	0.1	28.28	2.49	32	7.47	836.3	1	0.43
NBB03C	17-Aug-05	11:30:00 AM	0.5	27.35	1.87	23.7	7.38	671.7	10	0.35
RB01	17-Aug-05	9:00:00 AM	0.5	24.85	2.13	25.9	6.72	116.8		0.5
SL02	17-Aug-05	11:30:00 AM	1	27.54	1.36	17.4	6.33	75.1	30	0.02
SL03	17-Aug-05	10:00:00 AM	1	27.51	1.31	16.6	6.36	159.3	48	0.07
SL03	17-Aug-05	10:10:00 AM	3	25.05	0.17	2	5.97	213.6		0.1
SL03	17-Aug-05	10:15:00 AM	4.5	21.56	0.1	1.2	5.8	362.4		0.18
SL04	17-Aug-05	9:40:00 AM	1	27.99	2.5	32	6.49	170.7	48	0.08

Appendix F2 – Cross Sections and Discharge Measurements

Smithport Lake 100605

Field Data Summary -- Discharges and Cross Sections

Site #	Width (ft)	Width (m)	Depth (ft)	Depth (m)	Flow (cfs)	Flow (cms)
NBB03b						0.0330
NBB02	9.0	2.743	0.37	0.113	0.544	0.0154
RB01	15.3	4.663	1.06	0.323	7.480	0.2118
CLK01	485.0	147.828	12.80	3.901		
SL04	462.0	140.818	16.30	4.968		
SL03	198.2	60.411	10.60	3.231		
SL01	397.0	121.006	7.50	2.286	1.609	0.0456

Smithport Lake 100605

Width and Depth input Values

Reach #	Calculation	Width (m)	Depth (m)
1	NBB02	2.743	0.113
2	NBB02	2.743	0.113
3	CLK01	147.828	3.901
4	CLK01	147.828	3.901
5	CLK01	147.828	3.901
6	SL03	60.411	3.231
7	SL01	121.006	2.286

Lake Edwards and Smithport Lake 100605 Flow Input		Reach Length (km)	Calculation	Flow (cms)
Headwater *			NBB03a	0.0001
Incremental Inflow	Reach 1	7.3	NBB02 - NBB03a - NBB03b	0.0052
No Incremental flow	Reach 2	15.8	Continuous Flow	0.0000
No Incremental flow	Reach 3	0.7	Continuous Flow	0.0000
No Incremental flow	Reach 4	0.7	Continuous Flow	0.0000
No Incremental flow	Reach 5	0.3	Continuous Flow	0.0000
No Incremental flow	Reach 6	2	Continuous Flow	0.0000
No Incremental flow	Reach 7	2.3	Continuous Flow	0.0000
Discharger**	NBB03b		NBB03b	0.0101
Tributary	RB01		SL01 - NBB02	0.0302

* Minimal flow required to make the model run
** Flow used is DMR average of 230,000 gpd for August 2005

PERMITTEE NAME/ADDRESS
(Include Facility Name/Location if different)

NAME City of Mansfield
ADDRESS P.O. Box 773
Mansfield, LA 71052

FACILITY Mansfield Wastewater Treatment Facility
LOCATION George Hunt Road; Mansfield; DeSoto Parish

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM *(NPDES)*
DISCHARGE MONITORING REPORT *(DMR)*

(2-16)	(17-19)
LA0038962	001 A
PERMIT NUMBER	DISCHARGE NUMBER

MAJOR
F - FINAL
TREATED SANITARY WASTEWATER
PCU

MONITORING PERIOD							
FROM	YEAR	MO	DAY	TO	YEAR	MO	DAY
	05	08	01		05	08	31
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

_____ NO DISCHARGE

NOTE: Read Instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
BOD, 5-DAY	SAMPLE MEASUREMENT	9.12	XXXXXX	(26)	XXXXXX	6.45	7.65	(19)	0	WEEKLY	3 HR COMP.
00310 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	63 MONTHLY AVG.	XXXXXX	#/DAY	XXXXXX	10 MONTHLY AVG.	15 WEEKLY AVG.	mg/l		WEEKLY	3 HR COMP.
pH	SAMPLE MEASUREMENT	XXXXXX	XXXXXX		7.4	XXXXXX	7.6	(12)	0	WEEKLY	GRAB
00400 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	XXXXXX	XXXXXX	XX	6.0 MINIMUM	XXXXXX	9.0 MAXIUM	SU		WEEKLY	GRAB
SOLIDS, TOTAL SUSPENDED	SAMPLE MEASUREMENT	31.19	XXXXXX	(26)	XXXXXX	24.96	45.20	(19)	1	WEEKLY	3 HR COMP.
00530 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	94 MONTHLY AVG.	XXXXX	#/DAY	XXXXXX	15 MONTHLY AVG.	23 WEEKLY AVG.	mg/L		WEEKLY	3 HR COMP.
FLOW, IN CONDUIT OR THRU TREATMENT PLANT	SAMPLE MEASUREMENT	0.230	0.462	(03)	XXXXXX	XXXXXX	XXXXXX			CONT.	RECORDER
50050 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	REPORT MONTHLY AVG.	REPORT WEEKLY AVG.	MGD	XXXXXX	XXXXXX	XXXXXX	XX	X	CONTIN UOUS	RECORDER
COLIFORM, FECAL GENERAL	SAMPLE MEASUREMENT	XXXXXX	XXXXXX		XXXXXX	191.8	484	(13) # / 100 ml	1	WEEKLY	GRAB
74055 1 0 0	PERMIT REQUIREMENT	XXXXXX	XXXXXX	XX	XXXXXX	200 MONTHLY GEO.	400 WEEKLY GEO.			WEEKLY	GRAB
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

RECEIVED 2005

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Curtis W. McCoy, Mayor
~~Gail Mitchell~~
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE		DATE		
318	872-0406	2005	09	13
AREA CODE	NUMBER	YEAR	MO	DAY

COMMENT AND EXPLANATION OF ANY VIOLATIONS *(Reference all attachments here)*

Computer Reproduction EPA Form 3320-1

PAGE 1 OF 1

100605 Lake Edwards/Smithport Lake
Measured values taken in the channel that runs through the lake using the Depth Finder.
GEO XT used to locate where measurements were taken.

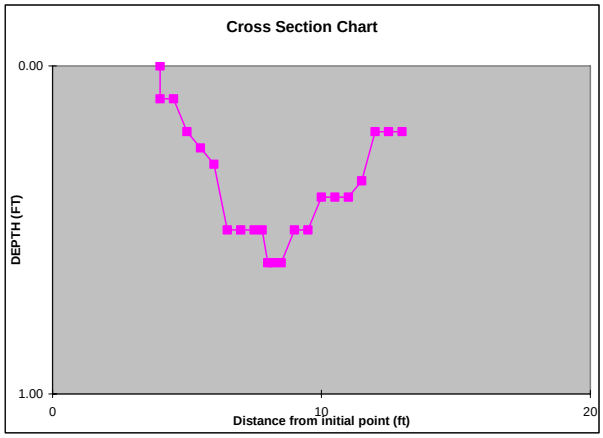
Depth Reading	Corresponding Survey Site		DEPTH (ft)	Range (ft)	Width (ft)	UTM_X	UTM_Y	COUNT	PDOP	QUALITY	DATUM	DATE_TIME	GPS
01 CL			4.9			443817.0	3556852.0	20	2.4	2	NAD_1983_UTM_Zone_15N	3/29/06 5:44:48 PM	GEO XT
02 CL			9.2			443832.0	3556774.0	20	3.1	2	NAD_1983_UTM_Zone_15N	3/29/06 5:48:30 PM	GEO XT
03 CL			3.7			443626.0	3556608.0	20	3.2	2	NAD_1983_UTM_Zone_15N	3/29/06 5:54:58 PM	GEO XT
04 CL			5.7			443748.0	3556522.0	20	2.6	2	NAD_1983_UTM_Zone_15N	3/29/06 5:59:10 PM	GEO XT
05 CL			4.5			443323.0	3556653.0	20	3.3	2	NAD_1983_UTM_Zone_15N	3/29/06 6:17:05 PM	GEO XT
06 CL			5.1			443574.0	3556443.0	20	2.6	2	NAD_1983_UTM_Zone_15N	3/29/06 6:23:54 PM	GEO XT
07 CL			6.7			443945.0	3556347.0	20	2.8	2	NAD_1983_UTM_Zone_15N	3/29/06 6:30:34 PM	GEO XT
08 CL			2.8			444260.0	3556603.0	20	3.1	2	NAD_1983_UTM_Zone_15N	3/29/06 6:39:36 PM	GEO XT
09 CL	CLK01	Channel	12.8	9.0 to 14.8	485	444092.0	3556268.0	20	3.3	2	NAD_1983_UTM_Zone_15N	3/29/06 6:44:25 PM	GEO XT
01 SL	Between SL04 and SL03	Channel	16.3	7.3 to 17	462	444651.0	3555147.0	20	3.3	2	NAD_1983_UTM_Zone_15N	3/29/06 6:52:08 PM	GEO XT
02 SL			3.2			445027.0	3554378.0	20	3.2	2	NAD_1983_UTM_Zone_15N	3/29/06 7:05:08 PM	GEO XT
03 SL			3.8			445461.0	3554615.0	20	3.9	2	NAD_1983_UTM_Zone_15N	3/29/06 7:12:10 PM	GEO XT
04 SL			2.1			445037.0	3554267.0	20	3.7	2	NAD_1983_UTM_Zone_15N	3/29/06 7:18:31 PM	GEO XT
05 SL	SL03	Channel	10.6	6.2 to 12.6	198.2	444853.0	3554340.0	20	3.8	2	NAD_1983_UTM_Zone_15N	3/29/06 7:22:44 PM	GEO XT
06 SL			5			445514.0	3553653.0	20	2.5	2	NAD_1983_UTM_Zone_15N	3/29/06 8:06:02 PM	GEO XT
07 SL			5.2			445078.0	3553318.0	20	2.5	2	NAD_1983_UTM_Zone_15N	3/29/06 8:13:53 PM	GEO XT
08 SL	SL02	Channel	7.5	6.1 to 10.4	397	446314.0	3553934.0	20	2.8	2	NAD_1983_UTM_Zone_15N	3/29/06 8:25:19 PM	GEO XT
09 SL		Dam	7.4			446865.0	3553519.0	20	2.5	2	NAD_1983_UTM_Zone_15N	3/29/06 8:29:32 PM	GEO XT

STREAM CROSS-SECTION SPREADSHEET

Site Number: NBB02 **Subsegment:** 100605 **Waterbody:** Smithport Lake
Site Description: At Hwy 175 DS of Bridge
Type of Equipment: ☐ Fathometer ☐ Hydrotrac ☑ Manual
Initial Bank: ☐ RDB ☐ LDB
Tapedown:
Guage Height:
Date: 7/19/2005

WIDTH[1] (ft):	9.00
AREA[2] (ft^2):	3.31
AVG. DEPTH[3] (ft):	0.37

Subsection	Distance from initial point (ft)	Width[4] (ft)	Depth (ft)	Area[5] (sq.ft.)	Area of element as % of Total Area[6 & 7]
1	4.0	0.00	0.00	0.00	0.00%
2	4.0	0.25	0.10	0.03	0.76%
3	4.5	0.50	0.10	0.05	1.51%
4	5.0	0.50	0.20	0.10	3.02%
5	5.5	0.50	0.25	0.13	3.78%
6	6.0	0.50	0.30	0.15	4.53%
7	6.5	0.50	0.50	0.25	7.55%
8	7.0	0.50	0.50	0.25	7.55%
9	7.5	0.40	0.50	0.20	6.04%
10	7.8	0.25	0.50	0.13	3.78%
11	8.0	0.20	0.60	0.12	3.63%
12	8.2	0.25	0.60	0.15	4.53%
13	8.5	0.40	0.60	0.24	7.25%
14	9.0	0.50	0.50	0.25	7.55%
15	9.5	0.50	0.50	0.25	7.55%
16	10.0	0.50	0.40	0.20	6.04%
17	10.5	0.50	0.40	0.20	6.04%
18	11.0	0.50	0.40	0.20	6.04%
19	11.5	0.50	0.35	0.18	5.29%
20	12.0	0.50	0.20	0.10	3.02%
21	12.5	0.50	0.20	0.10	3.02%
22	13.0	0.25	0.20	0.05	1.51%
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
	Total	9.00		3.31	100.00%



Data Collection Crew	Office Data Work
Measurement made by:	**Data Inputed by / Date:**
Notetaker/Recorder:	**Data Input Checked by / Date:**
Other:	

Note 1: WIDTH (ft) = sum of the width column
Note 2: AREA (sq.ft.) = sum of the area column
Note 3: AVG. DEPTH (ft) = area/width (using the values from this table)
Note 4: Width of element
Note 5: Area=Width*Depth for element
Note 6: Percent area = element area/total area x 100%
Note 7: Percent area should be less than 10% as per USGS standard.
Note 8: Blank fields are cleared from all calculations.
Note 9: The cross sections are taken at areas representative of the stream.

STREAM CROSS-SECTION SPREADSHEET

Site Number: RB1 **Subsegment:** 100605 **Waterbody:** Rambin Bayou

Site Description: Off of Mt. Zion Rd.

Type of Equipment: ☐ Fathometer ☐ Hydrotrac ☑ Manual

Initial Bank: ☐ RDB ☐ LDB

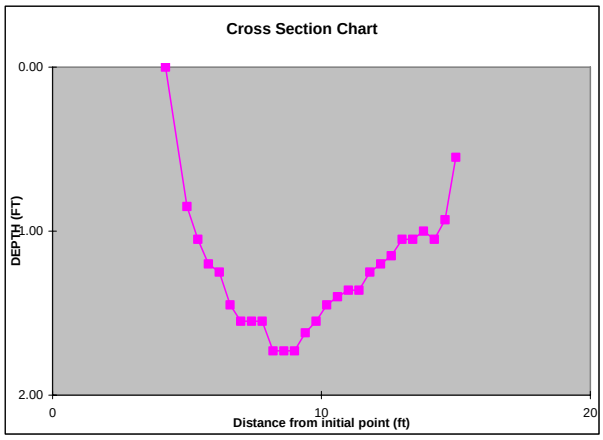
Tapedown:

Guage Height:

Date: 7/19/2005

WIDTH[1] (ft):	15.30
AREA[2] (ft^2):	16.19
AVG. DEPTH[3](ft):	1.06

Subsection	Distance from initial point (ft)	Width[4] (ft)	Depth (ft)	Area[5] (sq.ft.)	Area of element as % of Total Area[6 & 7]
1	4.2	0.40	0.00	0.00	0.00%
2	5.0	0.60	0.85	0.51	3.15%
3	5.4	0.40	1.05	0.42	2.59%
4	5.8	0.40	1.20	0.48	2.96%
5	6.2	0.40	1.25	0.50	3.09%
6	6.6	0.40	1.45	0.58	3.58%
7	7.0	0.40	1.55	0.62	3.83%
8	7.4	0.40	1.55	0.62	3.83%
9	7.8	0.40	1.55	0.62	3.83%
10	8.2	0.40	1.73	0.69	4.27%
11	8.6	0.40	1.73	0.69	4.27%
12	9.0	0.40	1.73	0.69	4.27%
13	9.4	0.40	1.62	0.65	4.00%
14	9.8	0.40	1.55	0.62	3.83%
15	10.2	0.40	1.45	0.58	3.58%
16	10.6	0.40	1.40	0.56	3.46%
17	11.0	0.40	1.36	0.54	3.36%
18	11.4	0.40	1.36	0.54	3.36%
19	11.8	0.40	1.25	0.50	3.09%
20	12.2	0.40	1.20	0.48	2.96%
21	12.6	0.40	1.15	0.46	2.84%
22	13.0	0.40	1.05	0.42	2.59%
23	13.4	0.40	1.05	0.42	2.59%
24	13.8	0.40	1.00	0.40	2.47%
25	14.2	0.40	1.05	0.42	2.59%
26	14.6	0.40	0.93	0.37	2.30%
27	15.0	0.40	0.55	0.22	1.36%
28	15.4	0.40	0.55	0.22	1.36%
29	15.8	0.40	0.60	0.24	1.48%
30	16.2	0.40	0.60	0.24	1.48%
31	16.6	0.40	0.65	0.26	1.61%
32	17.0	0.40	0.60	0.24	1.48%
33	17.4	1.25	0.60	0.75	4.63%
34	19.5	1.05	0.60	0.63	3.89%
35					
36					
37					
38					
39					
40					
	Total	15.30		16.19	100.00%



Data Collection Crew	Office Data Work
Measurement made by:	**Data Inputed by / Date:**
Notetaker/Recorder:	**Data Input Checked by / Date:**
Other:	

Note 1: WIDTH (ft) = sum of the width column
Note 2: AREA (sq.ft.) = sum of the area column
Note 3: AVG. DEPTH (ft) = area/width (using the values from this table)
Note 4: Width of element
Note 5: Area=Width*Depth for element
Note 6: Percent area = element area/total area x 100%
Note 7: Percent area should be less than 10% as per USGS standard.
Note 8: Blank fields are cleared from all calculations.
Note 9: The cross sections are taken at areas representative of the stream.

FLOWTRACKER WADING DISCHARGE

At Hwy 175 DS of Bridge NBB02
Initial Bank: LEW
Serial Number: P931
Date: 2005/08/17 10:11:43

Width:	9
Area:	3.31
Discharge:	0.544
Average Velocity:	0.164

Section	Distance	Depth	Area	Velocity				Section Discharge	% Discharge
				.2D	.6D	.8D	Average		
1	4	0	0		0		0	0	0
2	4	0.1	0.025		0.067		0.067	0.002	0.40%
3	4.5	0.1	0.05		0.514		0.514	0.026	4.80%
4	5	0.2	0.1		0.095		0.095	0.009	1.70%
5	5.5	0.25	0.125		0.038		0.038	0.005	0.90%
6	6	0.3	0.15		0.09		0.09	0.013	2.40%
7	6.5	0.5	0.25		0.152		0.152	0.038	7.00%
8	7	0.5	0.25		0.239		0.239	0.06	11.00%
9	7.5	0.5	0.2		0.262		0.262	0.052	9.60%
10	7.8	0.5	0.125		0.246		0.246	0.031	5.70%
11	8	0.6	0.12		0.188		0.188	0.023	4.20%
12	8.2	0.6	0.15		0.24		0.24	0.036	6.60%
13	8.5	0.6	0.24		0.239		0.239	0.057	10.50%
14	9	0.5	0.25		0.214		0.214	0.053	9.70%
15	9.5	0.5	0.25		0.211		0.211	0.053	9.70%
16	10	0.4	0.2		0.156		0.156	0.031	5.70%
17	10.5	0.4	0.2		0.144		0.144	0.029	5.30%
18	11	0.4	0.2		0.097		0.097	0.019	3.50%
19	11.5	0.35	0.175		0.035		0.035	0.006	1.10%
20	12	0.2	0.1		0.009		0.009	0.001	0.20%
21	12.5	0.2	0.1		0.003		0.003	0	0
22	13	0.2	0.05		0		0.003	0	0

FLOWTRACKER WADING DISCHARGE

Site: RB01
Initial Bank: REW
Serial Number: P929
Date: 2005/08/17 08:54:28

Width:	15.3
Area:	16.19
Discharge:	7.48
Average Velocity:	0.462

Section	Distance	Depth	Area	Velocity .2D	Velocity .6D	Velocity .8D	Velocity Average	Section Discharge	% Discharge
1	4.2	0	0		0		0	0	0
2	5	0.85	0.51		0.221		0.221	0.113	1.50%
3	5.4	1.05	0.42		0.272		0.272	0.114	1.50%
4	5.8	1.2	0.48		0.388		0.388	0.186	2.50%
5	6.2	1.25	0.5		0.483		0.483	0.241	3.20%
6	6.6	1.45	0.58		0.469		0.469	0.272	3.60%
7	7	1.55	0.62		0.425		0.425	0.263	3.50%
8	7.4	1.55	0.62		0.729		0.729	0.452	6.00%
9	7.8	1.55	0.62		0.783		0.783	0.485	6.50%
10	8.2	1.73	0.692		0.684		0.684	0.473	6.30%
11	8.6	1.73	0.692		0.677		0.677	0.469	6.30%
12	9	1.73	0.692		0.783		0.783	0.542	7.20%
13	9.4	1.62	0.648		0.599		0.599	0.388	5.20%
14	9.8	1.55	0.62		0.562		0.562	0.348	4.70%
15	10.2	1.45	0.58		0.558		0.558	0.323	4.30%
16	10.6	1.4	0.56		0.513		0.513	0.287	3.80%
17	11	1.36	0.544		0.405		0.405	0.22	2.90%
18	11.4	1.36	0.544		0.423		0.423	0.23	3.10%
19	11.8	1.25	0.5		0.536		0.536	0.268	3.60%
20	12.2	1.2	0.48		0.493		0.493	0.237	3.20%
21	12.6	1.15	0.46		0.507		0.507	0.233	3.10%
22	13	1.05	0.42		0.455		0.455	0.191	2.60%
23	13.4	1.05	0.42		0.448		0.448	0.188	2.50%
24	13.8	1	0.4		0.488		0.488	0.195	2.60%
25	14.2	1.05	0.42		0.45		0.45	0.189	2.50%
26	14.6	0.93	0.372		0.344		0.344	0.128	1.70%
27	15	0.55	0.22		0.29		0.29	0.064	0.90%
28	15.4	0.55	0.22		0.351		0.351	0.077	1.00%
29	15.8	0.6	0.24		0.359		0.359	0.086	1.10%
30	16.2	0.6	0.24		0.286		0.286	0.069	0.90%
31	16.6	0.65	0.26		0.322		0.322	0.084	1.10%
32	17	0.6	0.24		0.208		0.208	0.05	0.70%
33	17.4	0.6	0.75		0.01		0.01	0.008	0.10%
34	19.5	0.6	0.63		0		0.01	0.006	0.10%

FLOWTRACKER WADING DISCHARGE

Site: SL01
Initial Bank: LEW
Serial Number: P929
Date: 2005/08/17 11:23:35

Width:	57.4
Area:	7.85
Discharge:	1.609
Average Velocity:	0.205

Section	Distance	Depth	Area	Velocity .2D	Velocity .6D	Velocity .8D	Velocity Average	Section Discharge	% Discharge
1	1.6	0.1	0.02		0		0.185	0.004	0.20%
2	2	0.1	0.07		0.185		0.185	0.013	0.80%
3	3	0.1	0.1		0.469		0.469	0.047	2.90%
4	4	0.1	0.1		0.387		0.387	0.039	2.40%
5	5	0.1	0.1		0.355		0.355	0.035	2.20%
6	6	0.1	0.1		0.359		0.359	0.036	2.20%
7	7	0.1	0.1		0.418		0.418	0.042	2.60%
8	8	0.1	0.1		0.091		0.091	0.009	0.60%
9	9	0.1	0.1		0.378		0.378	0.038	2.40%
10	10	0.1	0.1		0.384		0.384	0.038	2.40%
11	11	0.1	0.1		0.291		0.291	0.029	1.80%
12	12	0.1	0.1		0.301		0.301	0.03	1.90%
13	13	0.1	0.1		0.376		0.376	0.037	2.30%
14	14	0.1	0.1		0.139		0.139	0.014	0.90%
15	15	0.1	0.199		0.092		0.092	0.018	1.10%
16	18	0.1	0.549		0.001		0.001	0.001	0.10%
17	26	0.1	0.449		0.13		0.13	0.058	3.60%
18	27	0.1	0.1		0.176		0.176	0.018	1.10%
19	28	0.1	0.1		0.156		0.156	0.016	1.00%
20	29	0.1	0.1		0.135		0.135	0.013	0.80%
21	30	0.1	0.424		0.109		0.109	0.046	2.90%
22	37.5	0.2	0.799		0.496		0.496	0.397	24.70%
23	38	0.2	0.1		1.795		1.795	0.179	11.10%
24	38.5	0.2	0.1		0.121		0.121	0.012	0.70%
25	39	0.2	0.35		0.8		0.8	0.28	17.40%
26	42	0.2	0.599		0.072		0.072	0.043	2.70%
27	45	0.2	0.899		0.103		0.103	0.092	5.70%
28	51	0.2	0.999		0.053		0.053	0.053	3.30%
29	55	0.2	0.799		0.075		0.075	0.06	3.70%
30	59	0	0		0		0	0	0

07351700 BAYOU NA BONCHASSE NEAR MANSFIELD

Analysis for -- 12 month period
starting April 1
ending March 31
1940-1968

Parameter is 7 day low value.

0 zero values in data

10 non-zero values in data

0.357	0.757	0.814	0.914	0.314
0.300	0.243	0.300	0.557	0.543

The following 7 statistics are based on non-zero values.

Mean (logs)	-0.338
Variance (logs)	0.044
Standard Deviation (logs)	0.209
Skewness (logs)	0.206
Standard Error of Skewness (logs)	0.687
Serial Correlation Coefficient (logs)	0.466
Coefficient of Variation (logs)	-0.620

Non exceedance Probability	Recurrence Interval	Parameter Value
0.0100	100.00	0.161
0.0200	50.00	0.180
0.0500	20.00	0.214
0.1000	10.00	0.250
0.2000	5.00	0.305
0.5000	2.00	0.452
0.8000	1.25	0.685
0.9000	1.11	0.860
0.9600	1.04	1.105
0.9800	1.02	1 303
0.9900	1.01	1.516

	SN	Station Name	Lat	Long	7Q10	DA	RATIO	YR	TS	
33	7348800	FLAT LICK BAYOU NEAR LETON	324611	931558	0	66.9	0.0000	10	D	
34	7348900	Brushy Creek near Hortman	324140	932240	0	16.1	0.0000	12	L	
35	7348970	Sausman's Creek near Minden	323850	932210	0	12.8	0.0000	4	L	
36	7349000	BAYOU DORCHEAT NEAR MINDEN	323555	931959	0	1097	0.0000	35	D	Loss to Aqu
37	7349030	Boone Creek near Doyline	323220	932230	0.5	19.5	0.0256	4	L	
38	7349100	Brushy Creek near Sibley	322850	931800	0.6	43.6	0.0138	9	L	
39	7349200	Clark Bayou near Haughton	323405	932910	0.2	35.1	0.0057	9	L	
40	7349374	FLAT RIVER NEAR CURTIS	322620	933737	1.9	*		8	D	
41	7349460	Martin Creek near Springhill	325912	933325	0	80.6	0.0000	4	L	
42	7349500	BODCAU BAYOU NEAR SAREPTA	325418	932858	0.3	546	0.0005	57	D	Sl regulated
43	7349600	Caney Creek near Cotton Valley	324920	932915	0	63.9	0.0000	5	L	
44	7349795	CYPRESS BAYOU ABOVE BENTON	324715	934227	0	88.9	0.0000	11	D	
45	7349796	Caney Creek near Benton	324545	934015	0	31.9	0.0000	4	L	
46	7349840	Black Bayou at Benton	324140	934340	0	17.2	0.0000	7	L	
47	7349845	Black Bayou near Benton	323855	934135	0	26	0.0000	4	L	
48	7349850	RED CHUTE BAYOU NEAR SLIGO	322650	933540	4.4	980	0.0045	18	D	
49	7350000	LOGGY BAYOU NEAR NINOCK	321410	932535	0	2628	0.0000	12	D	Sl regulated
50	7350020	LOGGY BAYOU NEAR EAST POINT	321140	932630	25.2	2648	0.0095	4	D	
51	7350500	RED RIVER AT COUSHATTA	320045	932110	1330	63362	0.0210	13	D	Regulated
52	7350800	Bayou Pierre at Forbing	322335	934325	0.4	19	0.0211	6	L	
53	7351000	BOGGY BAYOU NEAR KEITHVILLE	322235	934917	0	79	0.0000	43	D	
54	7351250	Brush Bayou at Mt. Zion Road near Shreveport	302445	934625	0.3	19.7	0.0152	6	L	
55	7351500	CYPRESS BAYOU NEAR KEITHVILLE	321800	934940	0	66	0.0000	34	D	
56	7351600	BAYOU PIERRE NEAR GRAND BAYOU	320441	933036	6.1	661	0.0092	6	D	
56	7351670	Rambin Bayou near Frierson	321325	934210	0	59.6	0.0000	9	L	
57	7351700	BAYOU NA BONCHASSE NEAR MANSFIELD	320605	934145	0.2	19.5	0.0103	10	D	
58	7351703	Little Bayou Na Bonchasse near Mansfield	320725	934205	0.1	10.9	0.0092	6	L	
59	7351720	Buffalo Bayou near Naborton	320430	933545	0	17.7	0.0000	7	L	
60	7351748	WEST BRANCH DOLET BAYOU AT RAMBIN	315735	932705	0	32.3	0.0000	21	D	
61	7351750	BAYOU PIERRE NEAR LAKE END	315340	932030	20.5	860	0.0238	17	D	
62	7351760	Bayou Terre Blanc near Allen	314620	931755	0	26.6	0.0000	8	L	
63	7352000	SALINE BAYOU NEAR LUCKY	321500	925835	4.4	154	0.0286	58	D	
64	7352040	Readhimer Creek near Lucky	321250	930100	0.4	4.4	0.0909	4	L	

Appendix F3 – Field Notes

Lake Edwards and Smithport Lake
Survey Report

Lake Edwards and Smithport Lake (Subsegment 100605) are located in the Red River Basin and have a total area of approximately 2791 acres. Clear Lake which begins at Rambin Bayou and ends at Hwy 509 Bridge is approximately 2.9 miles long. Smithport Lake starts at Hwy 509 Bridge and goes to the Smithport Dam and is approximately 2.5 miles long. The survey was conducted on August 16, 2005 thru August 18, 2005. The majority of the land use along the lakes is municipal.

The Watershed Survey Group took water quality samples throughout the lakes and surrounding tributaries along with In-Situ readings. During the survey, nine continuous monitors were deployed to collect water parameters such as DO, DO%, pH, Temperature, Specific Conductivity, and Salinity. GPS readings were taken prior to and during the survey. Flows were measured with a Flowtracker 6A at sites SL01, RB01, and NBB02. All field notes, lab, water quality, and monitor data are included in this report.

The Watershed Survey crew did encounter some problems while conducting the survey. The Weather Station that was deployed during the survey did not function properly but, the weather data can still be obtained from the Shreveport International Airport. Also, site SB01 was not flowing and site NBB01 was not accessible. The Survey crew was not able to collect a cross-section at NBB03C.

Site Information

Site #: RB01 Subsegment: 100605 Date: 8/18/05 Time: 1200

Waterbody: Rankin Bayou

Tapedown 1: _____ Staff Gauge 1: _____ Gauge Height 1: _____

Site Location†: OFF of Mount Elon Rd

Personnel: Brigman, Kno

Type of Work: Recon ☐ Data Collection ☑

Weather Conditions:
- Clear ☑
- Drizzle/Light Rain ☐
- Showers ☐

Cloud Cover:
- 0 –10% ☐
- 11 – 40% ☑
- 41 – 70% ☐
- 71 – 100% ☐

Temperature (°F):
- Hot >85° ☑
- Warm > 75° ☐
- Mild > 65° ☐
- Cool > 60° ☐
- Cold < 60° ☐

Wind (mph):
- <1 ☐
- 1-5 ☑
- 6-10 ☐
- 11-15 ☐
- >16 ☐

Wind Direction:
NW ☐ N ☐ NE ☐
SW ☐ S ☐ SE ☐
E ☐ W ☐
Variable ☑

Stream Characteristics: Flowing: ☑ Measurable Flow: ☑
Flow Direction Upstream ☐ Downstream ☐ Tidally Influenced: ☐
Wind Influence: ☐ Wind Influence Direction: Upstream ☐ Downstream ☐
Algae Present ☐ Sedimentation/Turbidity Present in Water Column ☑
Floating/Aquatic Vegetation % Surface Coverage: <1 ☐ 1-25% ☑ 26-50% ☐ 51-75% ☐ 76-100% ☐

Water Quality Samples Taken: ☐ **Water Quality Field Parameters:** ☐ Profiling: ☐

Water Quality Field Parameters

Time: _____ **Temp.(°C):** _____ **pH:** _____ **SpCond(µhmos/cm):** _____

D.O.: _____ **D.O. %:** _____ **Salinity:** _____ **Depth (m):** _____ **Secchi (in):** _____

InSitu Probe S/N: _____ **Surveyor 4a S/N:** _____

Continuous Monitor Deployed: ☐ Continuous Monitor S/N: 42511

Continuous Monitor Retrieved: ☑ Continuous Monitor Deployment Depth (m): _____

Flow Measurement: ☐ Type of Measurement: Wading ☐ Bridge Board ☐ Boat Board ☐

AquaCalc File Name: _____ AquaCalc S/N: _____

Tapedown 2: _____ Staff Gauge 2: _____ Gauge Height 2: _____

Flow Estimated: ☐ Using Discharge Equipment: ☐
Type: Wading ☐ Bridge Board ☐ Boat Board ☐
Drogue Estimate: ☐ Dye Estimate: ☐

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: ☐ Type of Measurement Manual: ☐ Fathometer ☐

Cross Section File Name: _____ Fathometer S/N: _____

GPS Measurement: ☐ GPS SSF File Name: _____

Site GPS: ☐ Cross Section GPS: ☐ GPS Unit: _____

Photos Taken: ☐ Picture File #s: _____

Camera: _____

† All work is done within 100 yard radius of Site unless otherwise noted in Data Plan

Tapedown Established: ☐ Tapedown Location: _____

Benchmark Established: ☐ Benchmark Location: _____

Survey Equipment Used: ☐

Time of Travel Measurement: ☐ Type of Site: Injection ☐ Collection ☐

Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: ☐ Man Altered Waterbody: ☐

Man-Made Waterbody: ☐

Stream Dry/Intermittent: ☐

Stream Bottom: Sandy ☐ Clay ☐ Gravel ☐ Hard Clay ☐ Soft Silt ☐

Sand/Silt ☐ Rock/Gravel/Silt ☐ Concrete ☐

Control Structure Present: ☐ Location: _____

Type: Man Made Dam ☐ Flow Regulation Device ☐ Beaver Dam ☐ Log Jam ☐

Land Use: Agriculture ☐ Forestry ☐ Municipal ☐ Industrial ☐ Field/Pasture ☐ Wetland ☐

Percent Tree Canopy Cover 0-25% ☐ 26-50% ☐ 51-75% ☐ 76-100% ☐

Recon Information:

Discharge Measurement: Wading ☐ Bridge Board ☐ Boat Board ☐

Measurement Location: _____

Cross Section Location: _____

Continuous Monitor Deployment: _____

Continuous Monitor Location: _____

Boat Accessible: ☐ Nearest Launch: _____

Bridge ☐ Bridge Safe: ☐ Bridge Width: _____ Bridge Height: _____

Profiling Measurements:

Time: _____ Temp.(°C): _____ pH: _____ Spcond(µhmos/cm): _____

D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Time: _____ Temp.(°C): _____ pH: _____ Spcond(µhmos/cm): _____

D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Time: _____ Temp.(°C): _____ pH: _____ Spcond(µhmos/cm): _____

D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments: _____

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≅ 0.15 m	20 ≅ 68	25 ≅ 77
1.0 ft ≅ 0.30 m	21 ≅ 69.8	26 ≅ 78.8
1.5 ft ≅ 0.45 m	22 ≅ 71.6	27 ≅ 80.6
2.0 ft ≅ 0.60 m	23 ≅ 73.4	28 ≅ 82.4
2.5 ft ≅ 0.75 m	24 ≅ 75.2	29 ≅ 84.2

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Site Information

Site #: SL01 Subsegment: 100605 Date: 8/17/05 Time: 11 30

Waterbody: Smithport Lake

Tapedown 1: _____ Staff Gauge 1: _____ Gauge Height 1: _____

Site Location†: Southeast end of Smithport Lake @ dam

Personnel: Brigman, LaFleur

Type of Work: Recon ☐ Data Collection ☑

Weather Conditions:
- Clear ☑
- Drizzle/Light Rain ☐
- Showers ☐

Cloud Cover:
- 0 – 10% ☐
- 11 – 40% ☐
- 41 – 70% ☐
- 71 – 100% ☐

Temperature (°F):
- Hot >85° ☐
- Warm > 75° ☐
- Mild > 65° ☐
- Cool > 60° ☐
- Cold < 60° ☐

Wind (mph):
- <1 ☐
- 1-5 ☑
- 6-10 ☐
- 11-15 ☐
- >16 ☐

Wind Direction:
- NW ☐ N ☐ NE ☐
- SW ☐ S ☐ SE ☐
- E ☐ W ☐
- Variable ☑

Stream Characteristics: Flowing: ☑ Measurable Flow: ☑
- Flow Direction Upstream ☐ Downstream ☑ Tidally Influenced: ☐
- Wind Influence: ☐ Wind Influence Direction: Upstream ☐ Downstream ☐
- Algae Present ☑ Sedimentation/Turbidity Present in Water Column ☐
- Floating/Aquatic Vegetation % Surface Coverage: <1 ☐ 1-25% ☐ 26-50% ☐ 51-75% ☐ 76-100% ☑

Water Quality Samples Taken: ☐ **Water Quality Field Parameters:** ☐ Profiling: ☐

Water Quality Field Parameters

Time: _____ **Temp.(°C):** _____ **pH:** _____ **SpCond(µhmos/cm):** _____

D.O.: _____ **D.O. %:** _____ **Salinity:** _____ **Depth (m):** _____ **Secchi (in):** _____

InSitu Probe S/N: _____ **Surveyor 4a S/N:** _____

Continuous Monitor Deployed: ☐ Continuous Monitor S/N: _____

Continuous Monitor Retrieved: ☐ Continuous Monitor Deployment Depth (m): _____

Flow Measurement: ☑ Type of Measurement: Wading ☑ Bridge Board ☐ Boat Board ☐

AquaCalc File Name: SC01 AquaCalc S/N: FT4D

Tapedown 2: _____ Staff Gauge 2: _____ Gauge Height 2: _____

Flow Estimated: ☐ Using Discharge Equipment: ☐
- Type: Wading ☐ Bridge Board ☐ Boat Board ☐
- Drogue Estimate: ☐ Dye Estimate: ☐

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: ☐ Type of Measurement Manual: ☐ Fathometer ☐

Cross Section File Name: _____ Fathometer S/N: _____

GPS Measurement: ☑ GPS SSF File Name: Smithport - SL01

Site GPS: ☑ Cross Section GPS: ☐ GPS Unit: 6

Photos Taken: ☐ Picture File #s: _____

Camera: _____

† All work is done within 100 yard radius of Site unless otherwise noted in Data Plan

Tapedown Established: ☐ Tapedown Location: _____

Benchmark Established: ☐ Benchmark Location: _____
Survey Equipment Used: ☐

Time of Travel Measurement: ☐ Type of Site: Injection ☐ Collection ☐
Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: ☐ Man Altered Waterbody: ☒
Man-Made Waterbody: ☐
Stream Dry/Intermittent: ☐
Stream Bottom: Sandy ☐ Clay ☐ Gravel ☐ Hard Clay ☐ Soft Silt ☐
Sand/Silt ☐ Rock/Gravel/Silt ☐ Concrete ☐
Control Structure Present: ☒ Location: lower end of Smithport Lake
Type: Man Made Dam ☒ Flow Regulation Device ☒ Beaver Dam ☐ Log Jam ☐
Land Use: Agriculture ☐ Forestry ☒ Municipal ☐ Industrial ☐ Field/Pasture ☐ Wetland ☒
Percent Tree Canopy Cover 0-25% ☒ 26-50% ☐ 51-75% ☐ 76-100% ☐

Recon Information:
Discharge Measurement: Wading ☐ Bridge Board ☐ Boat Board ☐
Measurement Location: _____
Cross Section Location: _____
Continuous Monitor Deployment: _____
Continuous Monitor Location: _____

Boat Accessible: ☐ Nearest Launch: _____
Bridge ☐ **Bridge Safe:** ☐ Bridge Width: _____ Bridge Height: _____

Profiling Measurements:

Time: _____	Temp.(°C): _____	pH: _____	Spcond(µhmos/cm): _____
D.O.: _____	D.O. %: _____	Salinity: _____	Depth (m): _____
Time: _____	Temp.(°C): _____	pH: _____	Spcond(µhmos/cm): _____
D.O.: _____	D.O. %: _____	Salinity: _____	Depth (m): _____
Time: _____	Temp.(°C): _____	pH: _____	Spcond(µhmos/cm): _____
D.O.: _____	D.O. %: _____	Salinity: _____	Depth (m): _____

Comments: _____

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≅ 0.15 m	20 ≅ 68	25 ≅ 77
1.0 ft ≅ 0.30 m	21 ≅ 69.8	26 ≅ 78.8
1.5 ft ≅ 0.45 m	22 ≅ 71.6	27 ≅ 80.6
2.0 ft ≅ 0.60 m	23 ≅ 73.4	28 ≅ 82.4
2.5 ft ≅ 0.75 m	24 ≅ 75.2	29 ≅ 84.2

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Site Information

Site #: SL02 Subsegment: 100605 Date: 8/16/05 Time: 1015

Waterbody: Smithport Lake

Tapedown 1: _____ Staff Gauge 1: _____ Gauge Height 1: _____

Site Location†: Above DAM

Personnel: Brigman, LAFleur

Type of Work: Recon ☐ Data Collection ☒

Weather Conditions:
- Clear ☒
- Drizzle/Light Rain ☐
- Showers ☐

Cloud Cover:
- 0 – 10% ☐
- 11 – 40% ☒
- 41 – 70% ☐
- 71 – 100% ☐

Temperature (°F):
- Hot >85° ☒
- Warm > 75° ☐
- Mild > 65° ☐
- Cool > 60° ☐
- Cold < 60° ☐

Wind (mph):
- <1 ☐
- 1-5 ☒
- 6-10 ☐
- 11-15 ☐
- >16 ☐

Wind Direction:
- NW ☐ N ☐ NE ☐
- SW ☐ S ☐ SE ☐
- E ☐ W ☐
- Variable ☒

Stream Characteristics: Flowing: ☐ Measurable Flow: ☐
- Flow Direction Upstream ☐ Downstream ☐ Tidally Influenced: ☐
- Wind Influence: ☐ Wind Influence Direction: Upstream ☐ Downstream ☐
- Algae Present ☒ Sedimentation/Turbidity Present in Water Column ☐
- Floating/Aquatic Vegetation % Surface Coverage: <1 ☐ 1-25% ☐ 26-50% ☒ 51-75% ☐ 76-100% ☐

Water Quality Samples Taken: ☐ **Water Quality Field Parameters:** ☐ Profiling: ☐

Water Quality Field Parameters

Time: _____ **Temp.(°C):** _____ **pH:** _____ **SpCond(µhmos/cm):** _____

D.O.: _____ **D.O. %:** _____ **Salinity:** _____ **Depth (m):** _____ **Secchi (in):** _____

InSitu Probe S/N: _____ **Surveyor 4a S/N:** _____

Continuous Monitor Deployed: ☒ Continuous Monitor S/N: 42512

Continuous Monitor Retrieved: ☐ Continuous Monitor Deployment Depth (m): 1 meter

Flow Measurement: ☐ Type of Measurement: Wading ☐ Bridge Board ☐ Boat Board ☐

AquaCalc File Name: _____ AquaCalc S/N: _____

Tapedown 2: _____ Staff Gauge 2: _____ Gauge Height 2: _____

Flow Estimated: ☐ Using Discharge Equipment: ☐
- Type: Wading ☐ Bridge Board ☐ Boat Board ☐
- Drogue Estimate: ☐ Dye Estimate: ☐

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: ☐ Type of Measurement Manual: ☐ Fathometer ☐

Cross Section File Name: _____ Fathometer S/N: _____

GPS Measurement: ☐ GPS SSF File Name: _____

Site GPS: ☐ Cross Section GPS: ☐ GPS Unit: _____

Photos Taken: ☐ Picture File #s: _____

Camera: _____

† All work is done within 100 yard radius of Site unless otherwise noted in Data Plan

Time of Travel Measurement: ☐ Type of Site: Injection ☐ Collection ☐
Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: ☐ Man Altered Waterbody: ☑
Man-Made Waterbody: ☐
Stream Dry/Intermittent: ☐
Stream Bottom: Sandy ☐ Clay ☐ Gravel ☐ Hard Clay ☐ Soft Silt ☑
Sand/Silt ☐ Rock/Gravel/Silt ☐ Concrete ☐
Control Structure Present: ☑ Location: Dam
Type: Man Made Dam ☑ Flow Regulation Device ☐ Beaver Dam ☐ Log Jam ☐
Land Use: Agriculture ☐ Forestry ☑ Municipal ☐ Industrial ☐ Field/Pasture ☐ Wetland ☐
Percent Tree Canopy Cover 0-25% ☐ 26-50% ☑ 51-75% ☐ 76-100% ☐

Recon Information:
Discharge Measurement: Wading ☐ Bridge Board ☐ Boat Board ☐
Measurement Location: _____
Cross Section Location: _____
Continuous Monitor Deployment: _____
Continuous Monitor Location: _____

Boat Accessible: ☐ Nearest Launch: _____
Bridge ☐ Bridge Safe: ☐ Bridge Width: _____ Bridge Height: _____

Profiling Measurements:

Time:		Temp.(°C):		pH:		Spcond(µhmos/cm):	
D.O.:		D.O. %:		Salinity:		Depth (m):	
Time:		Temp.(°C):		pH:		Spcond(µhmos/cm):	
D.O.:		D.O. %:		Salinity:		Depth (m):	
Time:		Temp.(°C):		pH:		Spcond(µhmos/cm):	
D.O.:		D.O. %:		Salinity:		Depth (m):	

Comments: Average Depth 5.5 ft Above Dam

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≅ 0.15 m	20 ≅ 68	25 ≅ 77
1.0 ft ≅ 0.30 m	21 ≅ 69.8	26 ≅ 78.8
1.5 ft ≅ 0.45 m	22 ≅ 71.6	27 ≅ 80.6
2.0 ft ≅ 0.60 m	23 ≅ 73.4	28 ≅ 82.4
2.5 ft ≅ 0.75 m	24 ≅ 75.2	29 ≅ 84.2

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Site Information

Site #: SL02 Subsegment: 100605 Date: 8/17/05 Time: 1130

Waterbody: Smithport Lake

Tapedown 1: _____ Staff Gauge 1: _____ Gauge Height 1: _____

Site Location†: SE end of lake just above dam

Personnel: LaFleur, Brignac

Type of Work: Recon ☐ Data Collection ☒

Weather Conditions:
- Clear ☒
- Drizzle/Light Rain ☐
- Showers ☐

Cloud Cover:
- 0 –10% ☐
- 11 – 40% ☒
- 41 – 70% ☐
- 71 – 100% ☐

Temperature (°F):
- Hot >85° ☒
- Warm > 75° ☐
- Mild > 65° ☐
- Cool > 60° ☐
- Cold < 60° ☐

Wind (mph):
- <1 ☐
- 1-5 ☒
- 6-10 ☐
- 11-15 ☐
- >16 ☐

Wind Direction:
- NW ☐ N ☐ NE ☐
- SW ☐ S ☐ SE ☐
- E ☐ W ☐
- Variable ☒

Stream Characteristics: Flowing: ☐ Measurable Flow: ☐
- Flow Direction Upstream ☐ Downstream ☐ Tidally Influenced: ☐
- Wind Influence: ☐ Wind Influence Direction: Upstream ☐ Downstream ☐
- Algae Present ☒ Sedimentation/Turbidity Present in Water Column ☐
- Floating/Aquatic Vegetation % Surface Coverage: <1 ☐ 1-25% ☐ 26-50% ☒ 51-75% ☐ 76-100% ☐

Water Quality Samples Taken: ☒ **Water Quality Field Parameters:** ☒ Profiling: ☐

Water Quality Field Parameters

Time: 1130 **Temp.(°C):** 27.54 **pH:** 6.33 **SpCond(µhmos/cm):** 75.1

D.O.: 1.36 **D.O. %:** 17.4 **Salinity:** 0.02 **Depth (m):** 1 **Secchi (in):** 30

InSitu Probe S/N: 42505 **Surveyor 4a S/N:** 52773

Continuous Monitor Deployed: ☐ Continuous Monitor S/N: _____

Continuous Monitor Retrieved: ☐ Continuous Monitor Deployment Depth (m): _____

Flow Measurement: ☐ Type of Measurement: Wading ☐ Bridge Board ☐ Boat Board ☐

AquaCalc File Name: _____ AquaCalc S/N: _____

Tapedown 2: _____ Staff Gauge 2: _____ Gauge Height 2: _____

Flow Estimated: ☐ Using Discharge Equipment: ☐
- Type: Wading ☐ Bridge Board ☐ Boat Board ☐
- Drogue Estimate: ☐ Dye Estimate: ☐

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: ☐ Type of Measurement Manual: ☐ Fathometer ☐

Cross Section File Name: _____ Fathometer S/N: _____

GPS Measurement: ☑ GPS SSF File Name: Smithport - SL02

Site GPS: ☑ Cross Section GPS: ☐ GPS Unit: 6

Photos Taken: ☐ Picture File #s: _____

Camera: _____

† All work is done within 100 yard radius of Site unless otherwise noted in Data Plan

Tapedown Established: ☐ Tapedown Location: _____

Benchmark Established: ☐ Benchmark Location: _____

Survey Equipment Used: ☐

Time of Travel Measurement: ☐ Type of Site: Injection ☐ Collection ☐

Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: ☐ Man Altered Waterbody: ☐

Man-Made Waterbody: ☐

Stream Dry/Intermittent: ☐

Stream Bottom: Sandy ☐ Clay ☐ Gravel ☐ Hard Clay ☐ Soft Silt ☐

Sand/Silt ☐ Rock/Gravel/Silt ☐ Concrete ☐

Control Structure Present: ☐ Location: _____

Type: Man Made Dam ☐ Flow Regulation Device ☐ Beaver Dam ☐ Log Jam ☐

Land Use: Agriculture ☐ Forestry ☐ Municipal ☐ Industrial ☐ Field/Pasture ☐ Wetland ☐

Percent Tree Canopy Cover 0-25% ☐ 26-50% ☐ 51-75% ☐ 76-100% ☐

Recon Information:

Discharge Measurement: Wading ☐ Bridge Board ☐ Boat Board ☐

Measurement Location: _____

Cross Section Location: _____

Continuous Monitor Deployment: _____

Continuous Monitor Location: _____

Boat Accessible: ☐ Nearest Launch: _____

Bridge ☐ **Bridge Safe:** ☐ Bridge Width: _____ Bridge Height: _____

Profiling Measurements:

Time:	_____	Temp.(°C):	_____	pH:	_____	Spcond(µhmos/cm):	_____
D.O.:	_____	D.O. %:	_____	Salinity:	_____	Depth (m):	_____
Time:	_____	Temp.(°C):	_____	pH:	_____	Spcond(µhmos/cm):	_____
D.O.:	_____	D.O. %:	_____	Salinity:	_____	Depth (m):	_____
Time:	_____	Temp.(°C):	_____	pH:	_____	Spcond(µhmos/cm):	_____
D.O.:	_____	D.O. %:	_____	Salinity:	_____	Depth (m):	_____

Comments: _____

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≅ 0.15 m	20 ≅ 68	25 ≅ 77
1.0 ft ≅ 0.30 m	21 ≅ 69.8	26 ≅ 78.8
1.5 ft ≅ 0.45 m	22 ≅ 71.6	27 ≅ 80.6
2.0 ft ≅ 0.60 m	23 ≅ 73.4	28 ≅ 82.4
2.5 ft ≅ 0.75 m	24 ≅ 75.2	29 ≅ 84.2

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Revised 11/8/04

Site Information

Site #: SL02 Subsegment: 100605 Date: 8/18/05 Time: 1015

Waterbody: Smithport Lake

Tapedown 1: _____ Staff Gauge 1: _____ Gauge Height 1: _____

Site Location†: Above Dam

Personnel: Abrigana, KMJ

Type of Work: Recon ☐ Data Collection ☑

Weather Conditions:
- Clear ☑
- Drizzle/Light Rain ☐
- Showers ☐

Cloud Cover:
- 0 –10% ☐
- 11 – 40% ☑
- 41 – 70% ☐
- 71 – 100% ☐

Temperature (°F):
- Hot >85° ☑
- Warm > 75° ☐
- Mild > 65° ☐
- Cool > 60° ☐
- Cold < 60° ☐

Wind (mph):
- <1 ☐
- 1-5 ☑
- 6-10 ☐
- 11-15 ☐
- >16 ☐

Wind Direction:
- NW ☐ N ☐ NE ☐
- SW ☐ S ☐ SE ☐
- E ☐ W ☐
- Variable ☑

Stream Characteristics: Flowing: ☐ Measurable Flow: ☐
- Flow Direction Upstream ☐ Downstream ☐ Tidally Influenced: ☐
- Wind Influence: ☐ Wind Influence Direction: Upstream ☐ Downstream ☐
- Algae Present ☑ Sedimentation/Turbidity Present in Water Column ☐
- Floating/Aquatic Vegetation % Surface Coverage: <1 ☐ 1-25% ☐ 26-50% ☑ 51-75% ☐ 76-100% ☐

Water Quality Samples Taken: ☐ **Water Quality Field Parameters:** ☐ Profiling: ☐

Water Quality Field Parameters

Time: _____ **Temp.(°C):** _____ **pH:** _____ **SpCond(µhmos/cm):** _____

D.O.: _____ **D.O. %:** _____ **Salinity:** _____ **Depth (m):** _____ **Secchi (in):** _____

InSitu Probe S/N: _____ **Surveyor 4a S/N:** _____

Continuous Monitor Deployed: ☐ Continuous Monitor S/N: 42512

Continuous Monitor Retrieved: ☑ Continuous Monitor Deployment Depth (m): _____

Flow Measurement: ☐ Type of Measurement: Wading ☐ Bridge Board ☐ Boat Board ☐

AquaCalc File Name: _____ AquaCalc S/N: _____

Tapedown 2: _____ Staff Gauge 2: _____ Gauge Height 2: _____

Flow Estimated: ☐ Using Discharge Equipment: ☐
- Type: Wading ☐ Bridge Board ☐ Boat Board ☐
- Drogue Estimate: ☐ Dye Estimate: ☐

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: ☐ Type of Measurement Manual: ☐ Fathometer ☐

Cross Section File Name: _____ Fathometer S/N: _____

GPS Measurement: ☐ GPS SSF File Name: _____

Site GPS: ☐ Cross Section GPS: ☐ GPS Unit: _____

Photos Taken: ☐ Picture File #s: _____

Camera: _____

† All work is done within 100 yard radius of Site unless otherwise noted in Data Plan

Tapedown Established: ☐ Tapedown Location: _____

Benchmark Established: ☐ Benchmark Location: _____
Survey Equipment Used: ☐

Time of Travel Measurement: ☐ Type of Site: Injection ☐ Collection ☐
Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: ☐ Man Altered Waterbody: ☐
Man-Made Waterbody: ☐
Stream Dry/Intermittent: ☐
Stream Bottom: Sandy ☐ Clay ☐ Gravel ☐ Hard Clay ☐ Soft Silt ☐
Sand/Silt ☐ Rock/Gravel/Silt ☐ Concrete ☐
Control Structure Present: ☐ Location: _____
Type: Man Made Dam ☐ Flow Regulation Device ☐ Beaver Dam ☐ Log Jam ☐
Land Use: Agriculture ☐ Forestry ☐ Municipal ☐ Industrial ☐ Field/Pasture ☐ Wetland ☐
Percent Tree Canopy Cover 0-25% ☐ 26-50% ☐ 51-75% ☐ 76-100% ☐

Recon Information:
Discharge Measurement: Wading ☐ Bridge Board ☐ Boat Board ☐
Measurement Location: _____
Cross Section Location: _____
Continuous Monitor Deployment: _____
Continuous Monitor Location: _____

Boat Accessible: ☐ Nearest Launch: _____
Bridge ☐ **Bridge Safe:** ☐ Bridge Width: _____ Bridge Height: _____

Profiling Measurements:

Time:	_____	Temp.(°C):	_____	pH:	_____	Spcond(µhmos/cm):	_____
D.O.:	_____	D.O. %:	_____	Salinity:	_____	Depth (m):	_____
Time:	_____	Temp.(°C):	_____	pH:	_____	Spcond(µhmos/cm):	_____
D.O.:	_____	D.O. %:	_____	Salinity:	_____	Depth (m):	_____
Time:	_____	Temp.(°C):	_____	pH:	_____	Spcond(µhmos/cm):	_____
D.O.:	_____	D.O. %:	_____	Salinity:	_____	Depth (m):	_____

Comments: _____

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≅ 0.15 m	20 ≅ 68	25 ≅ 77
1.0 ft ≅ 0.30 m	21 ≅ 69.8	26 ≅ 78.8
1.5 ft ≅ 0.45 m	22 ≅ 71.6	27 ≅ 80.6
2.0 ft ≅ 0.60 m	23 ≅ 73.4	28 ≅ 82.4
2.5 ft ≅ 0.75 m	24 ≅ 75.2	29 ≅ 84.2

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Revised 11/8/04

Site Information

Site #: SL03 Subsegment: 100605 Date: 8-16-05 Time: 10:55

Waterbody: Smithport Lake

Tapedown 1: _____ Staff Gauge 1: _____ Gauge Height 1: _____

Site Location†: Center of Smithport Lake

Personnel: Jones, Schwartz, Butler

Type of Work: Recon ☐ Data Collection ☒

Weather Conditions: Clear ☒; Drizzle/Light Rain ☐; Showers ☐

Cloud Cover: 0 –10% ☒; 11 – 40% ☐; 41 – 70% ☐; 71 – 100% ☐

Temperature (°F): Hot >85° ☒; Warm > 75° ☐; Mild > 65° ☐; Cool > 60° ☐; Cold < 60° ☐

Wind (mph): <1 ☒; 1-5 ☐; 5-10 ☐; 11-15 ☐; >16 ☐

Wind Direction: NW ☐ N ☐ NE ☐; SW ☐ S ☐ SE ☐; E ☐ W ☐; Variable ☐

Stream Characteristics: Flowing: ☐ Measurable Flow: ☐

Flow Direction Upstream ☐ Downstream ☐ Tidally Influenced: ☐

Wind Influence: ☐ Wind Influence Direction: Upstream ☐ Downstream ☐

Algae Present ☐ Sedimentation/Turbidity Present in Water Column ☐

Floating/Aquatic Vegetation % Surface Coverage: <1 ☐ 1-25% ☐ 26-50% ☐ 51-75% ☐ 76-100% ☒

Water Quality Samples Taken: ☐ **Water Quality Field Parameters:** ☐ Profiling: ☐

Water Quality Field Parameters

Time: _____ **Temp.(°C):** _____ **pH:** _____ **SpCond(µhmos/cm):** _____

D.O.: _____ **D.O. %:** _____ **Salinity:** _____ **Depth (m):** _____ **Secchi (in):** _____

InSitu Probe S/N: _____ **Surveyor 4a S/N:** _____

Continuous Monitor Deployed: ☒ Continuous Monitor S/N: 40803

Continuous Monitor Retrieved: ☐ Continuous Monitor Deployment Depth (m): 1m

Flow Measurement: ☐ Type of Measurement: Wading ☐ Bridge Board ☐ Boat Board ☐

AquaCalc File Name: _____ AquaCalc S/N: _____

Tapedown 2: _____ Staff Gauge 2: _____ Gauge Height 2: _____

Flow Estimated: ☐ Using Discharge Equipment: ☐

Type: Wading ☐ Bridge Board ☐ Boat Board ☐

Drogue Estimate: ☐ Dye Estimate: ☐

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: ☐ Type of Measurement Manual: ☐ Fathometer ☐

Cross Section File Name: _____ Fathometer S/N: _____

GPS Measurement: ☒ GPS SSF File Name: Smithport Lake – Lake GPS

Site GPS: ☒ Cross Section GPS: ☐ GPS Unit: 6

Photos Taken: ☐ Picture File #s: _____

Camera: _____

† All work is done within 100 yard radius of Site unless otherwise noted in Data Plan

Tapedown Established: ☐ Tapedown Location: _____

Benchmark Established: ☐ Benchmark Location: _____

Survey Equipment Used: ☐

Time of Travel Measurement: ☐ Type of Site: Injection ☐ Collection ☐

Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: ☒ Man Altered Waterbody: ☒

Man-Made Waterbody: ☐

Stream Dry/Intermittent: ☐

Stream Bottom: Sandy ☐ Clay ☒ Gravel ☐ Hard Clay ☐ Soft Silt ☒

Sand/Silt ☐ Rock/Gravel/Silt ☐ Concrete ☐

Control Structure Present: ☐ Location: _____

Type: Man Made Dam ☐ Flow Regulation Device ☐ Beaver Dam ☐ Log Jam ☐

Land Use: Agriculture ☐ Forestry ☒ Municipal ☐ Industrial ☐ Field/Pasture ☐ Wetland ☐

Percent Tree Canopy Cover 0-25% ☒ 26-50% ☐ 51-75% ☐ 76-100% ☐

Recon Information:

Discharge Measurement: Wading ☐ Bridge Board ☐ Boat Board ☐

Measurement Location: _____

Cross Section Location: _____

Continuous Monitor Deployment: _____

Continuous Monitor Location: _____

Boat Accessible: ☐ Nearest Launch: _____

Bridge ☐ **Bridge Safe:** ☐ Bridge Width: _____ Bridge Height: _____

Profiling Measurements:

Time:	_____	**Temp.(°C):**	_____	**pH:**	_____	**Spcond(µhmos/cm):**	_____
D.O.:	_____	**D.O. %:**	_____	**Salinity:**	_____	**Depth (m):**	_____
Time:	_____	**Temp.(°C):**	_____	**pH:**	_____	**Spcond(µhmos/cm):**	_____
D.O.:	_____	**D.O. %:**	_____	**Salinity:**	_____	**Depth (m):**	_____
Time:	_____	**Temp.(°C):**	_____	**pH:**	_____	**Spcond(µhmos/cm):**	_____
D.O.:	_____	**D.O. %:**	_____	**Salinity:**	_____	**Depth (m):**	_____

Comments: _____

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≅ 0.15 m	20 ≅ 68	25 ≅ 77
1.0 ft ≅ 0.30 m	21 ≅ 69.8	26 ≅ 78.8
1.5 ft ≅ 0.45 m	22 ≅ 71.6	27 ≅ 80.6
2.0 ft ≅ 0.60 m	23 ≅ 73.4	28 ≅ 82.4
2.5 ft ≅ 0.75 m	24 ≅ 75.2	29 ≅ 84.2

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Site Information

Site #: SL03 Subsegment: 100605 Date: 8-17-05 Time: 1000

Waterbody: Smithport LAKE

Tapedown 1: _____ Staff Gauge 1: _____ Gauge Height 1: _____

Site Location†: CENTER OF LAKE

Personnel: Jones, Schwartz, Butler

Type of Work: Recon ☐ Data Collection ☐

Weather Conditions:
- Clear ☒
- Drizzle/Light Rain ☐
- Showers ☐

Cloud Cover:
- 0 – 10% ☒
- 11 – 40% ☐
- 41 – 70% ☐
- 71 – 100% ☐

Temperature (°F):
- Hot >85° ☐
- Warm [illegible] ☒
- Mild > 65° ☐
- Cool > 60° ☐
- Cold < 60° ☐

Wind (mph):
- <1 ☐
- 1-5 ☒
- 6-10 ☐
- 11-15 ☐
- >16 ☐

Wind Direction:
- NW ☒ N ☐ NE ☐
- SW ☐ S ☐ SE ☐
- E ☐ W ☐
- Variable ☐

Stream Characteristics: Flowing: ☐ Measurable Flow: ☐
- Flow Direction Upstream ☐ Downstream ☐ Tidally Influenced: ☐
- Wind Influence: ☐ Wind Influence Direction: Upstream ☐ Downstream ☐
- Algae Present ☐ Sedimentation/Turbidity Present in Water Column ☐
- Floating/Aquatic Vegetation % Surface Coverage: <1 ☐ 1-25% ☐ 26-50% ☐ 51-75% ☐ 76-100% ☒

Water Quality Samples Taken: ☒ **Water Quality Field Parameters:** ☒ Profiling: ☒

Water Quality Field Parameters

Time: 1000 **Temp.(°C):** 27.51 **pH:** 6.36 **SpCond(µhmos/cm):** 159.3

D.O.: 1.31 **D.O. %:** 16.6 **Salinity:** .07 **Depth (m):** 1m **Secchi (in):** 48 in

InSitu Probe S/N: 37762 **Surveyor 4a S/N:** 52766

Continuous Monitor Deployed: ☐ Continuous Monitor S/N: _____

Continuous Monitor Retrieved: ☐ Continuous Monitor Deployment Depth (m): _____

Flow Measurement: ☐ Type of Measurement: Wading ☐ Bridge Board ☐ Boat Board ☐

AquaCalc File Name: _____ AquaCalc S/N: _____

Tapedown 2: _____ Staff Gauge 2: _____ Gauge Height 2: _____

Flow Estimated: ☐ Using Discharge Equipment: ☐
- Type: Wading ☐ Bridge Board ☐ Boat Board ☐
- Drogue Estimate: ☐ Dye Estimate: ☐

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: ☐ Type of Measurement Manual: ☐ Fathometer ☐

Cross Section File Name: _____ Fathometer S/N: _____

GPS Measurement: ☐ GPS SSF File Name: _____

Site GPS: ☐ Cross Section GPS: ☐ GPS Unit: _____

Photos Taken: ☐ Picture File #s: _____

Camera: _____

† All work is done within 100 yard radius of Site unless otherwise noted in Data Plan

Tapedown Established: ☐ Tapedown Location: _____

Benchmark Established: ☐ Benchmark Location: _____

Survey Equipment Used: ☐

Time of Travel Measurement: ☐ Type of Site: Injection ☐ Collection ☐

Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: ☒ Man Altered Waterbody: ☒

Man-Made Waterbody: ☐

Stream Dry/Intermittent: ☐

Stream Bottom: Sandy ☐ Clay ☒ Gravel ☐ Hard Clay ☐ Soft Silt ☒

Sand/Silt ☐ Rock/Gravel/Cr ☐ Concrete ☐

Control Structure Present: ☐ Location: _____

Type: Man Made Dam ☐ Flow Regulation Device ☐ Beaver Dam ☐ Log Jam ☐

Land Use: Agriculture ☐ Forestry ☒ Municipal ☐ Industrial ☐ Field/Pasture ☐ Wetland ☐

Percent Tree Canopy Cover 0-25% ☒ 26-50% ☐ 51-75% ☐ 76-100% ☐

Recon Information:

Discharge Measurement: Wading ☐ Bridge Board ☐ Boat Board ☐

Measurement Location: _____

Cross Section Location: _____

Continuous Monitor Deployment: _____

Continuous Monitor Location: _____

Boat Accessible: ☐ Nearest Launch: _____

Bridge ☐ **Bridge Safe:** ☐ Bridge Width: _____ Bridge Height: _____

Profiling Measurements:

Time:	10:10	**Temp.(°C):**	25.05	**pH:**	5.97	**Spcond(µhmos/cm):**	213.6
D.O.:	0.7	**D.O. %:**	2.0	**Salinity:**	.10	**Depth (m):**	3m
Time:	10:15	**Temp.(°C):**	21.56	**pH:**	5.8	**Spcond(µhmos/cm):**	362.4
D.O.:	.10	**D.O. %:**	1.2	**Salinity:**	.18	**Depth (m):**	4.5m
Time:		**Temp.(°C):**		**pH:**		**Spcond(µhmos/cm):**	
D.O.:		**D.O. %:**		**Salinity:**		**Depth (m):**	

Comments:

* Depth - 14.2 ft.

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≅ 0.15 m	20 ≅ 68	25 ≅ 77
1.0 ft ≅ 0.30 m	21 ≅ 69.8	26 ≅ 78.8
1.5 ft ≅ 0.45 m	22 ≅ 71.6	27 ≅ 80.6
2.0 ft ≅ 0.60 m	23 ≅ 73.4	28 ≅ 82.4
2.5 ft ≅ 0.75 m	24 ≅ 75.2	29 ≅ 84.2

Field Site Survey.doc
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Site #: SL03 Subsegment: 100605 Date: 8/18/05 Time: 1020hrs
Waterbody: Smithport Lake Tapedown 1: Staff Gauge 1:
Gauge Height 1: Tapedown 2: Staff Gauge 2: Gauge Height 2:
Site Location: Center of Smithport Lake
Personnel: Schwartz, Reed, Savant
Type of Work: Recon ☐ Data Collection ☑

Weather Conditions:	Temperature (°F):	Wind (mph):	Wind Direction:
Clear ☑	Hot >85° ☑	<1 ☐	NW ☐ N ☐ NE ☐
Drizzle/Light Rain ☐	Warm > 75° ☐	1-5 ☑	SW ☐ S ☐ SE ☐
Showers ☐	Mild > 65° ☐	6-10 ☐	E ☐ W ☑
Cloud Cover:	Cool > 60° ☐	11-15 ☐	Variable ☐
0 – 10% ☑	Cold < 60° ☐	>16 ☐	
11 – 40% ☐			
41 – 70% ☐			
71 – 100% ☐			

Stream Characteristics: Flowing: ☐ Measurable Flow: ☐
Flow Direction Upstream ☐ Downstream ☐ Tidally Influenced: ☐
Wind Influence: ☐ Wind Influence Direction: Upstream ☐ Downstream ☐
Algae Present ☐ Sedimentation/Turbidity Present in Water Column ☐
Floating/Aquatic Vegetation % Surface Coverage: <1 ☐ 1-25% ☐ 26-50% ☐ 51-75% ☐ 76-100% ☑

Water Quality Samples Taken: ☐ Water Quality Field Parameters: ☐ Profiling: ☐
Continuous Monitor Deployed: ☐ Continuous Monitor S/N: 40803
Continuous Monitor Retrieved: ☑ Continuous Monitor Deployment Depth (m): 1m
Continuous Monitor Location:

Water Quality Field Parameters

Time: Temp.(°C): pH: Spcond(µhmos/cm):
D.O.: D.O. %: Salinity: Depth (m): Secchi (in):

Flow Measurement: ☐ Measurement Location:
Type of Measurement: Wading ☐ Bridge Board ☐ Boat Board ☐
AquaCalc File Name:
Flow Estimated: ☐ Measurement Location:
Using Discharge Equipment: ☐ Type: Wading ☐ Bridge Board ☐ Boat Board ☐
Drogue Estimate: ☐ Dye Estimate: ☐
Right Descending Bank: Distance (ft): Time (s):
Mid Stream: Distance (ft): Time (s):
Left Descending Bank: Distance (ft): Time (s):
Cross Section Measurement: ☐ Measurement Location:
Type of Measurement Manual: ☐ Fathometer ☐ Cross Section File Name:
GPS Measurement: ☐ GPS SSF File Name:
Site GPS: ☐ Cross Section GPS: ☐
Comments:

Photos Taken: ☐ Picture File #s: _____

Tapedown Established: ☐ Tapedown Location: _____
Benchmark Established: ☐ Benchmark Location: _____
Survey Equipment Used: ☐

Time of Travel Measurement: ☐ Type of Site: Injection ☐ Collection ☐
Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: ☐ Man Altered Waterbody: ☐ Man-Made Waterbody: ☐
Stream Dry/Intermittent: ☐
Stream Bottom: Sandy ☐ Clay ☐ Gravel ☐ Hard Clay ☐ Soft Silt ☐ Sand/Silt ☐ Rock/Gravel/Silt ☐
Control Structure Present: ☐ Location: _____
Type: Man Made Dam ☐ Flow Regulation Device ☐ Beaver Dam ☐ Log Jam ☐
Land Use: Agriculture ☐ Forestry ☐ Municipal ☐ Industrial ☐ Field/Pasture ☐ Wetland ☐
Percent Tree Canopy Cover 0-25% ☐ 26-50% ☐ 51-75% ☐ 76-100% ☐

Recon Information:
Discharge Measurement: Wading ☐ Bridge Board ☐ Boat Board ☐
Measurement Location: _____
Cross Section Location: _____
Continuous Monitor Deployment: _____
Continuous Monitor Location: _____
Boat Accessible: ☐ Nearest Launch: _____
Bridge ☐ Bridge Safe: ☐ Bridge Width: _____ Bridge Height: _____

Profiling Measurements:

Time:		Temp.(°C):		pH:		Spcond(µhmos/cm):	
D.O.:		D.O. %:		Salinity:		Depth (m):	
Time:		Temp.(°C):		pH:		Spcond(µhmos/cm):	
D.O.:		D.O. %:		Salinity:		Depth (m):	
Time:		Temp.(°C):		pH:		Spcond(µhmos/cm):	
D.O.:		D.O. %:		Salinity:		Depth (m):	

Equipment Used:
In Situ Probe S/N: _____ Surveyor 4a S/N: _____ GPS Unit _____
AquaCalc S/N _____ Fathometer: _____ Laser Gun _____
Camera S/N: _____

References
Convert Feet to Meters
0.5 ft ≅ 0.15 m
1.0 ft ≅ 0.30 m
1.5 ft ≅ 0.45 m
2.0 ft ≅ 0.60 m
2.5 ft ≅ 0.75 m

Site Information

Site #: SL 04 Subsegment: 100605 Date: 8-17-05 Time: 9:40

Waterbody: Smithport LAKE

Tapedown 1: _____ Staff Gauge 1: _____ Gauge Height 1: _____

Site Location†: Just South of Hwy 509

Personnel: Jones, Schwartz, Butler

Type of Work: Recon ☐ Data Collection ☒

Weather Conditions:
- Clear ☒
- Drizzle/Light Rain ☐
- Showers ☐

Cloud Cover:
- 0 – 10% ☒
- 11 – 40% ☐
- 41 – 70% ☐
- 71 – 100% ☐

Temperature (°F):
- Hot > 85° ☐
- Warm > 75° ☒
- Mild > 65° ☐
- Cool > 50° ☐
- Cold < 60° ☐

Wind (mph):
- <1 ☐
- 1-5 ☒
- 5-10 ☐
- 11-15 ☐
- >16 ☐

Wind Direction:
- NW ☒ N ☐ NE ☐
- SW ☐ S ☐ SE ☐
- E ☐ W ☐
- Variable ☐

Stream Characteristics: Flowing: ☐ Measurable Flow: ☐
- Flow Direction Upstream ☐ Downstream ☐ Tidally Influenced: ☐
- Wind Influence: ☐ Wind Influence Direction: Upstream ☐ Downstream ☐
- Algae Present ☐ Sedimentation/Turbidity Present in Water Column ☐
- Floating/Aquatic Vegetation % Surface Coverage: <1 ☐ 1-25% ☐ 26-50% ☒ 51-75% ☐ 76-100% ☐

Water Quality Samples Taken: ☒ **Water Quality Field Parameters:** ☒ Profiling: ☐

Water Quality Field Parameters

Time: 9:40 **Temp.(°C):** 27.99 **pH:** 6.49 **SpCond(µhmos/cm):** 170.7

D.O.: 2.5 **D.O. %:** 32.0 **Salinity:** .08 **Depth (m):** 1m **Secchi (in):** 48in

InSitu Probe S/N: 37762 **Surveyor 4a S/N:** S27666

Continuous Monitor Deployed: ☐ Continuous Monitor S/N: _____

Continuous Monitor Retrieved: ☐ Continuous Monitor Deployment Depth (m): _____

Flow Measurement: ☐ Type of Measurement: Wading ☐ Bridge Board ☐ Boat Board ☐

AquaCalc File Name: _____ AquaCalc S/N: _____

Tapedown 2: _____ Staff Gauge 2: _____ Gauge Height 2: _____

Flow Estimated: ☐ Using Discharge Equipment: ☐
- Type: Wading ☐ Bridge Board ☐ Boat Board ☐
- Drogue Estimate: ☐ Dye Estimate: ☐

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: ☐ Type of Measurement Manual: ☐ Fathometer ☐

Cross Section File Name: _____ Fathometer S/N: _____

GPS Measurement: ☒ GPS SSF File Name: Smithport Lake - Lake GPS

Site GPS: ☒ Cross Section GPS: ☐ GPS Unit: _____

Photos Taken: ☐ Picture File #s: _____

Camera: _____

† All work is done within 100 yard radius of Site unless otherwise noted in Data Plan

Tapedown Established: ☐ Tapedown Location: _____

Benchmark Established: ☐ Benchmark Location: _____

Survey Equipment Used: ☐

Time of Travel Measurement: ☐ Type of Site: Injection ☐ Collection ☐

Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: ☒ Man Altered Waterbody: ☒

Man-Made Waterbody: ☐

Stream Dry/Intermittent: ☐

Stream Bottom: Sandy ☐ Clay ☒ Gravel ☐ Hard Clay ☐ Soft Silt ☒

Sand/Silt ☐ Rock/Gravel/Silt ☐ Concrete ☐

Control Structure Present: ☐ Location: _____

Type: Man Made Dam ☐ Flow Regulation Device ☐ Beaver Dam ☐ Log Jam ☐

Land Use: Agriculture ☐ Forestry ☒ Municipal ☐ Industrial ☐ Field/Pasture ☐ Wetland ☐

Percent Tree Canopy Cover 0-25% ☒ 26-50% ☐ 51-75% ☐ 76-100% ☐

Recon Information:

Discharge Measurement: Wading ☐ Bridge Board ☐ Boat Board ☐

Measurement Location: _____

Cross Section Location: _____

Continuous Monitor Deployment: _____

Continuous Monitor Location: _____

Boat Accessible: ☐ Nearest Launch: _____

Bridge ☐ **Bridge Safe:** ☐ Bridge Width: _____ Bridge Height: _____

Profiling Measurements:

Time:	_____	**Temp.(°C):**	_____	**pH:**	_____	**Spcond(µhmos/cm):**	_____
D.O.:	_____	**D.O. %:**	_____	**Salinity:**	_____	**Depth (m):**	_____
Time:	_____	**Temp.(°C):**	_____	**pH:**	_____	**Spcond(µhmos/cm):**	_____
D.O.:	_____	**D.O. %:**	_____	**Salinity:**	_____	**Depth (m):**	_____
Time:	_____	**Temp.(°C):**	_____	**pH:**	_____	**Spcond(µhmos/cm):**	_____
D.O.:	_____	**D.O. %:**	_____	**Salinity:**	_____	**Depth (m):**	_____

Comments: * Depth - 15.2 ft.

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≅ 0.15 m	20 ≅ 68	25 ≅ 77
1.0 ft ≅ 0.30 m	21 ≅ 69.8	26 ≅ 78.8
1.5 ft ≅ 0.45 m	22 ≅ 71.6	27 ≅ 80.6
2.0 ft ≅ 0.60 m	23 ≅ 73.4	28 ≅ 82.4
2.5 ft ≅ 0.75 m	24 ≅ 75.2	29 ≅ 84.2

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Revision 3.0
Revised 11/8/04

Site Information

Site #: CLK 01 Subsegment: 100605 Date: 8-16-05 Time: 11:10

Waterbody: Clear LAKE

Tapedown 1: _____ Staff Gauge 1: _____ Gauge Height 1: _____

Site Location†: Just North of Hwy. 509

Personnel: Jones, Butlee, Schwartz

Type of Work: Recon ☐ Data Collection ☒

Weather Conditions:
Clear ☒
Drizzle/Light Rain ☐
Showers ☐

Cloud Cover:
0 –10% ☒
11 – 40% ☐
41 – 70% ☐
71 – 100% ☐

Temperature (°F):
Hot >85° ☒
Warm > 75° ☐
Mild > 65° ☐
Cool > 60° ☐
Cold < 60° ☐

Wind (mph):
<1 ☒
1-5 ☐
6-10 ☐
11-15 ☐
>16 ☐

Wind Direction:
NW ☒ N ☐ NE ☐
SW ☐ S ☐ SE ☐
E ☐ W ☐
Variable ☐

Stream Characteristics: Flowing: ☐ Measurable Flow: ☐
Flow Direction Upstream ☐ Downstream ☐ Tidally Influenced: ☐
Wind Influence: ☐ Wind Influence Direction: Upstream ☐ Downstream ☐
Algae Present ☐ Sedimentation/Turbidity Present in Water Column ☐
Floating/Aquatic Vegetation % Surface Coverage: <1 ☐ 1-25% ☐ 26-50% ☐ 51-75% ☒ 76-100% ☐

Water Quality Samples Taken: ☐ **Water Quality Field Parameters:** ☐ Profiling: ☐

Water Quality Field Parameters

Time: _____ **Temp.(°C):** _____ **pH:** _____ **SpCond(µhmos/cm):** _____

D.O.: _____ **D.O. %:** _____ **Salinity:** _____ **Depth (m):** _____ **Secchi (in):** _____

InSitu Probe S/N: _____ **Surveyor 4a S/N:** _____

Continuous Monitor Deployed: ☒ Continuous Monitor S/N: 40805

Continuous Monitor Retrieved: ☐ Continuous Monitor Deployment Depth (m): 1M

Flow Measurement: ☐ Type of Measurement: Wading ☐ Bridge Board ☐ Boat Board ☐

AquaCalc File Name: _____ AquaCalc S/N: _____

Tapedown 2: _____ Staff Gauge 2: _____ Gauge Height 2: _____

Flow Estimated: ☐ Using Discharge Equipment: ☐
Type: Wading ☐ Bridge Board ☐ Boat Board ☐
Drogue Estimate: ☐ Dye Estimate: ☐

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: ☐ Type of Measurement Manual: ☐ Fathometer ☐

Cross Section File Name: _____ Fathometer S/N: _____

GPS Measurement: ☒ GPS SSF File Name: Smithport Lake - Lake GPS-

Site GPS: ☒ Cross Section GPS: ☐ GPS Unit: 6

Photos Taken: ☐ Picture File #s: _____

Camera: _____

† All work is done within 100 yard radius of Site unless otherwise noted in Data Plan

Tapedown Established: ☐ Tapedown Location: _____

Benchmark Established: ☐ Benchmark Location: _____

Survey Equipment Used: ☐

Time of Travel Measurement: ☐ Type of Site: Injection ☐ Collection ☐

Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: ☒ Man Altered Waterbody: ☒

Man-Made Waterbody: ☐

Stream Dry/Intermittent: ☐

Stream Bottom: Sandy ☐ Clay ☒ Gravel ☐ Hard Clay ☐ Soft Silt ☒

Sand/Silt ☐ Rock/Gravel/Silt ☐ Concrete ☐

Control Structure Present: ☐ Location: _____

Type: Man Made Dam ☐ Flow Regulation Device ☐ Beaver Dam ☐ Log Jam ☐

Land Use: Agriculture ☐ Forestry ☒ Municipal ☐ Industrial ☐ Field/Pasture ☐ Wetland ☐

Percent Tree Canopy Cover 0-25% ☒ 26-50% ☐ 51-75% ☐ 76-100% ☐

Recon Information:

Discharge Measurement: Wading ☐ Bridge Board ☐ Boat Board ☐

Measurement Location: _____

Cross Section Location: _____

Continuous Monitor Deployment: _____

Continuous Monitor Location: _____

Boat Accessible: ☐ Nearest Launch: _____

Bridge ☐ **Bridge Safe:** ☐ Bridge Width: _____ Bridge Height: _____

Profiling Measurements:

Time: _____ **Temp.(°C):** _____ **pH:** _____ **Spcond(µhmos/cm):** _____
D.O.: _____ **D.O. %:** _____ **Salinity:** _____ **Depth (m):** _____

Time: _____ **Temp.(°C):** _____ **pH:** _____ **Spcond(µhmos/cm):** _____
D.O.: _____ **D.O. %:** _____ **Salinity:** _____ **Depth (m):** _____

Time: _____ **Temp.(°C):** _____ **pH:** _____ **Spcond(µhmos/cm):** _____
D.O.: _____ **D.O. %:** _____ **Salinity:** _____ **Depth (m):** _____

Comments: _____

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≅ 0.15 m	20 ≅ 68	25 ≅ 77
1.0 ft ≅ 0.30 m	21 ≅ 69.8	26 ≅ 78.8
1.5 ft ≅ 0.45 m	22 ≅ 71.6	27 ≅ 80.6
2.0 ft ≅ 0.60 m	23 ≅ 73.4	28 ≅ 82.4
2.5 ft ≅ 0.75 m	24 ≅ 75.2	29 ≅ 84.2

Field Site Survey.doc
Revision 3.0
Revised 11/8/04

Site Information

Site #: CLK 01 Subsegment: 100605 Date: 8-17-05 Time: 9:15

Waterbody: CLEAR LAKE

Tapedown 1: _____ Staff Gauge 1: _____ Gauge Height 1: _____

Site Location†: JUST N. of Hwy 509

Personnel: JONES, SCHWARTZ, BUTLER

Type of Work: Recon ☐ Data Collection ☒

Weather Conditions:
- Clear ☒
- Drizzle/Light Rain ☐
- Showers ☐

Cloud Cover:
- 0 – 10% ☒
- 11 – 40% ☐
- 41 – 70% ☐
- 71 – 100% ☐

Temperature (°F):
- Hot >85° ☐
- Warm >75° ☒
- Mild > 65° ☐
- Cool > 60° ☐
- Cold < 60° ☐

Wind (mph):
- <1 ☐
- 1-5 ☒
- 6-10 ☐
- 11-15 ☐
- >16 ☐

Wind Direction:
- NW ☒ N ☐ NE ☐
- SW ☐ S ☐ SE ☐
- E ☐ W ☐
- Variable ☐

Stream Characteristics: Flowing: ☐ Measurable Flow: ☐
- Flow Direction Upstream ☐ Downstream ☐ Tidally Influenced: ☐
- Wind Influence: ☐ Wind Influence Direction: Upstream ☐ Downstream ☐
- Algae Present ☐ Sedimentation/Turbidity Present in Water Column ☐
- Floating/Aquatic Vegetation % Surface Coverage: <1 ☐ 1-25% ☐ 26-50% ☐ 51-75% ☒ 76-100% ☐

Water Quality Samples Taken: ☒ **Water Quality Field Parameters:** ☒ Profiling: ☒

Water Quality Field Parameters

Time: 915 **Temp.(°C):** 27.98 **pH:** 6.65 **SpCond(µhmos/cm):** 172.4

D.O.: 1.84 **D.O. %:** 23.5 **Salinity:** .08 **Depth (m):** 1m **Secchi (in):** 48in

InSitu Probe S/N: 37762 **Surveyor 4a S/N:** 527660

Continuous Monitor Deployed: ☐ Continuous Monitor S/N: _____

Continuous Monitor Retrieved: ☐ Continuous Monitor Deployment Depth (m): _____

Flow Measurement: ☐ Type of Measurement: Wading ☐ Bridge Board ☐ Boat Board ☐

AquaCalc File Name: _____ AquaCalc S/N: _____

Tapedown 2: _____ Staff Gauge 2: _____ Gauge Height 2: _____

Flow Estimated: ☐ Using Discharge Equipment: ☐
- Type: Wading ☐ Bridge Board ☐ Boat Board ☐
- Drogue Estimate: ☐ Dye Estimate: ☐

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: ☐ Type of Measurement Manual: ☐ Fathometer ☐

Cross Section File Name: _____ Fathometer S/N: _____

GPS Measurement: ☐ GPS SSF File Name: _____

Site GPS: ☐ Cross Section GPS: ☐ GPS Unit: _____

Photos Taken: ☐ Picture File #s: _____

Camera: _____

† All work is done within 100 yard radius of Site unless otherwise noted in Data Plan

Tapedown Established: ☐ Tapedown Location: _____

Benchmark Established: ☐ Benchmark Location: _____

Survey Equipment Used: ☐

Time of Travel Measurement: ☐ Type of Site: Injection ☐ Collection ☐

Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: ☒ Man Altered Waterbody: ☐

Man-Made Waterbody: ☐

Stream Dry/Intermittent: ☐

Stream Bottom: Sandy ☐ Clay ☒ Gravel ☐ Hard Clay ☐ Soft Silt ☒

Sand/Silt ☐ Rock/Gravel/Silt ☐ Concrete ☐

Control Structure Present: ☐ Location: _____

Type: Man Made Dam ☐ Flow Regulation Device ☐ Beaver Dam ☐ Log Jam ☐

Land Use: Agriculture ☐ Forestry ☒ Municipal ☐ Industrial ☐ Field/Pasture ☐ Wetland ☐

Percent Tree Canopy Cover 0-25% ☒ 26-50% ☐ 51-75% ☐ 76-100% ☐

Recon Information:

Discharge Measurement: Wading ☐ Bridge Board ☐ Boat Board ☐

Measurement Location: _____

Cross Section Location: _____

Continuous Monitor Deployment: _____

Continuous Monitor Location: _____

Boat Accessible: ☐ Nearest Launch: _____

Bridge ☐ **Bridge Safe:** ☐ Bridge Width: _____ Bridge Height: _____

Profiling Measurements:

Time:	9:20	Temp.(°C):	24.81	pH:	6.12	Spcond(µhmos/cm):	266.6
D.O.:	.12	D.O. %:	1.5	Salinity:	.13	Depth (m):	3m
Time:	9:24	Temp.(°C):	20.30	pH:	5.97	Spcond(µhmos/cm):	458.9
D.O.:	.10	D.O. %:	1.1	Salinity:	.23	Depth (m):	5m
Time:		Temp.(°C):		pH:		Spcond(µhmos/cm):	
D.O.:		D.O. %:		Salinity:		Depth (m):	

Comments:

* Depth - 16.5 ft.

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≅ 0.15 m	20 ≅ 68	25 ≅ 77
1.0 ft ≅ 0.30 m	21 ≅ 69.8	26 ≅ 78.8
1.5 ft ≅ 0.45 m	22 ≅ 71.6	27 ≅ 80.6
2.0 ft ≅ 0.60 m	23 ≅ 73.4	28 ≅ 82.4
2.5 ft ≅ 0.75 m	24 ≅ 75.2	29 ≅ 84.2

Field Site Survey.doc
Revision 3.0
Revised 11/8/04

Site Information

Site #: CLF01 Subsegment: 100605 Date: 8-18-05 Time: 1030hrs

Waterbody: Clear Lake

Tapedown 1: _____ Staff Gauge 1: _____ Gauge Height 1: _____

Site Location†: Just North of Hwy 509

Personnel: Schwartz Reed, Savant

Type of Work: Recon ☐ Data Collection ☑

Weather Conditions:
- Clear ☑
- Drizzle/Light Rain ☐
- Showers ☐

Cloud Cover:
- 0 –10% ☑
- 11 – 40% ☐
- 41 – 70% ☐
- 71 – 100% ☐

Temperature (°F):
- Hot >85° ☑
- Warm > 75° ☐
- Mild > 65° ☐
- Cool > 60° ☐
- Cold < 60° ☐

Wind (mph):
- <1 ☐
- 1-5 ☑
- 6-10 ☐
- 11-15 ☐
- >16 ☐

Wind Direction:
- NW ☐ N ☐ NE ☐
- SW ☐ S ☐ SE ☐
- E ☐ W ☑
- Variable ☐

Stream Characteristics: Flowing: ☐ Measurable Flow: ☐
- Flow Direction Upstream ☐ Downstream ☐ Tidally Influenced: ☐
- Wind Influence: ☐ Wind Influence Direction: Upstream ☐ Downstream ☐
- Algae Present ☐ Sedimentation/Turbidity Present in Water Column ☐
- Floating/Aquatic Vegetation % Surface Coverage: <1 ☐ 1-25% ☑ 26-50% ☐ 51-75% ☑ 76-100% ☐

Water Quality Samples Taken: ☐ **Water Quality Field Parameters:** ☐ Profiling: ☐

Water Quality Field Parameters

Time: _____ **Temp.(°C):** _____ **pH:** _____ **SpCond(µhmos/cm):** _____

D.O.: _____ **D.O. %:** _____ **Salinity:** _____ **Depth (m):** _____ **Secchi (in):** _____

InSitu Probe S/N: _____ **Surveyor 4a S/N:** _____

Continuous Monitor Deployed: ☐ Continuous Monitor S/N: 40805

Continuous Monitor Retrieved: ☑ Continuous Monitor Deployment Depth (m): 1m

Flow Measurement: ☐ Type of Measurement: Wading ☐ Bridge Board ☐ Boat Board ☐

AquaCalc File Name: _____ AquaCalc S/N: _____

Tapedown 2: _____ Staff Gauge 2: _____ Gauge Height 2: _____

Flow Estimated: ☐ Using Discharge Equipment: ☐
- Type: Wading ☐ Bridge Board ☐ Boat Board ☐
- Drogue Estimate: ☐ Dye Estimate: ☐

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: ☐ Type of Measurement Manual: ☐ Fathometer ☐

Cross Section File Name: _____ Fathometer S/N: _____

GPS Measurement: ☐ GPS SSF File Name: _____

Site GPS: ☐ Cross Section GPS: ☐ GPS Unit: _____

Photos Taken: ☐ Picture File #s: _____

Camera: _____

† All work is done within 100 yard radius of Site unless otherwise noted in Data Plan

Tapedown Established: ☐ Tapedown Location: _____

Benchmark Established: ☐ Benchmark Location: _____

Survey Equipment Used: ☐

Time of Travel Measurement: ☐ Type of Site: Injection ☐ Collection ☐

Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: ☐ Man Altered Waterbody: ☐

Man-Made Waterbody: ☐

Stream Dry/Intermittent: ☐

Stream Bottom: Sandy ☐ Clay ☐ Gravel ☐ Hard Clay ☐ Soft Silt ☐

Sand/Silt ☐ Rock/Gravel/Silt ☐ Concrete ☐

Control Structure Present: ☐ Location: _____

Type: Man Made Dam ☐ Flow Regulation Device ☐ Beaver Dam ☐ Log Jam ☐

Land Use: Agriculture ☐ Forestry ☐ Municipal ☐ Industrial ☐ Field/Pasture ☐ Wetland ☐

Percent Tree Canopy Cover 0-25% ☐ 26-50% ☐ 51-75% ☐ 76-100% ☐

Recon Information:

Discharge Measurement: Wading ☐ Bridge Board ☐ Boat Board ☐

Measurement Location: _____

Cross Section Location: _____

Continuous Monitor Deployment: _____

Continuous Monitor Location: _____

Boat Accessible: ☐ Nearest Launch: _____

Bridge ☐ **Bridge Safe:** ☐ Bridge Width: _____ Bridge Height: _____

Profiling Measurements:

Time:	_____	**Temp.(°C):**	_____	**pH:**	_____	**Spcond(µhmos/cm):**	_____
D.O.:	_____	**D.O. %:**	_____	**Salinity:**	_____	**Depth (m):**	_____
Time:	_____	**Temp.(°C):**	_____	**pH:**	_____	**Spcond(µhmos/cm):**	_____
D.O.:	_____	**D.O. %:**	_____	**Salinity:**	_____	**Depth (m):**	_____
Time:	_____	**Temp.(°C):**	_____	**pH:**	_____	**Spcond(µhmos/cm):**	_____
D.O.:	_____	**D.O. %:**	_____	**Salinity:**	_____	**Depth (m):**	_____

Comments: _____

References

Convert Feet to Meters	**Convert Celsius to Fahrenheit**	
0.5 ft ≅ 0.15 m	20 ≅ 68	25 ≅ 77
1.0 ft ≅ 0.30 m	21 ≅ 69.8	26 ≅ 78.8
1.5 ft ≅ 0.45 m	22 ≅ 71.6	27 ≅ 80.6
2.0 ft ≅ 0.60 m	23 ≅ 73.4	28 ≅ 82.4
2.5 ft ≅ 0.75 m	24 ≅ 75.2	29 ≅ 84.2

Field Site Survey.doc
Revision 3.0
Revised 11/8/04

Site Information

Site #: CLK 02 Subsegment: 100605 Date: 8-16-05 Time: 11:20

Waterbody: CLEAR LAKE

Tapedown 1: _____ Staff Gauge 1: _____ Gauge Height 1: _____

Site Location†: AS CLOSE TO CENTER OF LAKE AS POSSIBLE

Personnel: JONES, SCHWARTZ, BUTLER

Type of Work: Recon ☐ Data Collection ☒

Weather Conditions:
Clear ☒
Drizzle/Light Rain ☐
Showers ☐

Temperature (°F):
Hot >85° ☒
Warm > 75° ☐
Mild > 65° ☐
Cool > 60° ☐
Cold < 60° ☐

Wind (mph):
<1 ☒
1-5 ☐
6-10 ☐
11-15 ☐
>16 ☐

Wind Direction:
NW ☐ N ☐ NE ☐
SW ☐ S ☐ SE ☐
E ☐ W ☐
Variable ☐

Cloud Cover:
0 –10% ☒
11 – 40% ☐
41 – 70% ☐
71 – 100% ☐

Stream Characteristics: Flowing: ☐ Measurable Flow: ☐
Flow Direction Upstream ☐ Downstream ☐ Tidally Influenced: ☐
Wind Influence: ☐ Wind Influence Direction: Upstream ☐ Downstream ☐
Algae Present ☐ Sedimentation/Turbidity Present in Water Column ☐
Floating/Aquatic Vegetation % Surface Coverage: <1 ☐ 1-25% ☐ 26-50% ☐ 51-75% ☐ 76-100% ☒

Water Quality Samples Taken: ☐ **Water Quality Field Parameters:** ☐ Profiling: ☐

Water Quality Field Parameters

Time: _____ **Temp.(°C):** _____ **pH:** _____ **SpCond(µhmos/cm):** _____

D.O.: _____ **D.O. %:** _____ **Salinity:** _____ **Depth (m):** _____ **Secchi (in):** _____

InSitu Probe S/N: _____ **Surveyor 4a S/N:** _____

Continuous Monitor Deployed: ☒ Continuous Monitor S/N: 41500

Continuous Monitor Retrieved: ☐ Continuous Monitor Deployment Depth (m): 1m

Flow Measurement: ☐ Type of Measurement: Wading ☐ Bridge Board ☐ Boat Board ☐

AquaCalc File Name: _____ AquaCalc S/N: _____

Tapedown 2: _____ Staff Gauge 2: _____ Gauge Height 2: _____

Flow Estimated: ☐ Using Discharge Equipment: ☐
Type: Wading ☐ Bridge Board ☐ Boat Board ☐
Drogue Estimate: ☐ Dye Estimate: ☐

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: ☐ Type of Measurement Manual: ☐ Fathometer ☐

Cross Section File Name: _____ Fathometer S/N: _____

GPS Measurement: ☒ GPS SSF File Name: Smithport Lake - Lake GR

Site GPS: ☒ Cross Section GPS: ☐ GPS Unit: 6

Photos Taken: ☐ Picture File #s: _____

Camera: _____

† All work is done within 100 yard radius of Site unless otherwise noted in Data Plan

Tapedown Established: ☐ Tapedown Location: _____

Benchmark Established: ☐ Benchmark Location: _____

Survey Equipment Used: ☐

Time of Travel Measurement: ☐ Type of Site: Injection ☐ Collection ☐

Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: ☒ Man Altered Waterbody: ☒

Man-Made Waterbody: ☐

Stream Dry/Intermittent: ☐

Stream Bottom: Sandy ☐ Clay ☒ Gravel ☐ Hard Clay ☐ Soft Silt ☒

Sand/Silt ☐ Rock/Gravel/Silt ☐ Concrete ☐

Control Structure Present: ☐ Location: _____

Type: Man Made Dam ☐ Flow Regulation Device ☐ Beaver Dam ☐ Log Jam ☐

Land Use: Agriculture ☐ Forestry ☒ Municipal ☐ Industrial ☐ Field/Pasture ☐ Wetland ☐

Percent Tree Canopy Cover 0-25% ☒ 26-50% ☐ 51-75% ☐ 76-100% ☐

Recon Information:

Discharge Measurement: Wading ☐ Bridge Board ☐ Boat Board ☐

Measurement Location: _____

Cross Section Location: _____

Continuous Monitor Deployment: _____

Continuous Monitor Location: _____

Boat Accessible: ☐ Nearest Launch: _____

Bridge ☐ **Bridge Safe:** ☐ Bridge Width: _____ Bridge Height: _____

Profiling Measurements:

Time: _____ **Temp.(°C):** _____ **pH:** _____ **Spcond(µhmos/cm):** _____
D.O.: _____ **D.O. %:** _____ **Salinity:** _____ **Depth (m):** _____

Time: _____ **Temp.(°C):** _____ **pH:** _____ **Spcond(µhmos/cm):** _____
D.O.: _____ **D.O. %:** _____ **Salinity:** _____ **Depth (m):** _____

Time: _____ **Temp.(°C):** _____ **pH:** _____ **Spcond(µhmos/cm):** _____
D.O.: _____ **D.O. %:** _____ **Salinity:** _____ **Depth (m):** _____

Comments: _____

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≅ 0.15 m	20 ≅ 68	25 ≅ 77
1.0 ft ≅ 0.30 m	21 ≅ 69.8	26 ≅ 78.8
1.5 ft ≅ 0.45 m	22 ≅ 71.6	27 ≅ 80.6
2.0 ft ≅ 0.60 m	23 ≅ 73.4	28 ≅ 82.4
2.5 ft ≅ 0.75 m	24 ≅ 75.2	29 ≅ 84.2

Field Site Survey.doc
Revision 3.0
Revised 11/8/04

Site Information

Site #: CLK 02 Subsegment: 100605 Date: 8-17-05 Time: 845

Waterbody: CLEAR LAKE

Tapedown 1: _____ Staff Gauge 1: _____ Gauge Height 1: _____

Site Location†: CENTER OF LAKE

Personnel: JONES, SCHWARTZ, BUTLER

Type of Work: Recon ☐ Data Collection ☒

Weather Conditions:
- Clear ☒
- Drizzle/Light Rain ☐
- Showers ☐

Cloud Cover:
- 0 –10% ☒
- 11 – 40% ☐
- 41 – 70% ☐
- 71 – 100% ☐

Temperature (°F):
- Hot >85° ☐
- Warm > 75° ☒
- Mild > 65° ☐
- Cool > 60° ☐
- Cold < 60° ☐

Wind (mph):
- <1 ☐
- 1-5 ☒
- 6-10 ☐
- 11-15 ☐
- >16 ☐

Wind Direction:
- NW ☒ N ☐ NE ☐
- SW ☐ S ☐ SE ☐
- E ☐ W ☐
- Variable ☐

Stream Characteristics: Flowing: ☐ Measurable Flow: ☐
- Flow Direction Upstream ☐ Downstream ☐ Tidally Influenced: ☐
- Wind Influence: ☐ Wind Influence Direction: Upstream ☐ Downstream ☐
- Algae Present ☐ Sedimentation/Turbidity Present in Water Column ☐
- Floating/Aquatic Vegetation % Surface Coverage: <1 ☐ 1-25% ☐ 26-50% ☐ 51-75% ☐ 76-100% ☒

Water Quality Samples Taken: ☒ **Water Quality Field Parameters:** ☒ Profiling: ☐

Water Quality Field Parameters

Time: 8:45 **Temp.(°C):** 27.01 **pH:** 6.21 **SpCond(µhmos/cm):** 199.9

D.O.: .36 **D.O. %:** 4.5 **Salinity:** .09 **Depth (m):** 1m **Secchi (in):** 30

InSitu Probe S/N: 37762 **Surveyor 4a S/N:** 52766

Continuous Monitor Deployed: ☐ Continuous Monitor S/N: _____

Continuous Monitor Retrieved: ☐ Continuous Monitor Deployment Depth (m): _____

Flow Measurement: ☐ Type of Measurement: Wading ☐ Bridge Board ☐ Boat Board ☐

AquaCalc File Name: _____ AquaCalc S/N: _____

Tapedown 2: _____ Staff Gauge 2: _____ Gauge Height 2: _____

Flow Estimated: ☐ Using Discharge Equipment: ☐
- Type: Wading ☐ Bridge Board ☐ Boat Board ☐
- Drogue Estimate: ☐ Dye Estimate: ☐

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: ☐ Type of Measurement Manual: ☐ Fathometer ☐

Cross Section File Name: _____ Fathometer S/N: _____

GPS Measurement: ☐ GPS SSF File Name: _____

Site GPS: ☐ Cross Section GPS: ☐ GPS Unit: _____

Photos Taken: ☐ Picture File #s: _____

Camera: _____

† All work is done within 100 yard radius of Site unless otherwise noted in Data Plan

Tapedown Established: ☐ Tapedown Location: _____

Benchmark Established: ☐ Benchmark Location: _____

Survey Equipment Used: ☐

Time of Travel Measurement: ☐ Type of Site: Injection ☐ Collection ☐

Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: ☒ Man Altered Waterbody: ☒

Man-Made Waterbody: ☐

Stream Dry/Intermittent: ☐

Stream Bottom: Sandy ☐ Clay ☒ Gravel ☐ Hard Clay ☐ Soft Silt ☒

Sand/Silt ☐ Rock/Gravel/Silt ☐ Concrete ☐

Control Structure Present: ☐ Location: _____

Type: Man Made Dam ☐ Flow Regulation Device ☐ Beaver Dam ☐ Log Jam ☐

Land Use: Agriculture ☐ Forestry ☒ Municipal ☐ Industrial ☐ Field/Pasture ☐ Wetland ☐

Percent Tree Canopy Cover 0-25% ☒ 26-50% ☐ 51-75% ☐ 76-100% ☐

Recon Information:

Discharge Measurement: Wading ☐ Bridge Board ☐ Boat Board ☐

Measurement Location: _____

Cross Section Location: _____

Continuous Monitor Deployment: _____

Continuous Monitor Location: _____

Boat Accessible: ☐ Nearest Launch: _____

Bridge ☐ **Bridge Safe:** ☐ Bridge Width: _____ Bridge Height: _____

Profiling Measurements:

Time:	_____	**Temp.(°C):**	_____	**pH:**	_____	**Spcond(µhmos/cm):**	_____
D.O.:	_____	**D.O. %:**	_____	**Salinity:**	_____	**Depth (m):**	_____
Time:	_____	**Temp.(°C):**	_____	**pH:**	_____	**Spcond(µhmos/cm):**	_____
D.O.:	_____	**D.O. %:**	_____	**Salinity:**	_____	**Depth (m):**	_____
Time:	_____	**Temp.(°C):**	_____	**pH:**	_____	**Spcond(µhmos/cm):**	_____
D.O.:	_____	**D.O. %:**	_____	**Salinity:**	_____	**Depth (m):**	_____

Comments:

* Depth - 8 ft.

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≅ 0.15 m	20 ≅ 68	25 ≅ 77
1.0 ft ≅ 0.30 m	21 ≅ 69.8	26 ≅ 78.8
1.5 ft ≅ 0.45 m	22 ≅ 71.6	27 ≅ 80.6
2.0 ft ≅ 0.60 m	23 ≅ 73.4	28 ≅ 82.4
2.5 ft ≅ 0.75 m	24 ≅ 75.2	29 ≅ 84.2

Field Site Survey.doc
Revision 3.0
Revised 11/8/04

Site Information

Site #: CLK 02 Subsegment: 100605 Date: 8-18-05 Time: 1035hrs

Waterbody: Clear Lake

Tapedown 1: _____ Staff Gauge 1: _____ Gauge Height 1: _____

Site Location†: As close to center of Lake as possible

Personnel: Schwartz, Reed, Sawant

Type of Work: Recon ☐ Data Collection ☑

Weather Conditions:
- Clear ☑
- Drizzle/Light Rain ☐
- Showers ☐

Cloud Cover:
- 0 –10% ☑
- 11 – 40% ☐
- 41 – 70% ☐
- 71 – 100% ☐

Temperature (°F):
- Hot >85° ☑
- Warm > 75° ☐
- Mild > 65° ☐
- Cool > 60° ☐
- Cold < 60° ☐

Wind (mph):
- <1 ☐
- 1-5 ☑
- 6-10 ☐
- 11-15 ☐
- >16 ☐

Wind Direction:
- NW ☐ N ☐ NE ☐
- SW ☐ S ☐ SE ☐
- E ☐ W ☑
- Variable ☐

Stream Characteristics: Flowing: ☐ Measurable Flow: ☐
- Flow Direction Upstream ☐ Downstream ☐ Tidally Influenced: ☐
- Wind Influence: ☐ Wind Influence Direction: Upstream ☐ Downstream ☐
- Algae Present ☐ Sedimentation/Turbidity Present in Water Column ☐
- Floating/Aquatic Vegetation % Surface Coverage: <1 ☐ 1-25% ☐ 26-50% ☐ 51-75% ☐ 76-100% ☑

Water Quality Samples Taken: ☐ **Water Quality Field Parameters:** ☐ Profiling: ☐

Water Quality Field Parameters

Time: _____ **Temp.(°C):** _____ **pH:** _____ **SpCond(µhmos/cm):** _____

D.O.: _____ **D.O. %:** _____ **Salinity:** _____ **Depth (m):** _____ **Secchi (in):** _____

InSitu Probe S/N: _____ **Surveyor 4a S/N:** _____

Continuous Monitor Deployed: ☐ Continuous Monitor S/N: 415.00

Continuous Monitor Retrieved: ☑ Continuous Monitor Deployment Depth (m): 1m

Flow Measurement: ☐ Type of Measurement: Wading ☐ Bridge Board ☐ Boat Board ☐

AquaCalc File Name: _____ AquaCalc S/N: _____

Tapedown 2: _____ Staff Gauge 2: _____ Gauge Height 2: _____

Flow Estimated: ☐ Using Discharge Equipment: ☐
- Type: Wading ☐ Bridge Board ☐ Boat Board ☐
- Drogue Estimate: ☐ Dye Estimate: ☐

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: ☐ Type of Measurement Manual: ☐ Fathometer ☐

Cross Section File Name: _____ Fathometer S/N: _____

GPS Measurement: ☐ GPS SSF File Name: _____

Site GPS: ☐ Cross Section GPS: ☐ GPS Unit: _____

Photos Taken: ☐ Picture File #s: _____

Camera: _____

† All work is done within 100 yard radius of Site unless otherwise noted in Data Plan

Tapedown Established: ☐ Tapedown Location: _____

Benchmark Established: ☐ Benchmark Location: _____

Survey Equipment Used: ☐

Time of Travel Measurement: ☐ Type of Site: Injection ☐ Collection ☐

Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: ☐ Man Altered Waterbody: ☐

Man-Made Waterbody: ☐

Stream Dry/Intermittent: ☐

Stream Bottom: Sandy ☐ Clay ☐ Gravel ☐ Hard Clay ☐ Soft Silt ☐

Sand/Silt ☐ Rock/Gravel/Silt ☐ Concrete ☐

Control Structure Present: ☐ Location: _____

Type: Man Made Dam ☐ Flow Regulation Device ☐ Beaver Dam ☐ Log Jam ☐

Land Use: Agriculture ☐ Forestry ☐ Municipal ☐ Industrial ☐ Field/Pasture ☐ Wetland ☐

Percent Tree Canopy Cover 0-25% ☐ 26-50% ☐ 51-75% ☐ 76-100% ☐

Recon Information:

Discharge Measurement: Wading ☐ Bridge Board ☐ Boat Board ☐

Measurement Location: _____

Cross Section Location: _____

Continuous Monitor Deployment: _____

Continuous Monitor Location: _____

Boat Accessible: ☐ Nearest Launch: _____

Bridge ☐ **Bridge Safe:** ☐ Bridge Width: _____ Bridge Height: _____

Profiling Measurements:

Time: _____ **Temp.(°C):** _____ **pH:** _____ **Spcond(µhmos/cm):** _____
D.O.: _____ **D.O. %:** _____ **Salinity:** _____ **Depth (m):** _____

Time: _____ **Temp.(°C):** _____ **pH:** _____ **Spcond(µhmos/cm):** _____
D.O.: _____ **D.O. %:** _____ **Salinity:** _____ **Depth (m):** _____

Time: _____ **Temp.(°C):** _____ **pH:** _____ **Spcond(µhmos/cm):** _____
D.O.: _____ **D.O. %:** _____ **Salinity:** _____ **Depth (m):** _____

Comments: _____

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≅ 0.15 m	20 ≅ 68	25 ≅ 77
1.0 ft ≅ 0.30 m	21 ≅ 69.8	26 ≅ 78.8
1.5 ft ≅ 0.45 m	22 ≅ 71.6	27 ≅ 80.6
2.0 ft ≅ 0.60 m	23 ≅ 73.4	28 ≅ 82.4
2.5 ft ≅ 0.75 m	24 ≅ 75.2	29 ≅ 84.2

Field Site Survey.doc
Revision 3.0
Revised 11/8/04

Site Information

Site #: SB01 Subsegment: 100605 Date: 8/16/05 Time: 0945

Waterbody: Siphorien Bayou

Tapedown 1: _____ Staff Gauge 1: _____ Gauge Height 1: _____

Site Location†: At Hwy 509

Personnel: LAFleur, Brignac

Type of Work: Recon ☐ Data Collection ☒

Weather Conditions:
Clear ☒
Drizzle/Light Rain ☐
Showers ☐

Cloud Cover:
0 –10% ☐
11 – 40% ☒
41 – 70% ☐
71 – 100% ☐

Temperature (°F):
Hot >85° ☒
Warm > 75° ☐
Mild > 65° ☐
Cool > 60° ☐
Cold < 60° ☐

Wind (mph):
<1 ☐
1-5 ☐
6-10 ☐
11-15 ☐
>16 ☐

Wind Direction:
NW ☐ N ☐ NE ☐
SW ☐ S ☐ SE ☐
E ☐ W ☐
Variable ☐

Stream Characteristics: Flowing: ☐ Measurable Flow: ☐
Flow Direction Upstream ☐ Downstream ☐ Tidally Influenced: ☐
Wind Influence: ☐ Wind Influence Direction: Upstream ☐ Downstream ☐
Algae Present ☐ Sedimentation/Turbidity Present in Water Column ☐
Floating/Aquatic Vegetation % Surface Coverage: <1 ☐ 1-25% ☐ 26-50% ☐ 51-75% ☐ 76-100% ☐

Water Quality Samples Taken: ☐ **Water Quality Field Parameters:** ☐ Profiling: ☐

Water Quality Field Parameters

Time: _____ **Temp.(°C):** _____ **pH:** _____ **SpCond(µhmos/cm):** _____

D.O.: _____ **D.O. %:** _____ **Salinity:** _____ **Depth (m):** _____ **Secchi (in):** _____

InSitu Probe S/N: _____ **Surveyor 4a S/N:** _____

Continuous Monitor Deployed: ☐ Continuous Monitor S/N: _____

Continuous Monitor Retrieved: ☐ Continuous Monitor Deployment Depth (m): _____

Flow Measurement: ☐ Type of Measurement: Wading ☐ Bridge Board ☐ Boat Board ☐

AquaCalc File Name: _____ AquaCalc S/N: _____

Tapedown 2: _____ Staff Gauge 2: _____ Gauge Height 2: _____

Flow Estimated: ☐ Using Discharge Equipment: ☐
Type: Wading ☐ Bridge Board ☐ Boat Board ☐
Drogue Estimate: ☐ Dye Estimate: ☐

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: ☐ Type of Measurement Manual: ☐ Fathometer ☐

Cross Section File Name: _____ Fathometer S/N: _____

GPS Measurement: ☒ GPS SSF File Name: SB01

Site GPS: ☒ Cross Section GPS: ☐ GPS Unit: 6

Photos Taken: ☐ Picture File #s: _____

Camera: _____

† All work is done within 100 yard radius of Site unless otherwise noted in Data Plan

Tapedown Established: ☐ Tapedown Location: _____

Benchmark Established: ☐ Benchmark Location: _____

Survey Equipment Used: ☐

Time of Travel Measurement: ☐ Type of Site: Injection ☐ Collection ☐

Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: ☐ Man Altered Waterbody: ☒

Man-Made Waterbody: ☐

Stream Dry/Intermittent: ☒

Stream Bottom: Sandy ☐ Clay ☐ Gravel ☐ Hard Clay ☐ Soft Silt ☐

Sand/Silt ☐ Rock/Gravel/Silt ☐ Concrete ☐

Control Structure Present: ☐ Location: _____

Type: Man Made Dam ☐ Flow Regulation Device ☐ Beaver Dam ☐ Log Jam ☐

Land Use: Agriculture ☐ Forestry ☐ Municipal ☐ Industrial ☐ Field/Pasture ☒ Wetland ☐

Percent Tree Canopy Cover 0-25% ☐ 26-50% ☒ 51-75% ☐ 76-100% ☐

Recon Information:

Discharge Measurement: Wading ☐ Bridge Board ☐ Boat Board ☐

Measurement Location: _____

Cross Section Location: _____

Continuous Monitor Deployment: _____

Continuous Monitor Location: _____

Boat Accessible: ☐ Nearest Launch: _____

Bridge ☐ **Bridge Safe:** ☐ Bridge Width: _____ Bridge Height: _____

Profiling Measurements:

Time:	_____	Temp.(°C):	_____	pH:	_____	Spcond(µhmos/cm):	_____
D.O.:	_____	D.O. %:	_____	Salinity:	_____	Depth (m):	_____
Time:	_____	Temp.(°C):	_____	pH:	_____	Spcond(µhmos/cm):	_____
D.O.:	_____	D.O. %:	_____	Salinity:	_____	Depth (m):	_____
Time:	_____	Temp.(°C):	_____	pH:	_____	Spcond(µhmos/cm):	_____
D.O.:	_____	D.O. %:	_____	Salinity:	_____	Depth (m):	_____

Comments: Stream not flowing, water pooled. Did not deploy monitor.

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≅ 0.15 m	20 ≅ 68	25 ≅ 77
1.0 ft ≅ 0.30 m	21 ≅ 69.8	26 ≅ 78.8
1.5 ft ≅ 0.45 m	22 ≅ 71.6	27 ≅ 80.6
2.0 ft ≅ 0.60 m	23 ≅ 73.4	28 ≅ 82.4
2.5 ft ≅ 0.75 m	24 ≅ 75.2	29 ≅ 84.2

Field Site Survey.doc
Revision 3.0
Revised 11/8/04

Site Information

Site #: NBB01 Subsegment: 100605 Date: 8-17-05 Time: 0900hrs

Waterbody: Na Bonchasse Bayou

Tapedown 1: _____ Staff Gauge 1: _____ Gauge Height 1: _____

Site Location†: Off of Bradshaw Rd

Personnel: Schwartz, Jones, ~~[illegible]~~ Butler

Type of Work: Recon ☐ Data Collection ☑

Weather Conditions:
- Clear ☑
- Drizzle/Light Rain ☐
- Showers ☐

Cloud Cover:
- 0 –10% ☑
- 11 – 40% ☐
- 41 – 70% ☐
- 71 – 100% ☐

Temperature (°F):
- Hot >85° ☐
- Warm > 75° ☑
- Mild > 65° ☐
- Cool > 60° ☐
- Cold < 60° ☐

Wind (mph):
- <1 ☐
- 1-5 ☑
- 6-10 ☐
- 11-15 ☐
- >16 ☐

Wind Direction:
NW ☑ N ☐ NE ☐
SW ☐ S ☐ SE ☐
E ☐ W ☐
Variable ☐

Stream Characteristics: Flowing: ☐ Measurable Flow: ☐
Flow Direction Upstream ☐ Downstream ☐ Tidally Influenced: ☐
Wind Influence: ☐ Wind Influence Direction: Upstream ☐ Downstream ☐
Algae Present ☐ Sedimentation/Turbidity Present in Water Column ☐
Floating/Aquatic Vegetation % Surface Coverage: <1 ☐ 1-25% ☐ 26-50% ☐ 51-75% ☐ 76-100% ☐

Water Quality Samples Taken: ☐ **Water Quality Field Parameters:** ☐ Profiling: ☐

Water Quality Field Parameters

Time: _____ **Temp.(°C):** _____ **pH:** _____ **SpCond(µhmos/cm):** _____

D.O.: _____ **D.O. %:** _____ **Salinity:** _____ **Depth (m):** _____ **Secchi (in):** _____

InSitu Probe S/N: _____ **Surveyor 4a S/N:** _____

Continuous Monitor Deployed: ☐ Continuous Monitor S/N: _____

Continuous Monitor Retrieved: ☐ Continuous Monitor Deployment Depth (m): _____

Flow Measurement: ☐ Type of Measurement: Wading ☐ Bridge Board ☐ Boat Board ☐

AquaCalc File Name: _____ AquaCalc S/N: _____

Tapedown 2: _____ Staff Gauge 2: _____ Gauge Height 2: _____

Flow Estimated: ☐ Using Discharge Equipment: ☐
Type: Wading ☐ Bridge Board ☐ Boat Board ☐
Drogue Estimate: ☐ Dye Estimate: ☐

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: ☐ Type of Measurement Manual: ☐ Fathometer ☐

Cross Section File Name: _____ Fathometer S/N: _____

GPS Measurement: ☐ GPS SSF File Name: _____

Site GPS: ☐ Cross Section GPS: ☐ GPS Unit: _____

Photos Taken: ☐ Picture File #s: _____

Camera: _____

†...

Tapedown Established: ☐ Tapedown Location: _____

Benchmark Established: ☐ Benchmark Location: _____
Survey Equipment Used: ☐

Time of Travel Measurement: ☐ Type of Site: Injection ☐ Collection ☐
Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: ☐ Man Altered Waterbody: ☐
Man-Made Waterbody: ☐
Stream Dry/Intermittent: ☐
Stream Bottom: Sandy ☐ Clay ☐ Gravel ☐ Hard Clay ☐ Soft Silt ☐
Sand/Silt ☐ Rock/Gravel/Silt ☐ Concrete ☐
Control Structure Present: ☐ Location: _____
Type: Man Made Dam ☐ Flow Regulation Device ☐ Beaver Dam ☐ Log Jam ☐
Land Use: Agriculture ☐ Forestry ☐ Municipal ☐ Industrial ☐ Field/Pasture ☐ Wetland ☐
Percent Tree Canopy Cover 0-25% ☐ 26-50% ☐ 51-75% ☐ 76-100% ☐

Recon Information:
Discharge Measurement: Wading ☐ Bridge Board ☐ Boat Board ☐
Measurement Location: _____
Cross Section Location: _____
Continuous Monitor Deployment: _____
Continuous Monitor Location: _____

Boat Accessible: ☐ Nearest Launch: _____
Bridge ☐ **Bridge Safe:** ☐ Bridge Width: _____ Bridge Height: _____

Profiling Measurements:

Time:		Temp.(°C):		pH:		Spcond(µhmos/cm):	
D.O.:		D.O. %:		Salinity:		Depth (m):	
Time:		Temp.(°C):		pH:		Spcond(µhmos/cm):	
D.O.:		D.O. %:		Salinity:		Depth (m):	
Time:		Temp.(°C):		pH:		Spcond(µhmos/cm):	
D.O.:		D.O. %:		Salinity:		Depth (m):	

Comments: ~~It~~ Survey crew was unable to get access to site.

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≅ 0.15 m	20 ≅ 68	25 ≅ 77
1.0 ft ≅ 0.30 m	21 ≅ 69.8	26 ≅ 78.8
1.5 ft ≅ 0.45 m	22 ≅ 71.6	27 ≅ 80.6
2.0 ft ≅ 0.60 m	23 ≅ 73.4	28 ≅ 82.4
2.5 ft ≅ 0.75 m	24 ≅ 75.2	29 ≅ 84.2

Field Site Survey.doc
Revision 3.0
Revised 11/8/04

Site Information

Site #: NBB02 Subsegment: 100605 Date: 08/16/05 Time: 1100hrs.

Waterbody: Na Bonchasse Bayou

Tapedown 1: _____ Staff Gauge 1: _____ Gauge Height 1: _____

Site Location†: @ HWY 175 Downstream of Bridge

Personnel: Savant, Griffi, Reed

Type of Work: Recon ☐ Data Collection ☒

Weather Conditions:
- Clear ☒
- Drizzle/Light Rain ☐
- Showers ☐

Cloud Cover:
- 0 –10% ☒
- 11 – 40% ☐
- 41 – 70% ☐
- 71 – 100% ☐

Temperature (°F):
- Hot >85° ☒
- Warm > 75° ☐
- Mild > 65° ☐
- Cool > 60° ☐
- Cold < 60° ☐

Wind (mph):
- <1 ☒
- 1-5 ☐
- 6-10 ☐
- 11-15 ☐
- >16 ☐

Wind Direction:
- NW ☐ N ☐ NE ☐
- SW ☐ S ☐ SE ☐
- E ☐ W ☐
- Variable ☒

Stream Characteristics: Flowing: ☒ Measurable Flow: ☒
- Flow Direction Upstream ☐ Downstream ☒ Tidally Influenced: ☐
- Wind Influence: ☐ Wind Influence Direction: Upstream ☐ Downstream ☐
- Algae Present ☐ Sedimentation/Turbidity Present in Water Column ☐
- Floating/Aquatic Vegetation % Surface Coverage: <1 ☑ 1-25% ☐ 26-50% ☐ 51-75% ☐ 76-100% ☐

Water Quality Samples Taken: ☐ **Water Quality Field Parameters:** ☐ Profiling: ☐

Water Quality Field Parameters

Time: _____ **Temp.(°C):** _____ **pH:** _____ **SpCond(µhmos/cm):** _____

D.O.: _____ **D.O. %:** _____ **Salinity:** _____ **Depth (m):** _____ **Secchi (in):** _____

InSitu Probe S/N: _____ **Surveyor 4a S/N:** _____

Continuous Monitor Deployed: ☒ Continuous Monitor S/N: 40811

Continuous Monitor Retrieved: ☐ Continuous Monitor Deployment Depth (m): 0.5 m

Flow Measurement: ☒ Type of Measurement: Wading ☒ Bridge Board ☐ Boat Board ☐

AquaCalc File Name: ~~NBB02~~ AquaCalc S/N: ~~Flow Tracker 6A~~

Tapedown 2: _____ Staff Gauge 2: _____ Gauge Height 2: _____

Flow Estimated: ☐ Using Discharge Equipment: ☐
- Type: Wading ☐ Bridge Board ☐ Boat Board ☐
- Drogue Estimate: ☐ Dye Estimate: ☐

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: ☐ Type of Measurement Manual: ☐ Fathometer ☐

Cross Section File Name: _____ Fathometer S/N: _____

GPS Measurement: ☐ GPS SSF File Name: _____

Site GPS: ☐ Cross Section GPS: ☐ GPS Unit: _____

Photos Taken: ☐ Picture File #s: _____

Camera: _____

† All work is done within 100 yard radius of Site unless otherwise noted in Data Disc

Tapedown Established: ☐ Tapedown Location: _____

Benchmark Established: ☐ Benchmark Location: _____

Survey Equipment Used: ☐

Time of Travel Measurement: ☐ Type of Site: Injection ☐ Collection ☐

Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: ☒ Man Altered Waterbody: ☐

Man-Made Waterbody: ☐

Stream Dry/Intermittent: ☐

Stream Bottom: Sandy ☒ Clay ☐ Gravel ☒ Hard Clay ☐ Soft Silt ☐

Sand/Silt ☐ Rock/Gravel/Silt ☐ Concrete ☐

Control Structure Present: ☐ Location: _____

Type: Man Made Dam ☐ Flow Regulation Device ☐ Beaver Dam ☐ Log Jam ☐

Land Use: Agriculture ☒ Forestry ☒ Municipal ☐ Industrial ☐ Field/Pasture ☒ Wetland ☐

Percent Tree Canopy Cover 0-25% ☐ 26-50% ☐ 51-75% ☒ 76-100% ☐

Recon Information:

Discharge Measurement: Wading ☐ Bridge Board ☐ Boat Board ☐

Measurement Location: _____

Cross Section Location: _____

Continuous Monitor Deployment: _____

Continuous Monitor Location: _____

Boat Accessible: ☐ Nearest Launch: _____

Bridge ☐ **Bridge Safe:** ☐ Bridge Width: _____ Bridge Height: _____

Profiling Measurements:

Time:	_____	Temp.(°C):	_____	pH:	_____	Spcond(µhmos/cm):	_____
D.O.:	_____	D.O. %:	_____	Salinity:	_____	Depth (m):	_____
Time:	_____	Temp.(°C):	_____	pH:	_____	Spcond(µhmos/cm):	_____
D.O.:	_____	D.O. %:	_____	Salinity:	_____	Depth (m):	_____
Time:	_____	Temp.(°C):	_____	pH:	_____	Spcond(µhmos/cm):	_____
D.O.:	_____	D.O. %:	_____	Salinity:	_____	Depth (m):	_____

Comments: _____

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≅ 0.15 m	20 ≅ 68	25 ≅ 77
1.0 ft ≅ 0.30 m	21 ≅ 69.8	26 ≅ 78.8
1.5 ft ≅ 0.45 m	22 ≅ 71.6	27 ≅ 80.6
2.0 ft ≅ 0.60 m	23 ≅ 73.4	28 ≅ 82.4
2.5 ft ≅ 0.75 m	24 ≅ 75.2	29 ≅ 84.2

Field Site Survey.doc
Revision 3.0
Revised 11/8/04

Site Information

Site #: NBB02 Subsegment: 100605 Date: 8/17/05 Time: 1015 hrs

Waterbody: Na Benchasse Bayou

Tapedown 1: _____ Staff Gauge 1: _____ Gauge Height 1: _____

Site Location†: @ Hwy 175

Personnel: Griffith, Savant, Reed

Type of Work: Recon ☐ Data Collection ☑

Weather Conditions:
- Clear ☑
- Drizzle/Light Rain ☐
- Showers ☐

Cloud Cover:
- 0 –10% ☑
- 11 – 40% ☐
- 41 – 70% ☐
- 71 – 100% ☐

Temperature (°F):
- Hot >85° ☑
- Warm > 75° ☐
- Mild > 65° ☐
- Cool > 60° ☐
- Cold < 60° ☐

Wind (mph):
- <1 ☑
- 1-5 ☐
- 6-10 ☐
- 11-15 ☐
- >16 ☐

Wind Direction:
NW ☐ N ☐ NE ☐
SW ☐ S ☐ SE ☐
E ☐ W ☐
Variable ☑

Stream Characteristics: Flowing: ☑ Measurable Flow: ☑
Flow Direction Upstream ☐ Downstream ☑ Tidally Influenced: ☐
Wind Influence: ☐ Wind Influence Direction: Upstream ☐ Downstream ☐
Algae Present ☐ Sedimentation/Turbidity Present in Water Column ☐
Floating/Aquatic Vegetation % Surface Coverage: <1 ☐ 1-25% ☑ 26-50% ☐ 51-75% ☐ 76-100% ☐

Water Quality Samples Taken: ☑ Water Quality Field Parameters: ☑ Profiling: ☐

IBV: 7.2
IBatt: 11.0

Water Quality Field Parameters

Time: 1015 Temp.(°C): 25.12 pH: 6.93 SpCond(µhmos/cm): 475.1

D.O.: 4.53 D.O. %: 55.0 Salinity: 0.24 Depth (m): 0.3 Secchi (in): 12

InSitu Probe S/N: 4081 0 Surveyor 4a S/N: S2699

Continuous Monitor Deployed: ☐ Continuous Monitor S/N: _____

Continuous Monitor Retrieved: ☐ Continuous Monitor Deployment Depth (m): _____

Flow Measurement: ☑ Type of Measurement: Wading ☑ Bridge Board ☐ Boat Board ☐

AquaCalc File Name: NBB02 AquaCalc S/N: Flow Tracker 6A

Tapedown 2: _____ Staff Gauge 2: _____ Gauge Height 2: _____

Flow Estimated: ☐ Using Discharge Equipment: ☐
Type: Wading ☐ Bridge Board ☐ Boat Board ☐
Drogue Estimate: ☐ Dye Estimate: ☐

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: ☐ Type of Measurement Manual: ☐ Fathometer ☐

Cross Section File Name: _____ Fathometer S/N: _____

GPS Measurement: ☒ GPS SSF File Name: NBB02

Site GPS: ☒ Cross Section GPS: ☐ GPS Unit: 6

Photos Taken: ☐ Picture File #s: _____

Camera: _____

† All work is done within 100 yard radius of Site unless otherwise noted in Data Plan

Tapedown Established: ☐ Tapedown Location: _____

Benchmark Established: ☐ Benchmark Location: _____
Survey Equipment Used: ☐

Time of Travel Measurement: ☐ Type of Site: Injection ☐ Collection ☐
Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: ☑ Man Altered Waterbody: ☐
Man-Made Waterbody: ☐
Stream Dry/Intermittent: ☐
Stream Bottom: Sandy ☑ Clay ☐ Gravel ☑ Hard Clay ☐ Soft Silt ☐
Sand/Silt ☐ Rock/Gravel/Silt ☐ Concrete ☐
Control Structure Present: ☐ Location: _____
Type: Man Made Dam ☐ Flow Regulation Device ☐ Beaver Dam ☐ Log Jam ☐
Land Use: Agriculture ☐ Forestry ☑ Municipal ☐ Industrial ☐ Field/Pasture ☑ Wetland ☐
Percent Tree Canopy Cover 0-25% ☐ 26-50% ☐ 51-75% ☐ 76-100% ☑

Recon Information:
Discharge Measurement: Wading ☐ Bridge Board ☐ Boat Board ☐
Measurement Location: _____
Cross Section Location: _____
Continuous Monitor Deployment: _____
Continuous Monitor Location: _____

Boat Accessible: ☐ Nearest Launch: _____
Bridge ☐ **Bridge Safe:** ☐ Bridge Width: _____ Bridge Height: _____

Profiling Measurements:

Time:		Temp.(°C):		pH:		Spcond(µhmos/cm):	
D.O.:		D.O. %:		Salinity:		Depth (m):	
Time:		Temp.(°C):		pH:		Spcond(µhmos/cm):	
D.O.:		D.O. %:		Salinity:		Depth (m):	
Time:		Temp.(°C):		pH:		Spcond(µhmos/cm):	
D.O.:		D.O. %:		Salinity:		Depth (m):	

Comments: _____

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≅ 0.15 m	20 ≅ 68	25 ≅ 77
1.0 ft ≅ 0.30 m	21 ≅ 69.8	26 ≅ 78.8
1.5 ft ≅ 0.45 m	22 ≅ 71.6	27 ≅ 80.6
2.0 ft ≅ 0.60 m	23 ≅ 73.4	28 ≅ 82.4
2.5 ft ≅ 0.75 m	24 ≅ 75.2	29 ≅ 84.2

Field Site Survey.doc
Revision 3.0
Revised 11/8/04

Site Information

Site #: NB002 Subsegment: 100605 Date: 8/18/05 Time: 11:15

Waterbody: Na Bonchasse Bayou

Tapedown 1: _____ Staff Gauge 1: _____ Gauge Height 1: _____

Site Location†: @ Hwy 175 Downstream of Bridge

Personnel: Jones, Brignac

Type of Work: Recon ☐ Data Collection ☑

Weather Conditions:
- Clear ☑
- Drizzle/Light Rain ☐
- Showers ☐

Cloud Cover:
- 0 –10% ☐
- 11 – 40% ☑
- 41 – 70% ☐
- 71 – 100% ☐

Temperature (°F):
- Hot >85° ☑
- Warm > 75° ☐
- Mild > 65° ☐
- Cool > 60° ☐
- Cold < 60° ☐

Wind (mph):
- <1 ☑
- 1-5 ☐
- 6-10 ☐
- 11-15 ☐
- >16 ☐

Wind Direction:
- NW ☐ N ☐ NE ☐
- SW ☐ S ☐ SE ☐
- E ☐ W ☐
- Variable ☑

Stream Characteristics: Flowing: ☑ Measurable Flow: ☑
- Flow Direction Upstream ☐ Downstream ☑ Tidally Influenced: ☐
- Wind Influence: ☐ Wind Influence Direction: Upstream ☐ Downstream ☐
- Algae Present ☐ Sedimentation/Turbidity Present in Water Column ☐
- Floating/Aquatic Vegetation % Surface Coverage: <1 ☑ 1-25% ☐ 26-50% ☐ 51-75% ☐ 76-100% ☐

Water Quality Samples Taken: ☐ **Water Quality Field Parameters:** ☐ Profiling: ☐

Water Quality Field Parameters

Time: _____ **Temp.(°C):** _____ **pH:** _____ **SpCond(µhmos/cm):** _____

D.O.: _____ **D.O. %:** _____ **Salinity:** _____ **Depth (m):** _____ **Secchi (in):** _____

InSitu Probe S/N: _____ **Surveyor 4a S/N:** _____

Continuous Monitor Deployed: ☐ Continuous Monitor S/N: 40811

Continuous Monitor Retrieved: ☒ Continuous Monitor Deployment Depth (m): _____

Flow Measurement: ☐ Type of Measurement: Wading ☐ Bridge Board ☐ Boat Board ☐

AquaCalc File Name: _____ AquaCalc S/N: _____

Tapedown 2: _____ Staff Gauge 2: _____ Gauge Height 2: _____

Flow Estimated: ☐ Using Discharge Equipment: ☐
- Type: Wading ☐ Bridge Board ☐ Boat Board ☐
- Drogue Estimate: ☐ Dye Estimate: ☐

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: ☐ Type of Measurement Manual: ☐ Fathometer ☐

Cross Section File Name: _____ Fathometer S/N: _____

GPS Measurement: ☐ GPS SSF File Name: _____

Site GPS: ☐ Cross Section GPS: ☐ GPS Unit: _____

Photos Taken: ☐ Picture File #s: _____

Camera: _____

† All work is done within 100 yard radius of Site unless otherwise noted in Data Plan

Site Information

Site #: NB02 Subsegment: 100605 Date: 8/18/05 Time: 11:15

Waterbody: Na Bonchasse Bayou

Tapedown 1: _____ Staff Gauge 1: _____ Gauge Height 1: _____

Site Location†: @ Hwy 175 Downstream of Bridge

Personnel: Jones, Brignac

Type of Work: Recon ☐ Data Collection ☑

Weather Conditions:
- Clear ☑
- Drizzle/Light Rain ☐
- Showers ☐

Cloud Cover:
- 0 –10% ☐
- 11 – 40% ☑
- 41 – 70% ☐
- 71 – 100% ☐

Temperature (°F):
- Hot >85° ☑
- Warm > 75° ☐
- Mild > 65° ☐
- Cool > 60° ☐
- Cold < 60° ☐

Wind (mph):
- <1 ☑
- 1-5 ☐
- 6-10 ☐
- 11-15 ☐
- >16 ☐

Wind Direction:
- NW ☐ N ☐ NE ☐
- SW ☐ S ☐ SE ☐
- E ☐ W ☐
- Variable ☑

Stream Characteristics: Flowing: ☑ Measurable Flow: ☑
- Flow Direction Upstream ☐ Downstream ☑ Tidally Influenced: ☐
- Wind Influence: ☐ Wind Influence Direction: Upstream ☐ Downstream ☐
- Algae Present ☐ Sedimentation/Turbidity Present in Water Column ☐
- Floating/Aquatic Vegetation % Surface Coverage: <1 ☑ 1-25% ☐ 26-50% ☐ 51-75% ☐ 76-100% ☐

Water Quality Samples Taken: ☐ **Water Quality Field Parameters:** ☐ Profiling: ☐

Water Quality Field Parameters

Time: _____ **Temp.(°C):** _____ **pH:** _____ **SpCond(µhmos/cm):** _____

D.O.: _____ **D.O. %:** _____ **Salinity:** _____ **Depth (m):** _____ **Secchi (in):** _____

InSitu Probe S/N: _____ **Surveyor 4a S/N:** _____

Continuous Monitor Deployed: ☐ Continuous Monitor S/N: 40811

Continuous Monitor Retrieved: ☒ Continuous Monitor Deployment Depth (m): _____

Flow Measurement: ☐ Type of Measurement: Wading ☐ Bridge Board ☐ Boat Board ☐

AquaCalc File Name: _____ AquaCalc S/N: _____

Tapedown 2: _____ Staff Gauge 2: _____ Gauge Height 2: _____

Flow Estimated: ☐ Using Discharge Equipment: ☐
- Type: Wading ☐ Bridge Board ☐ Boat Board ☐
- Drogue Estimate: ☐ Dye Estimate: ☐

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: ☐ Type of Measurement Manual: ☐ Fathometer ☐

Cross Section File Name: _____ Fathometer S/N: _____

GPS Measurement: ☐ GPS SSF File Name: _____

Site GPS: ☐ Cross Section GPS: ☐ GPS Unit: _____

Photos Taken: ☐ Picture File #s: _____

Camera: _____

† All work is done within 100 yard radius of Site unless otherwise noted in Data Plan

Tapedown Established: ☐ Tapedown Location: _____

Benchmark Established: ☐ Benchmark Location: _____

Survey Equipment Used: ☐

Time of Travel Measurement: ☐ Type of Site: Injection ☐ Collection ☐

Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: ☑ Man Altered Waterbody: ☐

Man-Made Waterbody: ☐

Stream Dry/Intermittent: ☐

Stream Bottom: Sandy ☑ Clay ☐ Gravel ☑ Hard Clay ☐ Soft Silt ☐

Sand/Silt ☐ Rock/Gravel/Silt ☐ Concrete ☐

Control Structure Present: ☐ Location: _____

Type: Man Made Dam ☐ Flow Regulation Device ☐ Beaver Dam ☐ Log Jam ☐

Land Use: Agriculture ☑ Forestry ☑ Municipal ☐ Industrial ☐ Field/Pasture ☑ Wetland ☐

Percent Tree Canopy Cover 0-25% ☐ 26-50% ☐ 51-75% ☑ 76-100% ☐

Recon Information:

Discharge Measurement: Wading ☐ Bridge Board ☐ Boat Board ☐

Measurement Location: _____

Cross Section Location: _____

Continuous Monitor Deployment: _____

Continuous Monitor Location: _____

Boat Accessible: ☐ Nearest Launch: _____

Bridge ☐ **Bridge Safe:** ☐ Bridge Width: _____ Bridge Height: _____

Profiling Measurements:

Time:	_____	Temp.(°C):	_____	pH:	_____	Spcond(µhmos/cm):	_____
D.O.:	_____	D.O. %:	_____	Salinity:	_____	Depth (m):	_____
Time:	_____	Temp.(°C):	_____	pH:	_____	Spcond(µhmos/cm):	_____
D.O.:	_____	D.O. %:	_____	Salinity:	_____	Depth (m):	_____
Time:	_____	Temp.(°C):	_____	pH:	_____	Spcond(µhmos/cm):	_____
D.O.:	_____	D.O. %:	_____	Salinity:	_____	Depth (m):	_____

Comments: _____

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≅ 0.15 m	20 ≅ 68	25 ≅ 77
1.0 ft ≅ 0.30 m	21 ≅ 69.8	26 ≅ 78.8
1.5 ft ≅ 0.45 m	22 ≅ 71.6	27 ≅ 80.6
2.0 ft ≅ 0.60 m	23 ≅ 73.4	28 ≅ 82.4
2.5 ft ≅ 0.75 m	24 ≅ 75.2	29 ≅ 84.2

Field Site Survey.doc
Revision 3.0
Revised 11/8/04

Site Information

Site #: NBB03a Subsegment: 100605 Date: 8/16/05 Time: 1030 hrs
Waterbody: Na Bonchasse Bayou
Tapedown 1: _____ Staff Gauge 1: _____ Gauge Height 1: _____
Site Location†: Upstream of Mansfield STP outfall on George Hunt Rd.
Personnel: Griffith, Savant, Reid

Type of Work: Recon ☐ Data Collection ☑

Weather Conditions:
Clear ☑
Drizzle/Light Rain ☐
Showers ☐

Cloud Cover:
0 –10% ☑
11 – 40% ☐
41 – 70% ☐
71 – 100% ☐

Temperature (°F):
Hot >85° ☑
Warm > 75° ☐
Mild > 65° ☐
Cool > 60° ☐
Cold < 60° ☐

Wind (mph):
<1 ☑
1-5 ☐
6-10 ☐
11-15 ☐
>16 ☐

Wind Direction:
NW ☐ N ☐ NE ☐
SW ☐ S ☐ SE ☐
E ☐ W ☐
Variable ☑

Stream Characteristics: Flowing: ☑ Measurable Flow: ☐
Flow Direction Upstream ☐ Downstream ☑ Tidally Influenced: ☐
Wind Influence: ☐ Wind Influence Direction: Upstream ☐ Downstream ☐
Algae Present ☐ Sedimentation/Turbidity Present in Water Column ☐
Floating/Aquatic Vegetation % Surface Coverage: <1 ☐ 1-25% ☑ 26-50% ☐ 51-75% ☐ 76-100% ☐

Water Quality Samples Taken: ☐ **Water Quality Field Parameters:** ☐ Profiling: ☐

Water Quality Field Parameters

Time: _____ **Temp.(°C):** _____ **pH:** _____ **SpCond(µhmos/cm):** _____
D.O.: _____ **D.O. %:** _____ **Salinity:** _____ **Depth (m):** _____ **Secchi (in):** _____
InSitu Probe S/N: _____ **Surveyor 4a S/N:** _____

Continuous Monitor Deployed: ☑ Continuous Monitor S/N: ~~[illegible]~~ 41499
Continuous Monitor Retrieved: ☐ Continuous Monitor Deployment Depth (m): 0.5

Flow Measurement: ☐ Type of Measurement: Wading ☐ Bridge Board ☐ Boat Board ☐

AquaCalc File Name: _____ AquaCalc S/N: _____
Tapedown 2: _____ Staff Gauge 2: _____ Gauge Height 2: _____

Flow Estimated: ☐ Using Discharge Equipment: ☐
Type: Wading ☐ Bridge Board ☐ Boat Board ☐
Drogue Estimate: ☐ Dye Estimate: ☐

Right Descending Bank Distance (ft): _____ Time (s): _____
Mid Stream Distance (ft): _____ Time (s): _____
Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: ☐ Type of Measurement Manual: ☐ Fathometer ☐
Cross Section File Name: _____ Fathometer S/N: _____

GPS Measurement: ☐ GPS SSF File Name: _____
Site GPS: ☐ Cross Section GPS: ☐ GPS Unit: _____

Photos Taken: ☐ Picture File #s: _____
Camera: _____

† All work is done within 100 yard radius of Site unless otherwise noted in Data Plan

Tapedown Established: ☐ Tapedown Location: _____

Benchmark Established: ☐ Benchmark Location: _____

Survey Equipment Used: ☐

Time of Travel Measurement: ☐ Type of Site: Injection ☐ Collection ☐

Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: ☐ Man Altered Waterbody: ☑

Man-Made Waterbody: ☐

Stream Dry/Intermittent: ☐

Stream Bottom: Sandy ☐ Clay ☐ Gravel ☐ Hard Clay ☐ Soft Silt ☐

Sand/Silt ☐ Rock/Gravel/Silt ☑ Concrete ☐

Control Structure Present: ☐ Location: _____

Type: Man Made Dam ☐ Flow Regulation Device ☐ Beaver Dam ☐ Log Jam ☐

Land Use: Agriculture ☐ Forestry ☑ Municipal ☑ Industrial ☐ Field/Pasture ☐ Wetland ☐

Percent Tree Canopy Cover 0-25% ☐ 26-50% ☐ 51-75% ☐ 76-100% ☑

Recon Information:

Discharge Measurement: Wading ☐ Bridge Board ☐ Boat Board ☐

Measurement Location: _____

Cross Section Location: _____

Continuous Monitor Deployment: _____

Continuous Monitor Location: _____

Boat Accessible: ☐ Nearest Launch: _____

Bridge ☐ **Bridge Safe:** ☐ Bridge Width: _____ Bridge Height: _____

Profiling Measurements:

Time:	_____	Temp.(°C):	_____	pH:	_____	Spcond(µhmos/cm):	_____
D.O.:	_____	D.O. %:	_____	Salinity:	_____	Depth (m):	_____
Time:	_____	Temp.(°C):	_____	pH:	_____	Spcond(µhmos/cm):	_____
D.O.:	_____	D.O. %:	_____	Salinity:	_____	Depth (m):	_____
Time:	_____	Temp.(°C):	_____	pH:	_____	Spcond(µhmos/cm):	_____
D.O.:	_____	D.O. %:	_____	Salinity:	_____	Depth (m):	_____

Comments: _____

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≅ 0.15 m	20 ≅ 68	25 ≅ 77
1.0 ft ≅ 0.30 m	21 ≅ 69.8	26 ≅ 78.8
1.5 ft ≅ 0.45 m	22 ≅ 71.6	27 ≅ 80.6
2.0 ft ≅ 0.60 m	23 ≅ 73.4	28 ≅ 82.4
2.5 ft ≅ 0.75 m	24 ≅ 75.2	29 ≅ 84.2

Field Site Survey.doc
Revision 3.0
Revised 11/8/04

Site Information 8/17/05

Site #: NBB03a Subsegment: 100605 Date: ~~[illegible]~~ Time: 1130 hrs

Waterbody: Na Bonfasse Bayou

Tapedown 1: _____ Staff Gauge 1: _____ Gauge Height 1: _____

Site Location†: @ George Hunt Rd upstream of Mansfield STP outfall

Personnel: Griffith, Savant, Reed

Type of Work: Recon ☐ Data Collection ☑

Weather Conditions:
- Clear ☑
- Drizzle/Light Rain ☐
- Showers ☐

Cloud Cover:
- 0 –10% ☐
- 11 – 40% ☑
- 41 – 70% ☐
- 71 – 100% ☐

Temperature (°F):
- Hot >85° ☑
- Warm > 75° ☐
- Mild > 65° ☐
- Cool > 60° ☐
- Cold < 60° ☐

Wind (mph):
- <1 ☐
- 1-5 ☑
- 6-10 ☐
- 11-15 ☐
- >16 ☐

Wind Direction:
- NW ☐ N ☐ NE ☐
- SW ☐ S ☐ SE ☐
- E ☐ W ☐
- Variable ☑

Stream Characteristics: Flowing: ☑ Measurable Flow: ☐
- Flow Direction Upstream ☐ Downstream ☐ Tidally Influenced: ☐
- Wind Influence: ☐ Wind Influence Direction: Upstream ☐ Downstream ☐
- Algae Present ☐ Sedimentation/Turbidity Present in Water Column ☐
- Floating/Aquatic Vegetation % Surface Coverage: <1 ☐ 1-25% ☑ 26-50% ☐ 51-75% ☐ 76-100% ☐

Water Quality Samples Taken: ☑ **Water Quality Field Parameters:** ☑ Profiling: ☐

IBH: 7.2
IBatt: 10.9

Water Quality Field Parameters

Time: 1130 Temp.(°C): 24.22 pH: 6.92 SpCond(µhmos/cm): 344.4

D.O.: 2.25 D.O. %: 26.9 Salinity: 0.17 Depth (m): 1 Secchi (in): 18

InSitu Probe S/N: 40810 Surveyor 4a S/N: S2699

Continuous Monitor Deployed: ☐ Continuous Monitor S/N: _____

Continuous Monitor Retrieved: ☐ Continuous Monitor Deployment Depth (m): _____

Flow Measurement: ☐ Type of Measurement: Wading ☐ Bridge Board ☐ Boat Board ☐

AquaCalc File Name: _____ AquaCalc S/N: _____

Tapedown 2: _____ Staff Gauge 2: _____ Gauge Height 2: _____

Flow Estimated: ☐ Using Discharge Equipment: ☐
- Type: Wading ☐ Bridge Board ☐ Boat Board ☐
- Drogue Estimate: ☐ Dye Estimate: ☐

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: ☐ Type of Measurement Manual: ☐ Fathometer ☐

Cross Section File Name: _____ Fathometer S/N: _____

GPS Measurement: ☒ GPS SSF File Name: NBB03A

Site GPS: ☒ Cross Section GPS: ☐ GPS Unit: 6

Photos Taken: ☐ Picture File #s: _____

Camera: _____

† All work is done within 100 yard radius of Site unless otherwise noted in Data Plan

Tapedown Established: ☐ Tapedown Location: _____

Benchmark Established: ☐ Benchmark Location: _____

Survey Equipment Used: ☐

Time of Travel Measurement: ☐ Type of Site: Injection ☐ Collection ☐

Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: ☐ Man Altered Waterbody: ☑

Man-Made Waterbody: ☐

Stream Dry/Intermittent: ☐

Stream Bottom: Sandy ☐ Clay ☐ Gravel ☐ Hard Clay ☐ Soft Silt ☐

Sand/Silt ☐ Rock/Gravel/Silt ☑ Concrete ☐

Control Structure Present: ☐ Location: _____

Type: Man Made Dam ☐ Flow Regulation Device ☐ Beaver Dam ☐ Log Jam ☐

Land Use: Agriculture ☐ Forestry ☑ Municipal ☑ Industrial ☐ Field/Pasture ☐ Wetland ☐

Percent Tree Canopy Cover 0-25% ☐ 26-50% ☐ 51-75% ☐ 76-100% ☑

Recon Information:

Discharge Measurement: Wading ☐ Bridge Board ☐ Boat Board ☐

Measurement Location: _____

Cross Section Location: _____

Continuous Monitor Deployment: _____

Continuous Monitor Location: _____

Boat Accessible: ☐ Nearest Launch: _____

Bridge ☐ **Bridge Safe:** ☐ Bridge Width: _____ Bridge Height: _____

Profiling Measurements:

Time:	_____	Temp.(°C):	_____	pH:	_____	Spcond(µhmos/cm):	_____
D.O.:	_____	D.O. %:	_____	Salinity:	_____	Depth (m):	_____
Time:	_____	Temp.(°C):	_____	pH:	_____	Spcond(µhmos/cm):	_____
D.O.:	_____	D.O. %:	_____	Salinity:	_____	Depth (m):	_____
Time:	_____	Temp.(°C):	_____	pH:	_____	Spcond(µhmos/cm):	_____
D.O.:	_____	D.O. %:	_____	Salinity:	_____	Depth (m):	_____

Comments: Stream not flowing; unable to measure

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≅ 0.15 m	20 ≅ 68	25 ≅ 77
1.0 ft ≅ 0.30 m	21 ≅ 69.8	26 ≅ 78.8
1.5 ft ≅ 0.45 m	22 ≅ 71.6	27 ≅ 80.6
2.0 ft ≅ 0.60 m	23 ≅ 73.4	28 ≅ 82.4
2.5 ft ≅ 0.75 m	24 ≅ 75.2	29 ≅ 84.2

Field Site Survey.doc
Revision 3.0
Revised 11/8/04

Site Information

Site #: NBBO 3a Subsegment: 100605 Date: 8/18/05 Time: 10:45

Waterbody: Na Bonchasse Bayou

Tapedown 1: _____ Staff Gauge 1: _____ Gauge Height 1: _____

Site Location†: Upstream of Mansfield STP outfall on G. Hunt Rd.

Personnel: Jones, Brignac

Type of Work: Recon ☐ Data Collection ☑

Weather Conditions:
- Clear ☑
- Drizzle/Light Rain ☐
- Showers ☐

Cloud Cover:
- 0 – 10% ☐
- 11 – 40% ☑
- 41 – 70% ☐
- 71 – 100% ☐

Temperature (°F):
- Hot >85° ☑
- Warm > 75° ☐
- Mild > 65° ☐
- Cool > 60° ☐
- Cold < 60° ☐

Wind (mph):
- <1 ☑
- 1-5 ☐
- 6-10 ☐
- 11-15 ☐
- >16 ☐

Wind Direction:
- NW ☐ N ☐ NE ☐
- SW ☐ S ☐ SE ☐
- E ☐ W ☐
- Variable ☑

Stream Characteristics: Flowing: ☑ Measurable Flow: ☐
- Flow Direction Upstream ☐ Downstream ☑ Tidally influenced: ☐
- Wind Influence: ☐ Wind Influence Direction: Upstream ☐ Downstream ☐
- Algae Present ☐ Sedimentation/Turbidity Present in Water Column ☐
- Floating/Aquatic Vegetation % Surface Coverage: <1 ☐ 1-25% ☑ 26-50% ☐ 51-75% ☐ 76-100% ☐

Water Quality Samples Taken: ☐ **Water Quality Field Parameters:** ☐ Profiling: ☐

Water Quality Field Parameters

Time: _____ **Temp.(°C):** _____ **pH:** _____ **SpCond(µhmos/cm):** _____

D.O.: _____ **D.O. %:** _____ **Salinity:** _____ **Depth (m):** _____ **Secchi (in):** _____

InSitu Probe S/N: _____ **Surveyor 4a S/N:** _____

Continuous Monitor Deployed: ☐ Continuous Monitor S/N: 41499

Continuous Monitor Retrieved: ☑ Continuous Monitor Deployment Depth (m): _____

Flow Measurement: ☐ Type of Measurement: Wading ☐ Bridge Board ☐ Boat Board ☐

AquaCalc File Name: _____ AquaCalc S/N: _____

Tapedown 2: _____ Staff Gauge 2: _____ Gauge Height 2: _____

Flow Estimated: ☐ Using Discharge Equipment: ☐
- Type: Wading ☐ Bridge Board ☐ Boat Board ☐
- Drogue Estimate: ☐ Dye Estimate: ☐

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: ☐ Type of Measurement Manual: ☐ Fathometer ☐

Cross Section File Name: _____ Fathometer S/N: _____

GPS Measurement: ☐ GPS SSF File Name: _____

Site GPS: ☐ Cross Section GPS: ☐ GPS Unit: _____

Photos Taken: ☐ Picture File #s: _____

Camera: _____

† All work is done within 100 yard radius of Site unless otherwise noted in Data File.

Tapedown Established: ☐ Tapedown Location: _____

Benchmark Established: ☐ Benchmark Location: _____

Survey Equipment Used: ☐

Time of Travel Measurement: ☐ Type of Site: Injection ☐ Collection ☐

Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: ☐ Man Altered Waterbody: ☑

Man-Made Waterbody: ☐

Stream Dry/Intermittent: ☐

Stream Bottom: Sandy ☐ Clay ☐ Gravel ☑ Hard Clay ☐ Soft Silt ☐

Sand/Silt ☐ Rock/Gravel/Silt ☑ Concrete ☐

Control Structure Present: ☐ Location: _____

Type: Man Made Dam ☐ Flow Regulation Device ☑ Beaver Dam ☐ Log Jam ☐

Land Use: Agriculture ☐ Forestry ☑ Municipal ☑ Industrial ☐ Field/Pasture ☐ Wetland ☑

Percent Tree Canopy Cover 0-25% ☐ 26-50% ☐ 51-75% ☐ 76-100% ☑

Recon Information:

Discharge Measurement: Wading ☐ Bridge Board ☐ Boat Board ☐

Measurement Location: _____

Cross Section Location: _____

Continuous Monitor Deployment: _____

Continuous Monitor Location: _____

Boat Accessible: ☐ Nearest Launch: _____

Bridge ☐ **Bridge Safe:** ☐ Bridge Width: _____ Bridge Height: _____

Profiling Measurements:

Time:		Temp.(°C):		pH:		Spcond(µhmos/cm):	
D.O.:		D.O. %:		Salinity:		Depth (m):	
Time:		Temp.(°C):		pH:		Spcond(µhmos/cm):	
D.O.:		D.O. %:		Salinity:		Depth (m):	
Time:		Temp.(°C):		pH:		Spcond(µhmos/cm):	
D.O.:		D.O. %:		Salinity:		Depth (m):	

Comments: _____

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≅ 0.15 m	20 ≅ 68	25 ≅ 77
1.0 ft ≅ 0.30 m	21 ≅ 69.8	26 ≅ 78.8
1.5 ft ≅ 0.45 m	22 ≅ 71.6	27 ≅ 80.6
2.0 ft ≅ 0.60 m	23 ≅ 73.4	28 ≅ 82.4
2.5 ft ≅ 0.75 m	24 ≅ 75.2	29 ≅ 84.2

Field Site Survey.doc
Revision 3.0
Revised 11/8/04

Site Information 8/17/05

Site #: NBB03b Subsegment: 100605 Date: ~~[illegible]~~ Time: 1130 hrs

Waterbody: Na Banchasse Rd

Tapedown 1: _____ Staff Gauge 1: _____ Gauge Height 1: _____

Site Location†: @ George Hunt Rd – Mansfield STP outfall

Personnel: Griffith, Savant, Reed

Type of Work: Recon ☐ Data Collection ☑

Weather Conditions:
- Clear ☑
- Drizzle/Light Rain ☐
- Showers ☐

Cloud Cover:
- 0 –10% ☐
- 11 – 40% ☑
- 41 – 70% ☐
- 71 – 100% ☐

Temperature (°F):
- Hot >85° ☑
- Warm > 75° ☐
- Mild > 65° ☐
- Cool > 60° ☐
- Cold < 60° ☐

Wind (mph):
- <1 ☐
- 1-5 ☑
- 6-10 ☐
- 11-15 ☐
- >16 ☐

Wind Direction:
- NW ☐ N ☐ NE ☐
- SW ☐ S ☐ SE ☐
- E ☐ W ☐
- Variable ☑

Stream Characteristics: Flowing: ☑ Measurable Flow: ☐
- Flow Direction Upstream ☐ Downstream ☑ Tidally Influenced: ☐
- Wind Influence: ☐ Wind Influence Direction: Upstream ☐ Downstream ☐
- Algae Present ☐ Sedimentation/Turbidity Present in Water Column ☐
- Floating/Aquatic Vegetation % Surface Coverage: <1 ☐ 1-25% ☑ 26-50% ☐ 51-75% ☐ 76-100% ☐

Water Quality Samples Taken: ☑ **Water Quality Field Parameters:** ☑ Profiling: ☐

IBV: 7.2
IBatt: 10.9

Water Quality Field Parameters

Time: 1130 **Temp.(°C):** 28.28 **pH:** 7.47 **SpCond(µhmos/cm):** 836.3

D.O.: 2.49 **D.O. %:** 32.0 **Salinity:** 0.43 **Depth (m):** 0.1 **Secchi (in):** 1

InSitu Probe S/N: 40810 **Surveyor 4a S/N:** S2699

Continuous Monitor Deployed: ☐ Continuous Monitor S/N: _____

Continuous Monitor Retrieved: ☐ Continuous Monitor Deployment Depth (m): _____

Flow Measurement: ☐ Type of Measurement: Wading ☐ Bridge Board ☐ Boat Board ☐

AquaCalc File Name: _____ AquaCalc S/N: _____

Tapedown 2: _____ Staff Gauge 2: _____ Gauge Height 2: _____

Flow Estimated: ☐ Using Discharge Equipment: ☐
- Type: Wading ☐ Bridge Board ☐ Boat Board ☐
- Drogue Estimate: ☐ Dye Estimate: ☐

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: ☐ Type of Measurement Manual: ☐ Fathometer ☐

Cross Section File Name: _____ Fathometer S/N: _____

GPS Measurement: ☒ GPS SSF File Name: NBB03B

Site GPS: ☒ Cross Section GPS: ☐ GPS Unit: 6

Photos Taken: ☐ Picture File #s: _____

Camera: _____

† All work is done within 100 yard radius of Site unless otherwise noted in Data Plan

Tapedown Established: ☐ Tapedown Location: _____

Benchmark Established: ☐ Benchmark Location: _____

Survey Equipment Used: ☐

Time of Travel Measurement: ☐ Type of Site: Injection ☐ Collection ☐

Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: ☐ Man Altered Waterbody: ☑

Man-Made Waterbody: ☐

Stream Dry/Intermittent: ☐

Stream Bottom: Sandy ☐ Clay ☐ Gravel ☐ Hard Clay ☐ Soft Silt ☐

Sand/Silt ☐ Rock/Gravel/Silt ☑ Concrete ☐

Control Structure Present: ☐ Location: _____

Type: Man Made Dam ☐ Flow Regulation Device ☐ Beaver Dam ☐ Log Jam ☐

Land Use: Agriculture ☐ Forestry ☐ Municipal ☑ Industrial ☑ Field/Pasture ☐ Wetland ☐

Percent Tree Canopy Cover 0-25% ☐ 26-50% ☐ 51-75% ☐ 76-100% ☑

Recon Information:

Discharge Measurement: Wading ☐ Bridge Board ☐ Boat Board ☐

Measurement Location: _____

Cross Section Location: _____

Continuous Monitor Deployment: _____

Continuous Monitor Location: _____

Boat Accessible: ☐ Nearest Launch: _____

Bridge ☐ **Bridge Safe:** ☐ Bridge Width: _____ Bridge Height: _____

Profiling Measurements:

Time:	Temp.(°C):	pH:	Spcond(µhmos/cm):
D.O.:	D.O. %:	Salinity:	Depth (m):
Time:	Temp.(°C):	pH:	Spcond(µhmos/cm):
D.O.:	D.O. %:	Salinity:	Depth (m):
Time:	Temp.(°C):	pH:	Spcond(µhmos/cm):
D.O.:	D.O. %:	Salinity:	Depth (m):

Comments: Could not get flow; will try to get STP records.

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≅ 0.15 m	20 ≅ 68	25 ≅ 77
1.0 ft ≅ 0.30 m	21 ≅ 69.8	26 ≅ 78.8
1.5 ft ≅ 0.45 m	22 ≅ 71.6	27 ≅ 80.6
2.0 ft ≅ 0.60 m	23 ≅ 73.4	28 ≅ 82.4
2.5 ft ≅ 0.75 m	24 ≅ 75.2	29 ≅ 84.2

Field Site Survey.doc
Revision 3.0
Revised 11/8/04

Site Information

Site #: NBB03c Subsegment: 100605 Date: 8/16/05 Time: 1030 hrs

Waterbody: Na Bonchasse Bayou

Tapedown 1: _____ Staff Gauge 1: _____ Gauge Height 1: _____

Site Location†: Downstream of Mansfield STP outfall on George Hunt Rd.

Personnel: Griffith, Savant, Reid

Type of Work: Recon ☐ Data Collection ☑

Weather Conditions:
- Clear ☑
- Drizzle/Light Rain ☐
- Showers ☐

Cloud Cover:
- 0 –10% ☑
- 11 – 40% ☐
- 41 – 70% ☐
- 71 – 100% ☐

Temperature (°F):
- Hot >85° ☑
- Warm > 75° ☐
- Mild > 65° ☐
- Cool > 60° ☐
- Cold < 60° ☐

Wind (mph):
- <1 ☑
- 1-5 ☐
- 6-10 ☐
- 11-15 ☐
- >16 ☐

Wind Direction:
- NW ☐ N ☐ NE ☐
- SW ☐ S ☐ SE ☐
- E ☐ W ☐
- Variable ☑

Stream Characteristics: Flowing: ☑ Measurable Flow: ☐
- Flow Direction Upstream ☐ Downstream ☑ Tidally Influenced: ☐
- Wind Influence: ☐ Wind Influence Direction: Upstream ☐ Downstream ☐
- Algae Present ☐ Sedimentation/Turbidity Present in Water Column ☐
- Floating/Aquatic Vegetation % Surface Coverage: <1 ☐ 1-25% ☑ 26-50% ☐ 51-75% ☐ 76-100% ☐

Water Quality Samples Taken: ☐ Water Quality Field Parameters: ☐ Profiling: ☐

Water Quality Field Parameters

Time: _____ Temp.(°C): _____ pH: _____ SpCond(µhmos/cm): _____

D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____ Secchi (in): _____

InSitu Probe S/N: _____ Surveyor 4a S/N: _____

Continuous Monitor Deployed: ☑ Continuous Monitor S/N: 40806

Continuous Monitor Retrieved: ☐ Continuous Monitor Deployment Depth (m): 0.5 m

Flow Measurement: ☐ Type of Measurement: Wading ☐ Bridge Board ☐ Boat Board ☐

AquaCalc File Name: _____ AquaCalc S/N: _____

Tapedown 2: _____ Staff Gauge 2: _____ Gauge Height 2: _____

Flow Estimated: ☐ Using Discharge Equipment: ☐
- Type: Wading ☐ Bridge Board ☐ Boat Board ☐
- Drogue Estimate: ☐ Dye Estimate: ☐

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: ☐ Type of Measurement Manual: ☐ Fathometer ☐

Cross Section File Name: _____ Fathometer S/N: _____

GPS Measurement: ☐ GPS SSF File Name: _____

Site GPS: ☐ Cross Section GPS: ☐ GPS Unit: _____

Photos Taken: ☐ Picture File #s: _____

Camera: _____

† All work is done within 100 yard radius of Site unless otherwise noted in Data Plan

Tapedown Established: ☐ Tapedown Location: _____

Benchmark Established: ☐ Benchmark Location: _____
Survey Equipment Used: ☐

Time of Travel Measurement: ☐ Type of Site: Injection ☐ Collection ☐
Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: ☐ Man Altered Waterbody: ☑
Man-Made Waterbody: ☐
Stream Dry/Intermittent: ☐
Stream Bottom: Sandy ☐ Clay ☐ Gravel ☐ Hard Clay ☐ Soft Silt ☐
Sand/Silt ☐ Rock/Gravel/Silt ☑ Concrete ☐
Control Structure Present: ☐ Location: _____
Type: Man Made Dam ☐ Flow Regulation Device ☐ Beaver Dam ☐ Log Jam ☐
Land Use: Agriculture ☐ Forestry ☑ Municipal ☑ Industrial ☐ Field/Pasture ☐ Wetland ☐
Percent Tree Canopy Cover 0-25% ☐ 26-50% ☐ 51-75% ☐ 76-100% ☑

Recon Information:
Discharge Measurement: Wading ☐ Bridge Board ☐ Boat Board ☐
Measurement Location: _____
Cross Section Location: _____
Continuous Monitor Deployment: _____
Continuous Monitor Location: _____

Boat Accessible: ☐ Nearest Launch: _____
Bridge ☐ **Bridge Safe:** ☐ Bridge Width: _____ Bridge Height: _____

Profiling Measurements:

Time:		Temp.(°C):		pH:		Spcond(µhmos/cm):	
D.O.:		D.O. %:		Salinity:		Depth (m):	
Time:		Temp.(°C):		pH:		Spcond(µhmos/cm):	
D.O.:		D.O. %:		Salinity:		Depth (m):	
Time:		Temp.(°C):		pH:		Spcond(µhmos/cm):	
D.O.:		D.O. %:		Salinity:		Depth (m):	

Comments: _____

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≅ 0.15 m	20 ≅ 68	25 ≅ 77
1.0 ft ≅ 0.30 m	21 ≅ 69.8	26 ≅ 78.8
1.5 ft ≅ 0.45 m	22 ≅ 71.6	27 ≅ 80.6
2.0 ft ≅ 0.60 m	23 ≅ 73.4	28 ≅ 82.4
2.5 ft ≅ 0.75 m	24 ≅ 75.2	29 ≅ 84.2

Field Site Survey.doc
Revision 3.0
Revised 11/8/04

Site Information 8/17/05

Site #: NBB03c Subsegment: 100605 Date: [illegible] Time: 1130 hrs

Waterbody: No Bonchasse Bayou

Tapedown 1: _____ Staff Gauge 1: _____ Gauge Height 1: _____

Site Location†: @ George Hunt Rd – downstream of Mansfield STP outfall

Personnel: Griffith, Savant, Reed

Type of Work: Recon ☐ Data Collection ☑

Weather Conditions:
- Clear ☑
- Drizzle/Light Rain ☐
- Showers ☐

Cloud Cover:
- 0 – 10% ☐
- 11 – 40% ☑
- 41 – 70% ☐
- 71 – 100% ☐

Temperature (°F):
- Hot >85° ☑
- Warm > 75° ☐
- Mild > 65° ☐
- Cool > 60° ☐
- Cold < 60° ☐

Wind (mph):
- <1 ☐
- 1-5 ☑
- 6-10 ☐
- 11-15 ☐
- >16 ☐

Wind Direction:
- NW ☐ N ☐ NE ☐
- SW ☐ S ☐ SE ☐
- E ☐ W ☐
- Variable ☑

Stream Characteristics: Flowing: ☑ Measurable Flow: ☐
- Flow Direction Upstream ☐ Downstream ☐ Tidally Influenced: ☐
- Wind Influence: ☐ Wind Influence Direction: Upstream ☐ Downstream ☐
- Algae Present ☐ Sedimentation/Turbidity Present in Water Column ☐
- Floating/Aquatic Vegetation % Surface Coverage: <1 ☐ 1-25% ☐ 26-50% ☐ 51-75% ☑ 76-100% ☐

Water Quality Samples Taken: ☑ **Water Quality Field Parameters:** ☑ Profiling: ☐

IBr: 7.2
IBat: 10.8

Water Quality Field Parameters

Time: 1130 Temp.(°C): 27.35 pH: 7.38 SpCond(µhmos/cm): 671.7

D.O.: 1.87 D.O. %: 23.7 Salinity: 0.35 Depth (m): 0.5 Secchi (in): 10

InSitu Probe S/N: 40810 Surveyor 4a S/N: 52699

Continuous Monitor Deployed: ☐ Continuous Monitor S/N: _____

Continuous Monitor Retrieved: ☐ Continuous Monitor Deployment Depth (m): _____

Flow Measurement: ☐ Type of Measurement: Wading ☐ Bridge Board ☐ Boat Board ☐

AquaCalc File Name: _____ AquaCalc S/N: _____

Tapedown 2: _____ Staff Gauge 2: _____ Gauge Height 2: _____

Flow Estimated: ☐ Using Discharge Equipment: ☐
- Type: Wading ☐ Bridge Board ☐ Boat Board ☐
- Drogue Estimate: ☐ Dye Estimate: ☐

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: ☐ Type of Measurement Manual: ☐ Fathometer ☐

Cross Section File Name: _____ Fathometer S/N: _____

GPS Measurement: ☑ GPS SSF File Name: NBB03C

Site GPS: ☑ Cross Section GPS: ☐ GPS Unit: 6

Photos Taken: ☐ Picture File #s: _____

Camera: _____

†

Tapedown Established: ☐ Tapedown Location: _____

Benchmark Established: ☐ Benchmark Location: _____
Survey Equipment Used: ☐

Time of Travel Measurement: ☐ Type of Site: Injection ☐ Collection ☐
Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: ☐ Man Altered Waterbody: ☑
Man-Made Waterbody: ☐
Stream Dry/Intermittent: ☐
Stream Bottom: Sandy ☐ Clay ☐ Gravel ☐ Hard Clay ☐ Soft Silt ☐
Sand/Silt ☐ Rock/Gravel/Silt ☑ Concrete ☐
Control Structure Present: ☐ Location: _____
Type: Man Made Dam ☐ Flow Regulation Device ☐ Beaver Dam ☐ Log Jam ☐
Land Use: Agriculture ☐ Forestry ☑ Municipal ☑ Industrial ☐ Field/Pasture ☐ Wetland ☐
Percent Tree Canopy Cover 0-25% ☐ 26-50% ☐ 51-75% ☐ 76-100% ☑

Recon Information:
Discharge Measurement: Wading ☐ Bridge Board ☐ Boat Board ☐
Measurement Location: _____
Cross Section Location: _____
Continuous Monitor Deployment: _____
Continuous Monitor Location: _____

Boat Accessible: ☐ Nearest Launch: _____
Bridge ☐ **Bridge Safe:** ☐ Bridge Width: _____ Bridge Height: _____

Profiling Measurements:

Time: _____ Temp.(°C): _____ pH: _____ Spcond(µhmos/cm): _____
D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Time: _____ Temp.(°C): _____ pH: _____ Spcond(µhmos/cm): _____
D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Time: _____ Temp.(°C): _____ pH: _____ Spcond(µhmos/cm): _____
D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments: _____

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft = 0.15 m	20 = 68	25 = 77
1.0 ft = 0.30 m	21 = 69.8	26 = 78.8
1.5 ft = 0.45 m	22 = 71.6	27 = 80.6
2.0 ft = 0.60 m	23 = 73.4	28 = 82.4
2.5 ft = 0.75 m	24 = 75.2	29 = 84.2

Field Site Survey.doc
Revision 3.3
Revised 11/8/04

Site Information

Site #: NB303c Subsegment: 100605 Date: 8/18/03 Time: 10:45

Waterbody: Na Bonchasse BAYOU

Tapedown 1: _____ Staff Gauge 1: _____ Gauge Height 1: _____

Site Location†: Downstream of Mansfield STP outfall on G Hunt Rd.

Personnel: Jones, Brignac

Type of Work: Recon ☐ Data Collection: ☑

Weather Conditions: Clear ☑; Drizzle/Light Rain ☐; Showers ☐

Cloud Cover: 0 – 10% ☐; 11 – 40% ☑; 41 – 70% ☐; 71 – 100% ☐

Temperature (°F): Hot >85° ☑; Warm > 75° ☐; Mild > 65° ☐; Cool > 60° ☐; Cold < 60° ☐

Wind (mph): <1 ☑; 1-5 ☐; 6-10 ☐; 11-15 ☐; >16 ☐

Wind Direction: NW ☐ N ☐ NE ☐; SW ☐ S ☐ SE ☐; E ☐ W ☐; Variable ☑

Stream Characteristics: Flowing: ☑ Measurable Flow: ☐

Flow Direction Upstream ☐ Downstream ☑ Tidally Influenced: ☐

Wind Influence: ☐ Wind Influence Direction: Upstream ☐ Downstream ☐

Algae Present ☐ Sedimentation/Turbidity Present in Water Column: ☐

Floating/Aquatic Vegetation % Surface Coverage: <1 ☐ 1-25% ☑ 26-50% ☐ 51-75% ☐ 76-100% ☐

Water Quality Samples Taken: ☐ **Water Quality Field Parameters:** ☐ Profiling: ☐

Water Quality Field Parameters

Time: _____ **Temp.(°C):** _____ **pH:** _____ **SpCond(µhmos/cm):** _____

D.O.: _____ **D.O. %:** _____ **Salinity:** _____ **Depth (m):** _____ **Secchi (in):** _____

InSitu Probe S/N: _____ **Surveyor 4a S/N:** _____

Continuous Monitor Deployed: ☐ Continuous Monitor S/N: 40806

Continuous Monitor Retrieved: ☒ Continuous Monitor Deployment Depth (m): _____

Flow Measurement: ☐ Type of Measurement: Wading ☐ Bridge Board ☐ Boat Board ☐

AquaCalc File Name: _____ AquaCalc S/N: _____

Tapedown 2: _____ Staff Gauge 2: _____ Gauge Height 2: _____

Flow Estimated: ☐ Using Discharge Equipment: ☐

Type: Wading ☐ Bridge Board ☐ Boat Board ☐

Drogue Estimate: ☐ Dye Estimate: ☐

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: ☐ Type of Measurement Manual: ☐ Fathometer ☐

Cross Section File Name: _____ Fathometer S/N: _____

GPS Measurement: ☐ GPS SSF File Name: _____

Site GPS: ☐ Cross Section GPS: ☐ GPS Unit: _____

Photos Taken: ☐ Picture File #s: _____

Camera: _____

† All work is done within 100 yard radius of Site unless otherwise noted in Data Plan

Tapedown Established: ☐ Tapedown Location: _____

Benchmark Established: ☐ Benchmark Location: _____

Survey Equipment Used: ☐

Time of Travel Measurement: ☐ Type of Site: Injection ☐ Collection ☐

Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: ☐ Man Altered Waterbody: ☑

Man-Made Waterbody: ☐

Stream Dry/Intermittent: ☐

Stream Bottom: Sandy ☐ Clay ☐ Gravel ☑ Hard Clay ☐ Soft Silt ☐

Sand/Silt ☐ Rock/Gravel/Silt ☑ Concrete ☐

Control Structure Present: ☐ Location: _____

Type: Man Made Dam ☐ Flow Regulation Device ☐ Beaver Dam ☐ Log Jam ☐

Land Use: Agriculture ☐ Forestry ☑ Municipal ☑ Industrial ☐ Field/Pasture ☐ Wetland ☑

Percent Tree Canopy Cover 0-25% ☐ 26-50% ☐ 51-75% ☐ 76-100% ☑

Recon Information:

Discharge Measurement: Wading ☐ Bridge Board ☐ Boat Board ☐

Measurement Location: _____

Cross Section Location: _____

Continuous Monitor Deployment: _____

Continuous Monitor Location: _____

Boat Accessible: ☐ **Nearest Launch:** _____

Bridge ☐ **Bridge Safe:** ☐ **Bridge Width:** _____ **Bridge Height:** _____

Profiling Measurements:

Time: _____ **Temp.(°C):** _____ **pH:** _____ **Spcond(µhmos/cm):** _____

D.O.: _____ **D.O. %:** _____ **Salinity:** _____ **Depth (m):** _____

Time: _____ **Temp.(°C):** _____ **pH:** _____ **Spcond(µhmos/cm):** _____

D.O.: _____ **D.O. %:** _____ **Salinity:** _____ **Depth (m):** _____

Time: _____ **Temp.(°C):** _____ **pH:** _____ **Spcond(µhmos/cm):** _____

D.O.: _____ **D.O. %:** _____ **Salinity:** _____ **Depth (m):** _____

Comments: _____

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≅ 0.15 m	20 ≅ 68	25 ≅ 77
1.0 ft ≅ 0.30 m	21 ≅ 69.8	26 ≅ 78.8
1.5 ft ≅ 0.45 m	22 ≅ 71.6	27 ≅ 80.6
2.0 ft ≅ 0.60 m	23 ≅ 73.4	28 ≅ 82.4
2.5 ft ≅ 0.75 m	24 ≅ 75.2	29 ≅ 84.2

Field Site Survey.doc
Revision 3.0
Revised 11/8/04

Site Information

Site #: CB01 Subsegment: 100605 Date: 8/16/05 Time: 1125hrs.

Waterbody: Caney Bayou

Tapedown 1: _____ Staff Gauge 1: _____ Gauge Height 1: _____

Site Location*: off Bradshaw Rd Downstream of Bridge

Personnel: Saxon, Griff, Reed

Type of Work: Recon ☐ Data Collection ☒

Weather Conditions:
- Clear ☒
- Drizzle/Light Rain ☐
- Showers ☐

Cloud Cover:
- 0 –10% ☑
- 11 – 40% ☐
- 41 – 70% ☐
- 71 – 100% ☐

Temperature (°F):
- Hot >85° ☒
- Warm > 75° ☐
- Mild > 65° ☐
- Cool > 60° ☐
- Cold < 60° ☐

Wind (mph):
- <1 ☒
- 1-5 ☐
- 6-10 ☐
- 11-15 ☐
- >16 ☐

Wind Direction:
- NW ☐ N ☐ NE ☐
- SW ☐ S ☐ SE ☐
- E ☐ W ☐
- Variable ☒

Stream Characteristics: Flowing: ☐ Measurable Flow: ☐
- Flow Direction Upstream ☐ Downstream ☐ Tidally Influenced: ☐
- Wind Influence: ☐ Wind Influence Direction: Upstream ☐ Downstream ☐
- Algae Present ☐ Sedimentation/Turbidity Present in Water Column ☒
- Floating/Aquatic Vegetation % Surface Coverage: <1 ☒ 1-25% ☐ 26-50% ☐ 51-75% ☐ 76-100% ☐

Water Quality Samples Taken: ☐ **Water Quality Field Parameters:** ☐ Profiling: ☐

Water Quality Field Parameters

Time: _____ **Temp.(°C):** _____ **pH:** _____ **SpCond(µhmos/cm):** _____

D.O.: _____ **D.O. %:** _____ **Salinity:** _____ **Depth (m):** _____ **Secchi (in):** _____

InSitu Probe S/N: _____ **Surveyor 4a S/N:** _____

Continuous Monitor Deployed: ☒ Continuous Monitor S/N: 41511

Continuous Monitor Retrieved: ☐ Continuous Monitor Deployment Depth (m): 1 m

Flow Measurement: ☐ Type of Measurement: Wading ☐ Bridge Board ☐ Boat Board ☐

AquaCalc File Name: _____ AquaCalc S/N: _____

Tapedown 2: _____ Staff Gauge 2: _____ Gauge Height 2: _____

Flow Estimated: ☐ Using Discharge Equipment: ☐
- Type: Wading ☐ Bridge Board ☐ Boat Board ☐
- Drogue Estimate: ☐ Dye Estimate: ☐

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: ☐ Type of Measurement Manual: ☐ Fathometer ☐

Cross Section File Name: _____ Fathometer S/N: _____

GPS Measurement: ☐ GPS SSF File Name: _____

Site GPS: ☐ Cross Section GPS: ☐ GPS Unit: _____

Photos Taken: ☐ Picture File #s: _____

Camera: _____

Tapedown Established: ☐ Tapedown Location: _____

Benchmark Established: ☐ Benchmark Location: _____

Survey Equipment Used: ☐

Time of Travel Measurement: ☐ Type of Site: Injection ☐ Collection ☐

Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: ☐ Man Altered Waterbody: ☒

Man-Made Waterbody: ☐

Stream Dry/Intermittent: ☐

Stream Bottom: Sandy ☒ Clay ☒ Gravel ☐ Hard Clay ☐ Soft Silt ☐

Sand/Silt ☐ Rock/Gravel/Silt ☐ Concrete ☐

Control Structure Present: ☐ Location: _____

Type: Man Made Dam ☐ Flow Regulation Device ☐ Beaver Dam ☐ Log Jam ☐

Land Use: Agriculture ☒ Forestry ☒ Municipal ☐ Industrial ☐ Field/Pasture ☒ Wetland ☐

Percent Tree Canopy Cover 0-25% ☒ 26-50% ☐ 51-75% ☐ 76-100% ☐

Recon Information:

Discharge Measurement: Wading ☐ Bridge Board ☒ Boat Board ☐

Measurement Location: _____

Cross Section Location: _____

Continuous Monitor Deployment: _____

Continuous Monitor Location: _____

Boat Accessible: ☐ Nearest Launch: _____

Bridge ☐ **Bridge Safe:** ☐ Bridge Width: _____ Bridge Height: _____

Profiling Measurements:

Time: _____ Temp.(°C): _____ pH: _____ Spcond(µhmos/cm): _____
D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Time: _____ Temp.(°C): _____ pH: _____ Spcond(µhmos/cm): _____
D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Time: _____ Temp.(°C): _____ pH: _____ Spcond(µhmos/cm): _____
D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments: _____

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft = 0.15 m	20 = 68	25 = 77
1.0 ft = 0.30 m	21 = 69.8	26 = 78.8
1.5 ft = 0.45 m	22 = 71.6	27 = 80.6
2.0 ft = 0.60 m	23 = 73.4	28 = 82.4
2.5 ft = 0.75 m	24 = 75.2	29 = 84.2

Field Site Survey.doc
Revision 3.0
Revised 11/8/04

Site Information

Site #: CB01 Subsegment: 100605 Date: 8/17/05 Time: 0930 hrs

Waterbody: Caney Bayou

Tapedown 1: _____ Staff Gauge 1: _____ Gauge Height 1: _____

Site Location*: off Bradshaw Rd; Downstream of bridge

Personnel: Griffith, Savard, Reed

Type of Work: Recon ☐ Data Collection ☑

Weather Conditions:
- Clear ☑
- Drizzle/Light Rain ☐
- Showers ☐

Cloud Cover:
- 0 – 10% ☑
- 11 – 40% ☐
- 41 – 70% ☐
- 71 – 100% ☐

Temperature (°F):
- Hot >85° ☑
- Warm > 75° ☐
- Mild > 65° ☐
- Cool > 60° ☐
- Cold < 60° ☐

Wind (mph):
- <1 ☑
- 1-5 ☐
- 6-10 ☐
- 11-15 ☐
- >16 ☐

Wind Direction:
- NW ☐ N ☐ NE ☐
- SW ☐ S ☐ SE ☐
- E ☐ W ☐
- Variable ☑

Stream Characteristics: Flowing: ☐ Measurable Flow: ☐
- Flow Direction: Upstream ☐ Downstream ☐ Tidally Influenced: ☐
- Wind Influence: ☑ Wind Influence Direction: Upstream ☐ Downstream ☑
- Algae Present ☐ Sedimentation/Turbidity Present in Water Column ☑
- Floating/Aquatic Vegetation % Surface Coverage: <1 ☑ 1-25% ☐ 26-50% ☐ 51-75% ☐ 76-100% ☐

Water Quality Samples Taken: ☑ **Water Quality Field Parameters:** ☑ Profiling: ☐

IBW: 7.3
~~IBAT~~: 10.9

Water Quality Field Parameters

Time: _____ Temp.(°C): 26.00 pH: 6.51 SpCond(µhmos/cm): 118.3

D.O.: 2.38 D.O. %: 29.1 Salinity: 0.05 Depth (m): 1 Secchi (in): 2

InSitu Probe S/N: 40810 Surveyor 4a S/N: S2699

Continuous Monitor Deployed: ☐ Continuous Monitor S/N: _____

Continuous Monitor Retrieved: ☐ Continuous Monitor Deployment Depth (m): _____

Flow Measurement: ☐ Type of Measurement: Wading ☐ Bridge Board ☐ Boat Board ☐

AquaCalc File Name: _____ AquaCalc S/N: _____

Tapedown 2: _____ Staff Gauge 2: _____ Gauge Height 2: _____

Flow Estimated: ☐ Using Discharge Equipment: ☐
- Type: Wading ☐ Bridge Board ☐ Boat Board ☐
- Drogue Estimate: ☐ Dye Estimate: ☐

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: ☐ Type of Measurement Manual: ☐ Fathometer ☐

Cross Section File Name: _____ Fathometer S/N: _____

GPS Measurement: ☑ GPS SSF File Name: CB01

Site GPS: ☑ Cross Section GPS: ☐ GPS Unit: 1a

Photos Taken: ☐ Picture File #s: _____

Camera: _____

* All work is done within 100 yard radius of Site unless otherwise noted in Data Plan

Tapedown Established: ☐ Tapedown Location: _____

Benchmark Established: ☐ Benchmark Location: _____

Survey Equipment Used: ☐

Time of Travel Measurement: ☐ Type of Site: Injection ☐ Collection ☐

Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: ☐ Man Altered Waterbody: ☒

Man-Made Waterbody: ☐

Stream Dry/Intermittent: ☑

Stream Bottom: Sandy ☑ Clay ☑ Gravel ☐ Hard Clay ☐ Soft Silt ☐

Sand/Silt ☐ Rock/Gravel/Silt ☐ Concrete ☐

Control Structure Present: ☐ Location: _____

Type: Man Made Dam ☐ Flow Regulation Device ☐ Beaver Dam ☑ Log Jam ☐

Land Use: Agriculture ☑ Forestry ☑ Municipal ☐ Industrial ☐ Field/Pasture ☑ Wetland ☐

Percent Tree Canopy Cover 0-25% ☑ 25-50% ☐ 51-75% ☐ 76-100% ☐

Recon Information:

Discharge Measurement: Wading ☐ Bridge Board ☐ Boat Board ☐

Measurement Location: _____

Cross Section Location: _____

Continuous Monitor Deployment: _____

Continuous Monitor Location: _____

Boat Accessible: ☐ Nearest Launch: _____

Bridge ☐ **Bridge Safe:** ☐ Bridge Width: _____ Bridge Height: _____

Profiling Measurements:

Time: _____ **Temp.(°C):** _____ **pH:** _____ **Spcond(µhmos/cm):** _____
D.O.: _____ **D.O. %:** _____ **Salinity:** _____ **Depth (m):** _____

Time: _____ **Temp.(°C):** _____ **pH:** _____ **Spcond(µhmos/cm):** _____
D.O.: _____ **D.O. %:** _____ **Salinity:** _____ **Depth (m):** _____

Time: _____ **Temp.(°C):** _____ **pH:** _____ **Spcond(µhmos/cm):** _____
D.O.: _____ **D.O. %:** _____ **Salinity:** _____ **Depth (m):** _____

Comments: Stream not flowing. Slight movement caused by wind

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft = 0.15 m	20 = 68	25 = 77
1.0 ft = 0.30 m	21 = 69.8	26 = 78.8
1.5 ft = 0.45 m	22 = 71.6	27 = 80.6
2.0 ft = 0.60 m	23 = 73.4	28 = 82.4
2.5 ft = 0.75 m	24 = 75.2	29 = 84.2

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Site Information

Site #: CB01 Subsegment: 100605 Date: 8/18/05 Time: 11:40

Waterbody: Caney Bayou

Tapedown 1: _____ Staff Gauge 1: _____ Gauge Height 1: _____

Site Location*: OFF Bradshaw Rd. Downstream of Bridge

Personnel: Jones, Brignac

Type of Work: Recon ☐ Data Collection ☒

Weather Conditions:
- Clear ☒
- Drizzle/Light Rain ☐
- Showers ☐

Cloud Cover:
- 0 – 10% ☐
- 11 – 40% ☒
- 41 – 70% ☐
- 71 – 100% ☐

Temperature (°F):
- Hot >85° ☒
- Warm > 75° ☐
- Mild > 65° ☐
- Cool > 60° ☐
- Cold < 60° ☐

Wind (mph):
- <1 ☒
- 1-5 ☐
- 6-10 ☐
- 11-15 ☐
- >16 ☐

Wind Direction:
- NW ☐ N ☐ NE ☐
- SW ☐ S ☐ SE ☐
- E ☐ W ☐
- Variable ☒

Stream Characteristics: Flowing: ☐ Measurable Flow: ☐
- Flow Direction Upstream ☐ Downstream ☐ Tidally Influenced: ☐
- Wind Influence: ☐ Wind Influence Direction: Upstream ☐ Downstream ☐
- Algae Present ☐ Sedimentation/Turbidity Present in Water Column ☒
- Floating/Aquatic Vegetation % Surface Coverage: <1 ☒ 1-25% ☐ 26-50% ☐ 51-75% ☐ 76-100% ☐

Water Quality Samples Taken: ☐ **Water Quality Field Parameters:** ☐ Profiling: ☐

Water Quality Field Parameters

Time: _____ **Temp.(°C):** _____ **pH:** _____ **SpCond(µhmos/cm):** _____

D.O.: _____ **D.O. %:** _____ **Salinity:** _____ **Depth (m):** _____ **Secchi (in):** _____

InSitu Probe S/N: _____ **Surveyor 4a S/N:** _____

Continuous Monitor Deployed: ☐ Continuous Monitor S/N: 41511

Continuous Monitor Retrieved: ☒ Continuous Monitor Deployment Depth (m): _____

Flow Measurement: ☐ Type of Measurement: Wading ☐ Bridge Board ☐ Boat Board ☐

AquaCalc File Name: _____ AquaCalc S/N: _____

Tapedown 2: _____ Staff Gauge 2: _____ Gauge Height 2: _____

Flow Estimated: ☐ Using Discharge Equipment: ☐
- Type: Wading ☐ Bridge Board ☐ Boat Board ☐
- Drogue Estimate: ☐ Dye Estimate: ☐

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: ☐ Type of Measurement Manual: ☐ Fathometer ☐

Cross Section File Name: _____ Fathometer S/N: _____

GPS Measurement: ☐ GPS SSF File Name: _____

Site GPS: ☐ Cross Section GPS: ☐ GPS Unit: _____

Photos Taken: ☐ Picture File #s: _____

Camera: _____

* All work is done within 100 yard radius of Site unless otherwise noted. [illegible]

Tapedown Established: ☐ Tapedown Location: _____

Benchmark Established: ☐ Benchmark Location: _____

Survey Equipment Used: ☐

Time of Travel Measurement: ☐ Type of Site: Injection ☐ Collection ☐

Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: ☐ Man Altered Waterbody: ☒

Man-Made Waterbody: ☐

Stream Dry/Intermittent: ☐

Stream Bottom: Sandy ☒ Clay ☒ Gravel ☐ Hard Clay ☐ Soft Silt ☐

Sand/Silt ☐ Rock/Gravel/Silt ☐ Concrete ☐

Control Structure Present: ☐ Location: _____

Type: Man Made Dam ☐ Flow Regulation Device ☐ Beaver Dam ☐ Log Jam ☐

Land Use: Agriculture ☒ Forestry ☒ Municipal ☐ Industrial ☐ Field/Pasture ☒ Wetland ☐

Percent Tree Canopy Cover 0-25% ☒ 25-50% ☐ 51-75% ☐ 76-100% ☐

Recon Information:

Discharge Measurement: Wacing ☐ Bridge Board ☐ Boat Board ☐

Measurement Location: _____

Cross Section Location: _____

Continuous Monitor Deployment: _____

Continuous Monitor Location: _____

Boat Accessible: ☐ Nearest Launch: _____

Bridge ☐ **Bridge Safe:** ☐ **Bridge Width:** _____ **Bridge Height:** _____

Profiling Measurements:

Time: _____ **Temp.(°C):** _____ **pH:** _____ **Spcond(µhmos/cm):** _____
D.O.: _____ **D.O. %:** _____ **Salinity:** _____ **Depth (m):** _____

Time: _____ **Temp.(°C):** _____ **pH:** _____ **Spcond(µhmos/cm):** _____
D.O.: _____ **D.O. %:** _____ **Salinity:** _____ **Depth (m):** _____

Time: _____ **Temp.(°C):** _____ **pH:** _____ **Spcond(µhmos/cm):** _____
D.O.: _____ **D.O. %:** _____ **Salinity:** _____ **Depth (m):** _____

Comments: _____

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft = 0.15 m	20 = 68	25 = 77
1.0 ft = 0.30 m	21 = 69.8	26 = 78.8
1.5 ft = 0.45 m	22 = 71.6	27 = 80.6
2.0 ft = 0.60 m	23 = 73.4	28 = 82.4
2.5 ft = 0.75 m	24 = 75.2	29 = 84.2

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Site Information

Site #: RB01 Subsegment: 100605 Date: 8/16/05 Time: 1200

Waterbody: Rambin Bayou

Tapedown 1: _____ Staff Gauge 1: _____ Gauge Height 1: _____

Site Location*: Off of Mt. Zion Rd

Personnel: Brigman, Lefleur

Type of Work: Recon ☐ Data Collection ☑

Weather Conditions:
- Clear ☐
- Drizzle/Light Rain ☐
- Showers ☐

Cloud Cover:
- 0 – 10% ☑
- 11 – 40% ☐
- 41 – 70% ☐
- 71 – 100% ☐

Temperature (°F):
- Hot >85° ☑
- Warm > 75° ☐
- Mild > 65° ☐
- Cool > 60° ☐
- Cold < 60° ☐

Wind (mph):
- <1 ☐
- 1-5 ☑
- 6-10 ☐
- 11-15 ☐
- >16 ☐

Wind Direction:
- NW ☐ N ☐ NE ☐
- SW ☐ S ☐ SE ☐
- E ☐ W ☐
- Variable ☑

Stream Characteristics: Flowing: ☑ Measurable Flow: ☑

Flow Direction Upstream: ☐ Downstream ☑ Tidally Influenced: ☐

Wind Influence: ☐ Wind Influence Direction: Upstream ☐ Downstream ☐

Algae Present ☐ Sedimentation/Turbidity Present in Water Column ☑

Floating/Aquatic Vegetation % Surface Coverage: <1 ☐ 1-25% ☑ 26-50% ☐ 51-75% ☐ 76-100% ☐

Water Quality Samples Taken: ☐ **Water Quality Field Parameters:** ☐ Profiling: ☐

Water Quality Field Parameters

Time: _____ **Temp.(°C):** _____ **pH:** _____ **SpCond(µhmos/cm):** _____

D.O.: _____ **D.O. %:** _____ **Salinity:** _____ **Depth (m):** _____ **Secchi (in):** _____

inSitu Probe S/N: _____ **Surveyor 4a S/N:** _____

Continuous Monitor Deployed: ☑ Continuous Monitor S/N: 42511

Continuous Monitor Retrieved: ☐ Continuous Monitor Deployment Depth (m): .33 meter

Flow Measurement: ☐ Type of Measurement: Wading ☐ Bridge Board ☐ Boat Board ☐

AquaCalc File Name: _____ AquaCalc S/N: _____

Tapedown 2: _____ Staff Gauge 2: _____ Gauge Height 2: _____

Flow Estimated: ☐ Using Discharge Equipment: ☐

Type: Wading ☐ Bridge Board ☐ Boat Board ☐

Drogue Estimate: ☐ Dye Estimate: ☐

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: ☐ Type of Measurement Manual: ☐ Fathometer ☐

Cross Section File Name: _____ Fathometer S/N: _____

GPS Measurement: ☐ GPS SSF File Name: _____

Site GPS: ☐ Cross Section GPS: ☐ GPS Unit: _____

Photos Taken: ☐ Picture File #s: _____

Camera: _____

* All work is done within 100 yard radius of Site unless otherwise noted in Data Plan

Tapedown Established: ☐ Tapedown Location: _____

Benchmark Established: ☐ Benchmark Location: _____

Survey Equipment Used: ☐

Time of Travel **Measurement:** ☐ Type of Site: Injection ☐ Collection ☐

Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: ☐ Man Altered Waterbody: ☑

Man-Made Waterbody: ☐

Stream Dry/Intermittent: ☐

Stream Bottom: Sandy ☐ Clay ☐ Gravel ☐ Hard Clay ☑ Soft Silt ☐

Sand/Silt ☐ Rock/Gravel/Silt ☐ Concrete ☐

Control Structure Present: ☐ Location: _____

Type: Man Made Dam ☐ Flow Regulation Device ☐ Beaver Dam ☐ Log Jam ☐

Land Use: Agriculture ☐ Forestry ☑ Municipal ☐ Industrial ☐ Field/Pasture ☐ Wetland ☐

Percent Tree Canopy Cover 0-25% ☐ 26-50% ☐ 51-75% ☐ 76-100% ☑

Recon Information:

Discharge Measurement: Wading ☐ Bridge Board ☐ Boat Board ☐

Measurement Location: _____

Cross Section Location: _____

Continuous Monitor Deployment: _____

Continuous Monitor Location: _____

Boat Accessible: ☐ **Nearest Launch:** _____

Bridge ☐ **Bridge Safe:** ☐ **Bridge Width:** _____ **Bridge Height:** _____

Profiling Measurements:

Time: _____ **Temp.(°C):** _____ **pH:** _____ **Spcond(µhmos/cm):** _____
D.O.: _____ **D.O. %:** _____ **Salinity:** _____ **Depth (m):** _____

Time: _____ **Temp.(°C):** _____ **pH:** _____ **Spcond(µhmos/cm):** _____
D.O.: _____ **D.O. %:** _____ **Salinity:** _____ **Depth (m):** _____

Time: _____ **Temp.(°C):** _____ **pH:** _____ **Spcond(µhmos/cm):** _____
D.O.: _____ **D.O. %:** _____ **Salinity:** _____ **Depth (m):** _____

Comments: _____

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≈ 0.15 m	20 ≈ 68	25 ≈ 77
1.0 ft ≈ 0.30 m	21 ≈ 69.8	26 ≈ 78.8
1.5 ft ≈ 0.45 m	22 ≈ 71.6	27 ≈ 80.6
2.0 ft ≈ 0.60 m	23 ≈ 73.4	28 ≈ 82.4
2.5 ft ≈ 0.75 m	24 ≈ 75.2	29 ≈ 84.2

Field Site Survey.doc
Revision 3.3
Revised 11/8/04

Site Information

Site #: RB01 Subsegment: 100605 Date: 8/17/05 Time: 0900

Waterbody: Rambin Bayou

Tapedown 1: _____ Staff Gauge 1: _____ Gauge Height 1: _____

Site Location[1]: Off of Mount Zion Rd

Personnel: Brigman, LAFleur

Type of Work: Recon ☐ Data Collection ☒

Weather Conditions:
- Clear ☒
- Drizzle/Light Rain ☐
- Showers ☐

Cloud Cover:
- 0 –10% ☒
- 11 – 40% ☐
- 41 – 70% ☐
- 71 – 100% ☐

Temperature (°F):
- Hot >85° ☒
- Warm > 75° ☐
- Mild > 65° ☐
- Cool > 60° ☐
- Cold < 60° ☐

Wind (mph):
- <1 ☐
- 1-5 ☒
- 6-10 ☐
- 11-15 ☐
- >16 ☐

Wind Direction:
- NW ☐ N ☐ NE ☐
- SW ☐ S ☐ SE ☐
- E ☐ W ☐
- Variable ☒

Stream Characteristics: Flowing: ☒ Measurable Flow: ☒
- Flow Direction Upstream ☐ Downstream ☒ Tidally Influenced: ☐
- Wind Influence: ☐ Wind Influence Direction: Upstream ☐ Downstream ☐
- Algae Present ☐ Sedimentation/Turbidity Present in Water Column ☒
- Floating/Aquatic Vegetation % Surface Coverage: <1 ☐ 1-25% ☒ 26-50% ☐ 51-75% ☐ 76-100% ☐

Water Quality Samples Taken: ☒ Water Quality Field Parameters: ☒ Profiling: ☐

Water Quality Field Parameters

Time: 0900 Temp.(°C): 24.85 pH: 6.72 SpCond(µhmos/cm): 116.8

D.O.: 2.13 D.O. %: 25.9 Salinity: 0.05 Depth (m): .5m Secchi (in): ____

InSitu Probe S/N: 050400042505 Surveyor 4a S/N: 52773

Continuous Monitor Deployed: ☐ Continuous Monitor S/N: _____

Continuous Monitor Retrieved: ☐ Continuous Monitor Deployment Depth (m): _____

Flow Measurement: ☒ Type of Measurement: Wading ☒ Bridge Board ☐ Boat Board ☐

AquaCalc File Name: RB01 AquaCalc S/N: FT40

Tapedown 2: _____ Staff Gauge 2: _____ Gauge Height 2: _____

Flow Estimated: ☐ Using Discharge Equipment: ☐
- Type: Wading ☐ Bridge Board ☐ Boat Board ☐
- Drogue Estimate: ☐ Dye Estimate: ☐

Right Descending Bank Distance (ft): _____ Time (s): _____

Mid Stream Distance (ft): _____ Time (s): _____

Left Descending Bank Distance (ft): _____ Time (s): _____

Cross Section Measurement: ☐ Type of Measurement Manual: ☐ Fathometer ☐

Cross Section File Name: _____ Fathometer S/N: _____

GPS Measurement: ☒ GPS SSF File Name: RB01

Site GPS: ☒ Cross Section GPS: ☐ GPS Unit: 6

Photos Taken: ☐ Picture File #s: _____

Camera: _____

[1] All work is done within 100 yard radius of Site unless otherwise noted in Data Blue

Tapedown Established: ☐ Tapedown Location: _____

Benchmark Established: ☐ Benchmark Location: _____

Survey Equipment Used: ☐

Time of Travel Measurement: ☐ Type of Site: Injection ☐ Collection ☐

Amount of Dye Injected (ml): _____

Physical Site Characteristics: Natural Waterbody: ☐ Man Altered Waterbody: ☐

Man-Made Waterbody: ☐

Stream Dry/Intermittent: ☐

Stream Bottom: Sandy ☐ Clay ☐ Gravel ☐ Hard Clay ☐ Soft Silt ☐

Sand/Silt ☐ Rock/Gravel/Silt ☐ Concrete ☐

Control Structure Present: ☐ Location: _____

Type: Man Made Dam ☐ Flow Regulation Device ☐ Beaver Dam ☐ Log Jam ☐

Land Use: Agriculture ☐ Forestry ☐ Municipal ☐ Industrial ☐ Field/Pasture ☐ Wetland ☐

Percent Tree Canopy Cover 0-25% ☐ 26-50% ☐ 51-75% ☐ 76-100% ☐

Recon Information:

Discharge Measurement: Wading ☐ Bridge Board ☐ Boat Board ☐

Measurement Location: _____

Cross Section Location: _____

Continuous Monitor Deployment: _____

Continuous Monitor Location: _____

Boat Accessible: ☐ Nearest Launch: _____

Bridge ☐ Bridge Safe: ☐ Bridge Width: _____ Bridge Height: _____

Profiling Measurements:

Time: _____ Temp.(°C): _____ pH: _____ Spcond(µhmos/cm): _____

D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Time: _____ Temp.(°C): _____ pH: _____ Spcond(µhmos/cm): _____

D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Time: _____ Temp.(°C): _____ pH: _____ Spcond(µhmos/cm): _____

D.O.: _____ D.O. %: _____ Salinity: _____ Depth (m): _____

Comments: _____

References

Convert Feet to Meters	Convert Celsius to Fahrenheit	
0.5 ft ≅ 0.15 m	20 ≅ 68	25 ≅ 77
1.0 ft ≅ 0.30 m	21 ≅ 69.8	26 ≅ 78.8
1.5 ft ≅ 0.45 m	22 ≅ 71.6	27 ≅ 80.6
2.0 ft ≅ 0.60 m	23 ≅ 73.4	28 ≅ 82.4
2.5 ft ≅ 0.75 m	24 ≅ 75.2	29 ≅ 84.2

Field Site Survey.doc
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Appendix F4 – Continuous Monitor

Smithport Lake (Subsegment 100605) Continuous Monitoring Averages									
	Temp			pH			SpCond		
Site ID	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max
CB01	25.3	25.97	28.60	6.60	6.66	7.10	115.90	121.80	227.00
CLK01	27.8	27.99	28.40	6.40	6.51	6.60	126.00	129.94	140.00
CLK02	26.9	27.10	27.50	6.30	6.45	6.50	137.70	148.63	160.90
NBB02	24.4	25.66	26.50	7.50	7.61	8.10	434.00	477.73	509.00
NBB03A	23.8	23.89	24.10	6.60	6.65	6.80	350.00	368.61	390.00
NBB03C	26.8	27.50	28.20	7.20	7.22	7.30	660.00	687.42	712.00
RB01	24.8	25.85	26.50	6.60	6.60	6.70	121.00	125.05	131.00
SL02	27.1	27.41	27.60	6.30	6.35	6.50	80.90	82.86	85.40
SL03	27.3	27.66	28.10	6.30	6.39	6.50	123.90	125.55	127.20

	Smithport Lake (Subsegment 100605) Continuous Monitoring Averages								
	DO%			DO			SALINITY		
Site ID	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max
CB01	2.00	12.58	84.00	0.10	1.02	6.50	0.10	0.10	0.10
CLK01	2.00	14.89	39.00	0.20	1.17	3.00	0.10	0.10	0.10
CLK02	1.00	2.95	33.00	0.10	0.24	2.60	0.10	0.10	0.10
NBB02	44.00	62.17	91.00	3.70	5.06	7.30	0.20	0.24	0.30
NBB03A	0.00	5.65	30.00	0.00	0.48	2.50	0.20	0.20	0.20
NBB03C	4.00	14.79	29.00	0.40	1.16	2.30	0.30	0.39	0.40
RB01	8.00	21.06	29.00	0.70	1.70	2.30	0.10	0.10	0.10
SL02	0.00	5.80	30.00	0.00	0.46	2.30			
SL03	1.00	12.84	64.00	0.10	1.01	5.00	0.10	0.10	0.10

Note: Highlighted values were discarded as bad DO readings by the Continuous Moniters. For all other sites a DO value of the minimum DO plus one was used instead of the average value.

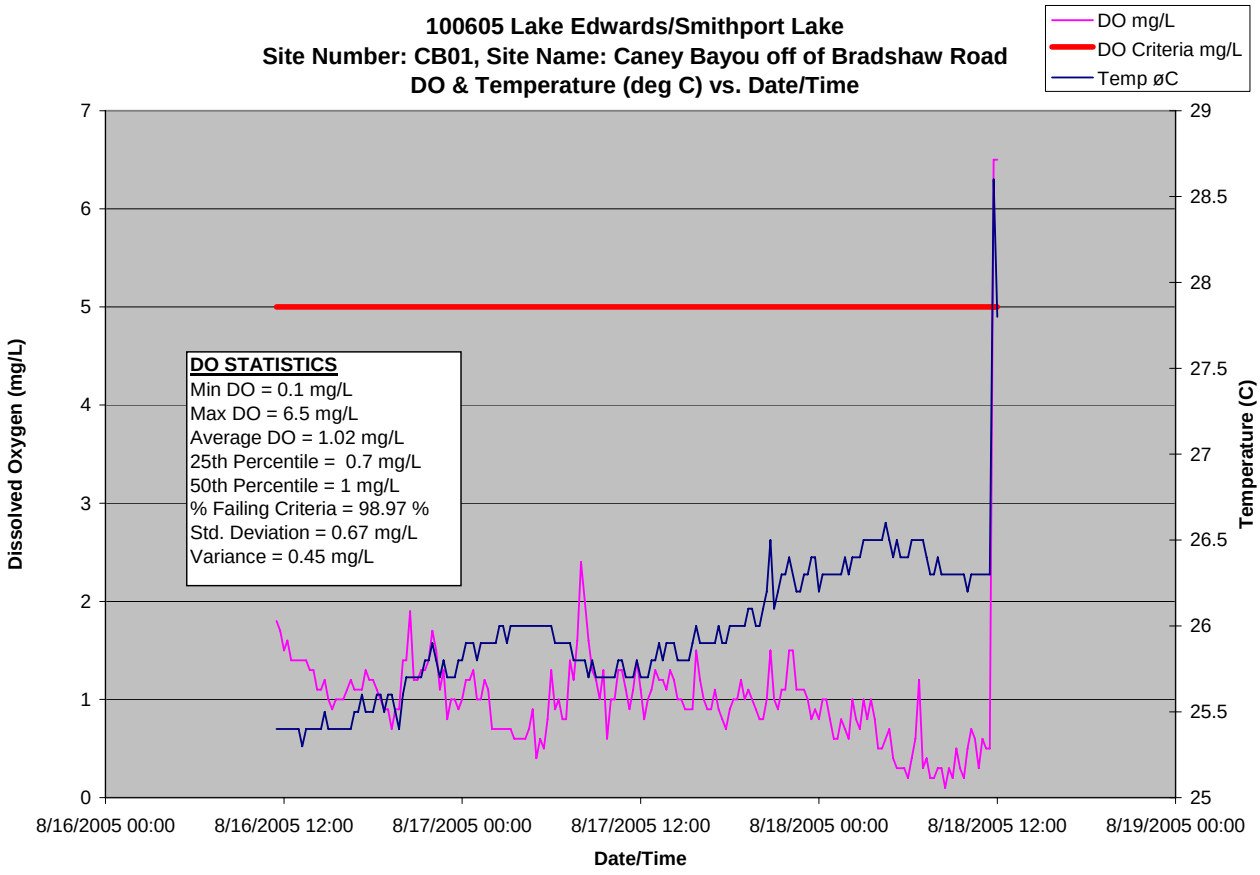
CB01 Continuous Monitoring Data for Lake Edwards/Smithport Lake Subsegment 100605

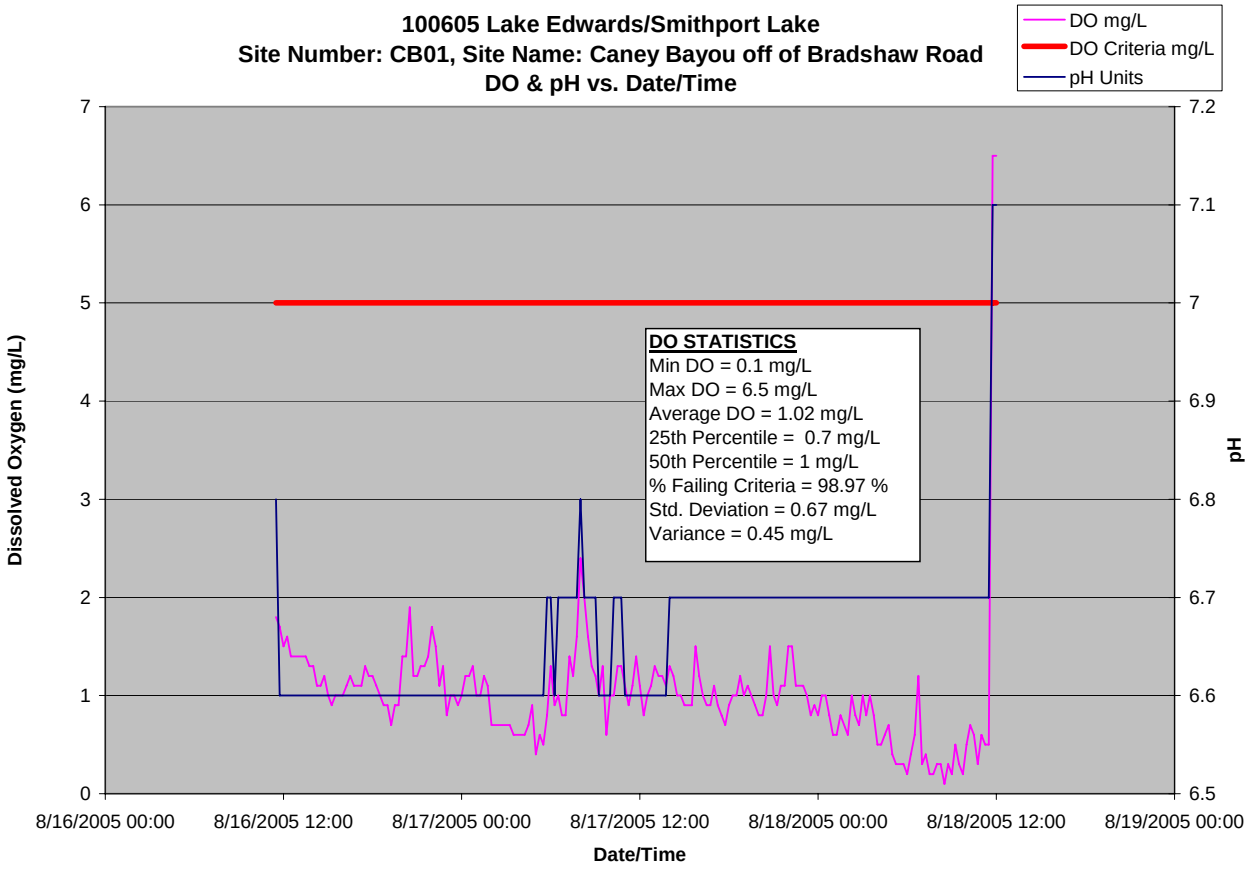
Date	Time	Date+Time	Temp	pH	SpCond	DO%	DO	VENTED DEPTH	SALINITY
MMDDYY	HHMM	MMDDYYYY HHMM	øC	Units	æS/cm	Sat	mg/L	True/False	ppt
8/16/2005	11:30	8/16/2005 11:30	25.4	6.8	0.1159	22	1.8	FALSE	0.1
8/16/2005	11:45	8/16/2005 11:45	25.4	6.6	0.1171	20	1.7	FALSE	0.1
8/16/2005	12:00	8/16/2005 12:00	25.4	6.6	0.1182	18	1.5	FALSE	0.1
8/16/2005	12:15	8/16/2005 12:15	25.4	6.6	0.1178	20	1.6	FALSE	0.1
8/16/2005	12:30	8/16/2005 12:30	25.4	6.6	0.1182	17	1.4	FALSE	0.1
8/16/2005	12:45	8/16/2005 12:45	25.4	6.6	0.118	17	1.4	FALSE	0.1
8/16/2005	13:00	8/16/2005 13:00	25.4	6.6	0.1178	18	1.4	FALSE	0.1
8/16/2005	13:15	8/16/2005 13:15	25.3	6.6	0.1179	17	1.4	FALSE	0.1
8/16/2005	13:30	8/16/2005 13:30	25.4	6.6	0.118	17	1.4	FALSE	0.1
8/16/2005	13:45	8/16/2005 13:45	25.4	6.6	0.118	16	1.3	FALSE	0.1
8/16/2005	14:00	8/16/2005 14:00	25.4	6.6	0.1182	16	1.3	FALSE	0.1
8/16/2005	14:15	8/16/2005 14:15	25.4	6.6	0.1184	14	1.1	FALSE	0.1
8/16/2005	14:30	8/16/2005 14:30	25.4	6.6	0.1186	13	1.1	FALSE	0.1
8/16/2005	14:45	8/16/2005 14:45	25.5	6.6	0.118	15	1.2	FALSE	0.1
8/16/2005	15:00	8/16/2005 15:00	25.4	6.6	0.1189	12	1	FALSE	0.1
8/16/2005	15:15	8/16/2005 15:15	25.4	6.6	0.1194	11	0.9	FALSE	0.1
8/16/2005	15:30	8/16/2005 15:30	25.4	6.6	0.1193	13	1	FALSE	0.1
8/16/2005	15:45	8/16/2005 15:45	25.4	6.6	0.1192	13	1	FALSE	0.1
8/16/2005	16:00	8/16/2005 16:00	25.4	6.6	0.1192	12	1	FALSE	0.1
8/16/2005	16:15	8/16/2005 16:15	25.4	6.6	0.1187	13	1.1	FALSE	0.1
8/16/2005	16:30	8/16/2005 16:30	25.4	6.6	0.1191	14	1.2	FALSE	0.1
8/16/2005	16:45	8/16/2005 16:45	25.5	6.6	0.1188	13	1.1	FALSE	0.1
8/16/2005	17:00	8/16/2005 17:00	25.5	6.6	0.1193	13	1.1	FALSE	0.1
8/16/2005	17:15	8/16/2005 17:15	25.6	6.6	0.1191	14	1.1	FALSE	0.1
8/16/2005	17:30	8/16/2005 17:30	25.5	6.6	0.1184	16	1.3	FALSE	0.1
8/16/2005	17:45	8/16/2005 17:45	25.5	6.6	0.1185	14	1.2	FALSE	0.1
8/16/2005	18:00	8/16/2005 18:00	25.5	6.6	0.1191	15	1.2	FALSE	0.1
8/16/2005	18:15	8/16/2005 18:15	25.6	6.6	0.1191	14	1.1	FALSE	0.1
8/16/2005	18:30	8/16/2005 18:30	25.6	6.6	0.1187	12	1	FALSE	0.1
8/16/2005	18:45	8/16/2005 18:45	25.5	6.6	0.1193	11	0.9	FALSE	0.1
8/16/2005	19:00	8/16/2005 19:00	25.6	6.6	0.1192	11	0.9	FALSE	0.1
8/16/2005	19:15	8/16/2005 19:15	25.6	6.6	0.1194	8	0.7	FALSE	0.1
8/16/2005	19:30	8/16/2005 19:30	25.5	6.6	0.1191	11	0.9	FALSE	0.1
8/16/2005	19:45	8/16/2005 19:45	25.4	6.6	0.1194	11	0.9	FALSE	0.1
8/16/2005	20:00	8/16/2005 20:00	25.6	6.6	0.1189	17	1.4	FALSE	0.1
8/16/2005	20:15	8/16/2005 20:15	25.7	6.6	0.1189	17	1.4	FALSE	0.1
8/16/2005	20:30	8/16/2005 20:30	25.7	6.6	0.1189	23	1.9	FALSE	0.1
8/16/2005	20:45	8/16/2005 20:45	25.7	6.6	0.1191	15	1.2	FALSE	0.1
8/16/2005	21:00	8/16/2005 21:00	25.7	6.6	0.119	14	1.2	FALSE	0.1
8/16/2005	21:15	8/16/2005 21:15	25.7	6.6	0.119	16	1.3	FALSE	0.1
8/16/2005	21:30	8/16/2005 21:30	25.8	6.6	0.1186	16	1.3	FALSE	0.1
8/16/2005	21:45	8/16/2005 21:45	25.8	6.6	0.1188	17	1.4	FALSE	0.1
8/16/2005	22:00	8/16/2005 22:00	25.9	6.6	0.1186	20	1.7	FALSE	0.1
8/16/2005	22:15	8/16/2005 22:15	25.8	6.6	0.1187	18	1.5	FALSE	0.1
8/16/2005	22:30	8/16/2005 22:30	25.7	6.6	0.1194	14	1.1	FALSE	0.1

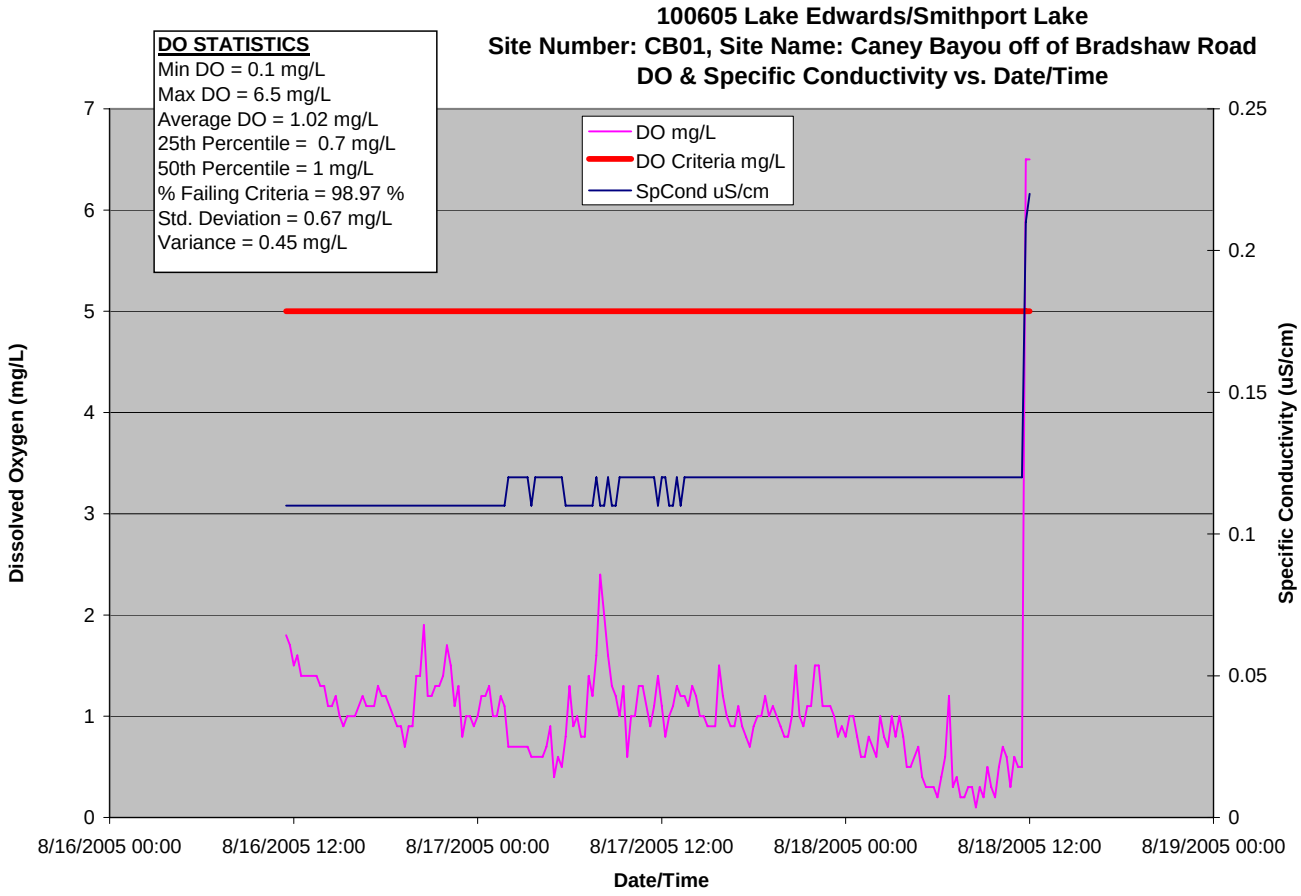
8/16/2005	22:45	8/16/2005 22:45	25.8	6.6	0.1191	15	1.3	FALSE	0.1
8/16/2005	23:00	8/16/2005 23:00	25.7	6.6	0.1189	10	0.8	FALSE	0.1
8/16/2005	23:15	8/16/2005 23:15	25.7	6.6	0.1189	12	1	FALSE	0.1
8/16/2005	23:30	8/16/2005 23:30	25.7	6.6	0.1192	12	1	FALSE	0.1
8/16/2005	23:45	8/16/2005 23:45	25.8	6.6	0.119	11	0.9	FALSE	0.1
8/17/2005	0:00	8/17/2005 00:00	25.8	6.6	0.1188	12	1	FALSE	0.1
8/17/2005	0:15	8/17/2005 00:15	25.9	6.6	0.1182	15	1.2	FALSE	0.1
8/17/2005	0:30	8/17/2005 00:30	25.9	6.6	0.1192	15	1.2	FALSE	0.1
8/17/2005	0:45	8/17/2005 00:45	25.9	6.6	0.1187	16	1.3	FALSE	0.1
8/17/2005	1:00	8/17/2005 01:00	25.8	6.6	0.1193	12	1	FALSE	0.1
8/17/2005	1:15	8/17/2005 01:15	25.9	6.6	0.1192	12	1	FALSE	0.1
8/17/2005	1:30	8/17/2005 01:30	25.9	6.6	0.1193	14	1.2	FALSE	0.1
8/17/2005	1:45	8/17/2005 01:45	25.9	6.6	0.1199	14	1.1	FALSE	0.1
8/17/2005	2:00	8/17/2005 02:00	25.9	6.6	0.1208	9	0.7	FALSE	0.1
8/17/2005	2:15	8/17/2005 02:15	25.9	6.6	0.121	9	0.7	FALSE	0.1
8/17/2005	2:30	8/17/2005 02:30	26	6.6	0.1203	8	0.7	FALSE	0.1
8/17/2005	2:45	8/17/2005 02:45	26	6.6	0.1205	9	0.7	FALSE	0.1
8/17/2005	3:00	8/17/2005 03:00	25.9	6.6	0.1201	9	0.7	FALSE	0.1
8/17/2005	3:15	8/17/2005 03:15	26	6.6	0.1207	9	0.7	FALSE	0.1
8/17/2005	3:30	8/17/2005 03:30	26	6.6	0.1199	7	0.6	FALSE	0.1
8/17/2005	3:45	8/17/2005 03:45	26	6.6	0.1209	7	0.6	FALSE	0.1
8/17/2005	4:00	8/17/2005 04:00	26	6.6	0.1209	7	0.6	FALSE	0.1
8/17/2005	4:15	8/17/2005 04:15	26	6.6	0.1207	8	0.6	FALSE	0.1
8/17/2005	4:30	8/17/2005 04:30	26	6.6	0.1205	9	0.7	FALSE	0.1
8/17/2005	4:45	8/17/2005 04:45	26	6.6	0.1202	11	0.9	FALSE	0.1
8/17/2005	5:00	8/17/2005 05:00	26	6.6	0.1206	5	0.4	FALSE	0.1
8/17/2005	5:15	8/17/2005 05:15	26	6.6	0.1205	7	0.6	FALSE	0.1
8/17/2005	5:30	8/17/2005 05:30	26	6.6	0.1203	6	0.5	FALSE	0.1
8/17/2005	5:45	8/17/2005 05:45	26	6.7	0.1197	10	0.8	FALSE	0.1
8/17/2005	6:00	8/17/2005 06:00	26	6.7	0.1196	16	1.3	FALSE	0.1
8/17/2005	6:15	8/17/2005 06:15	25.9	6.6	0.1194	11	0.9	FALSE	0.1
8/17/2005	6:30	8/17/2005 06:30	25.9	6.7	0.1189	12	1	FALSE	0.1
8/17/2005	6:45	8/17/2005 06:45	25.9	6.7	0.1193	10	0.8	FALSE	0.1
8/17/2005	7:00	8/17/2005 07:00	25.9	6.7	0.1193	10	0.8	FALSE	0.1
8/17/2005	7:15	8/17/2005 07:15	25.9	6.7	0.1192	17	1.4	FALSE	0.1
8/17/2005	7:30	8/17/2005 07:30	25.8	6.7	0.1195	14	1.2	FALSE	0.1
8/17/2005	7:45	8/17/2005 07:45	25.8	6.7	0.1201	19	1.6	FALSE	0.1
8/17/2005	8:00	8/17/2005 08:00	25.8	6.8	0.1188	30	2.4	FALSE	0.1
8/17/2005	8:15	8/17/2005 08:15	25.8	6.7	0.1196	24	2	FALSE	0.1
8/17/2005	8:30	8/17/2005 08:30	25.7	6.7	0.1202	19	1.6	FALSE	0.1
8/17/2005	8:45	8/17/2005 08:45	25.8	6.7	0.1199	16	1.3	FALSE	0.1
8/17/2005	9:00	8/17/2005 09:00	25.7	6.7	0.1196	15	1.2	FALSE	0.1
8/17/2005	9:15	8/17/2005 09:15	25.7	6.6	0.1204	12	1	FALSE	0.1
8/17/2005	9:30	8/17/2005 09:30	25.7	6.6	0.1203	16	1.3	FALSE	0.1
8/17/2005	9:45	8/17/2005 09:45	25.7	6.6	0.1201	7	0.6	FALSE	0.1
8/17/2005	10:00	8/17/2005 10:00	25.7	6.6	0.1204	13	1	FALSE	0.1
8/17/2005	10:15	8/17/2005 10:15	25.7	6.7	0.1201	13	1	FALSE	0.1
8/17/2005	10:30	8/17/2005 10:30	25.8	6.7	0.1203	16	1.3	FALSE	0.1
8/17/2005	10:45	8/17/2005 10:45	25.8	6.7	0.1202	16	1.3	FALSE	0.1
8/17/2005	11:00	8/17/2005 11:00	25.7	6.6	0.1209	13	1.1	FALSE	0.1

8/17/2005	11:15	8/17/2005	11:15	25.7	6.6	0.12	11	0.9	FALSE	0.1
8/17/2005	11:30	8/17/2005	11:30	25.7	6.6	0.1203	14	1.1	FALSE	0.1
8/17/2005	11:45	8/17/2005	11:45	25.8	6.6	0.1197	17	1.4	FALSE	0.1
8/17/2005	12:00	8/17/2005	12:00	25.7	6.6	0.12	14	1.1	FALSE	0.1
8/17/2005	12:15	8/17/2005	12:15	25.7	6.6	0.1208	10	0.8	FALSE	0.1
8/17/2005	12:30	8/17/2005	12:30	25.7	6.6	0.1194	12	1	FALSE	0.1
8/17/2005	12:45	8/17/2005	12:45	25.8	6.6	0.1197	14	1.1	FALSE	0.1
8/17/2005	13:00	8/17/2005	13:00	25.8	6.6	0.1202	16	1.3	FALSE	0.1
8/17/2005	13:15	8/17/2005	13:15	25.9	6.6	0.1199	15	1.2	FALSE	0.1
8/17/2005	13:30	8/17/2005	13:30	25.8	6.6	0.121	15	1.2	FALSE	0.1
8/17/2005	13:45	8/17/2005	13:45	25.9	6.6	0.1208	13	1.1	FALSE	0.1
8/17/2005	14:00	8/17/2005	14:00	25.9	6.7	0.1204	16	1.3	FALSE	0.1
8/17/2005	14:15	8/17/2005	14:15	25.9	6.7	0.121	15	1.2	FALSE	0.1
8/17/2005	14:30	8/17/2005	14:30	25.8	6.7	0.1217	12	1	FALSE	0.1
8/17/2005	14:45	8/17/2005	14:45	25.8	6.7	0.1211	12	1	FALSE	0.1
8/17/2005	15:00	8/17/2005	15:00	25.8	6.7	0.1213	12	0.9	FALSE	0.1
8/17/2005	15:15	8/17/2005	15:15	25.8	6.7	0.1215	12	0.9	FALSE	0.1
8/17/2005	15:30	8/17/2005	15:30	25.9	6.7	0.1213	12	0.9	FALSE	0.1
8/17/2005	15:45	8/17/2005	15:45	26	6.7	0.121	19	1.5	FALSE	0.1
8/17/2005	16:00	8/17/2005	16:00	25.9	6.7	0.1216	15	1.2	FALSE	0.1
8/17/2005	16:15	8/17/2005	16:15	25.9	6.7	0.1216	12	1	FALSE	0.1
8/17/2005	16:30	8/17/2005	16:30	25.9	6.7	0.1215	11	0.9	FALSE	0.1
8/17/2005	16:45	8/17/2005	16:45	25.9	6.7	0.1221	12	0.9	FALSE	0.1
8/17/2005	17:00	8/17/2005	17:00	25.9	6.7	0.122	13	1.1	FALSE	0.1
8/17/2005	17:15	8/17/2005	17:15	26	6.7	0.1218	11	0.9	FALSE	0.1
8/17/2005	17:30	8/17/2005	17:30	25.9	6.7	0.1222	9	0.8	FALSE	0.1
8/17/2005	17:45	8/17/2005	17:45	25.9	6.7	0.1217	9	0.7	FALSE	0.1
8/17/2005	18:00	8/17/2005	18:00	26	6.7	0.121	12	0.9	FALSE	0.1
8/17/2005	18:15	8/17/2005	18:15	26	6.7	0.1211	12	1	FALSE	0.1
8/17/2005	18:30	8/17/2005	18:30	26	6.7	0.1212	13	1	FALSE	0.1
8/17/2005	18:45	8/17/2005	18:45	26	6.7	0.1209	15	1.2	FALSE	0.1
8/17/2005	19:00	8/17/2005	19:00	26	6.7	0.1214	13	1	FALSE	0.1
8/17/2005	19:15	8/17/2005	19:15	26.1	6.7	0.1215	14	1.1	FALSE	0.1
8/17/2005	19:30	8/17/2005	19:30	26.1	6.7	0.1217	13	1	FALSE	0.1
8/17/2005	19:45	8/17/2005	19:45	26	6.7	0.1217	12	0.9	FALSE	0.1
8/17/2005	20:00	8/17/2005	20:00	26	6.7	0.1216	10	0.8	FALSE	0.1
8/17/2005	20:15	8/17/2005	20:15	26.1	6.7	0.1219	10	0.8	FALSE	0.1
8/17/2005	20:30	8/17/2005	20:30	26.2	6.7	0.122	13	1	FALSE	0.1
8/17/2005	20:45	8/17/2005	20:45	26.5	6.7	0.122	19	1.5	FALSE	0.1
8/17/2005	21:00	8/17/2005	21:00	26.1	6.7	0.1223	13	1	FALSE	0.1
8/17/2005	21:15	8/17/2005	21:15	26.2	6.7	0.1222	11	0.9	FALSE	0.1
8/17/2005	21:30	8/17/2005	21:30	26.3	6.7	0.1222	14	1.1	FALSE	0.1
8/17/2005	21:45	8/17/2005	21:45	26.3	6.7	0.1224	14	1.1	FALSE	0.1
8/17/2005	22:00	8/17/2005	22:00	26.4	6.7	0.1225	19	1.5	FALSE	0.1
8/17/2005	22:15	8/17/2005	22:15	26.3	6.7	0.1226	18	1.5	FALSE	0.1
8/17/2005	22:30	8/17/2005	22:30	26.2	6.7	0.1229	13	1.1	FALSE	0.1
8/17/2005	22:45	8/17/2005	22:45	26.2	6.7	0.1224	13	1.1	FALSE	0.1
8/17/2005	23:00	8/17/2005	23:00	26.3	6.7	0.1226	14	1.1	FALSE	0.1
8/17/2005	23:15	8/17/2005	23:15	26.3	6.7	0.1226	13	1	FALSE	0.1
8/17/2005	23:30	8/17/2005	23:30	26.4	6.7	0.1225	9	0.8	FALSE	0.1

8/17/2005	23:45	8/17/2005 23:45	26.4	6.7	0.1227	11	0.9	FALSE	0.1
8/18/2005	0:00	8/18/2005 00:00	26.2	6.7	0.1224	9	0.8	FALSE	0.1
8/18/2005	0:15	8/18/2005 00:15	26.3	6.7	0.1226	13	1	FALSE	0.1
8/18/2005	0:30	8/18/2005 00:30	26.3	6.7	0.1231	12	1	FALSE	0.1
8/18/2005	0:45	8/18/2005 00:45	26.3	6.7	0.1224	10	0.8	FALSE	0.1
8/18/2005	1:00	8/18/2005 01:00	26.3	6.7	0.1228	8	0.6	FALSE	0.1
8/18/2005	1:15	8/18/2005 01:15	26.3	6.7	0.1227	7	0.6	FALSE	0.1
8/18/2005	1:30	8/18/2005 01:30	26.3	6.7	0.123	10	0.8	FALSE	0.1
8/18/2005	1:45	8/18/2005 01:45	26.4	6.7	0.1223	9	0.7	FALSE	0.1
8/18/2005	2:00	8/18/2005 02:00	26.3	6.7	0.123	8	0.6	FALSE	0.1
8/18/2005	2:15	8/18/2005 02:15	26.4	6.7	0.1226	12	1	FALSE	0.1
8/18/2005	2:30	8/18/2005 02:30	26.4	6.7	0.1228	9	0.8	FALSE	0.1
8/18/2005	2:45	8/18/2005 02:45	26.4	6.7	0.1225	9	0.7	FALSE	0.1
8/18/2005	3:00	8/18/2005 03:00	26.5	6.7	0.123	12	1	FALSE	0.1
8/18/2005	3:15	8/18/2005 03:15	26.5	6.7	0.1226	9	0.8	FALSE	0.1
8/18/2005	3:30	8/18/2005 03:30	26.5	6.7	0.1223	13	1	FALSE	0.1
8/18/2005	3:45	8/18/2005 03:45	26.5	6.7	0.1228	10	0.8	FALSE	0.1
8/18/2005	4:00	8/18/2005 04:00	26.5	6.7	0.1231	6	0.5	FALSE	0.1
8/18/2005	4:15	8/18/2005 04:15	26.5	6.7	0.123	7	0.5	FALSE	0.1
8/18/2005	4:30	8/18/2005 04:30	26.6	6.7	0.1225	8	0.6	FALSE	0.1
8/18/2005	4:45	8/18/2005 04:45	26.5	6.7	0.1229	9	0.7	FALSE	0.1
8/18/2005	5:00	8/18/2005 05:00	26.4	6.7	0.1231	4	0.4	FALSE	0.1
8/18/2005	5:15	8/18/2005 05:15	26.5	6.7	0.1234	3	0.3	FALSE	0.1
8/18/2005	5:30	8/18/2005 05:30	26.4	6.7	0.1226	3	0.3	FALSE	0.1
8/18/2005	5:45	8/18/2005 05:45	26.4	6.7	0.1234	4	0.3	FALSE	0.1
8/18/2005	6:00	8/18/2005 06:00	26.4	6.7	0.1229	2	0.2	FALSE	0.1
8/18/2005	6:15	8/18/2005 06:15	26.5	6.7	0.1229	5	0.4	FALSE	0.1
8/18/2005	6:30	8/18/2005 06:30	26.5	6.7	0.123	7	0.6	FALSE	0.1
8/18/2005	6:45	8/18/2005 06:45	26.5	6.7	0.1224	15	1.2	FALSE	0.1
8/18/2005	7:00	8/18/2005 07:00	26.5	6.7	0.1229	4	0.3	FALSE	0.1
8/18/2005	7:15	8/18/2005 07:15	26.4	6.7	0.1235	5	0.4	FALSE	0.1
8/18/2005	7:30	8/18/2005 07:30	26.3	6.7	0.1226	2	0.2	FALSE	0.1
8/18/2005	7:45	8/18/2005 07:45	26.3	6.7	0.1229	2	0.2	FALSE	0.1
8/18/2005	8:00	8/18/2005 08:00	26.4	6.7	0.1237	3	0.3	FALSE	0.1
8/18/2005	8:15	8/18/2005 08:15	26.3	6.7	0.1225	4	0.3	FALSE	0.1
8/18/2005	8:30	8/18/2005 08:30	26.3	6.7	0.1245	2	0.1	FALSE	0.1
8/18/2005	8:45	8/18/2005 08:45	26.3	6.7	0.1235	4	0.3	FALSE	0.1
8/18/2005	9:00	8/18/2005 09:00	26.3	6.7	0.1232	2	0.2	FALSE	0.1
8/18/2005	9:15	8/18/2005 09:15	26.3	6.7	0.1236	6	0.5	FALSE	0.1
8/18/2005	9:30	8/18/2005 09:30	26.3	6.7	0.124	3	0.3	FALSE	0.1
8/18/2005	9:45	8/18/2005 09:45	26.3	6.7	0.123	2	0.2	FALSE	0.1
8/18/2005	10:00	8/18/2005 10:00	26.2	6.7	0.1236	6	0.5	FALSE	0.1
8/18/2005	10:15	8/18/2005 10:15	26.3	6.7	0.1226	8	0.7	FALSE	0.1
8/18/2005	10:30	8/18/2005 10:30	26.3	6.7	0.1224	8	0.6	FALSE	0.1
8/18/2005	10:45	8/18/2005 10:45	26.3	6.7	0.124	4	0.3	FALSE	0.1
8/18/2005	11:00	8/18/2005 11:00	26.3	6.7	0.1232	8	0.6	FALSE	0.1
8/18/2005	11:15	8/18/2005 11:15	26.3	6.7	0.1236	6	0.5	FALSE	0.1
8/18/2005	11:30	8/18/2005 11:30	26.3	6.7	0.1231	6	0.5	FALSE	0.1
8/18/2005	11:45	8/18/2005 11:45	28.6	7.1	0.211	84	6.5	FALSE	0.1
8/18/2005	12:00	8/18/2005 12:00	27.8	7.1	0.227	83	6.5	FALSE	0.1


100605 Lake Edwards/Smithport Lake
Site Number: CB01, Site Name: Caney Bayou off of Bradshaw Road
DO & Temperature (deg C) vs. Date/Time
DO mg/L
DO Criteria mg/L
Temp øC
DO STATISTICS
Min DO = 0.1 mg/L
Max DO = 6.5 mg/L
Average DO = 1.02 mg/L
25th Percentile = 0.7 mg/L
50th Percentile = 1 mg/L
% Failing Criteria = 98.97 %
Std. Deviation = 0.67 mg/L
Variance = 0.45 mg/L
Dissolved Oxygen (mg/L)
Temperature (C)
Date/Time
0
1
2
3
4
5
6
7
25
25.5
26
26.5
27
27.5
28
28.5
29
8/16/2005 00:00
8/16/2005 12:00
8/17/2005 00:00
8/17/2005 12:00
8/18/2005 00:00
8/18/2005 12:00
8/19/2005 00:00


100605 Lake Edwards/Smithport Lake
Site Number: CB01, Site Name: Caney Bayou off of Bradshaw Road
DO & pH vs. Date/Time
DO mg/L
DO Criteria mg/L
pH Units
DO STATISTICS
Min DO = 0.1 mg/L
Max DO = 6.5 mg/L
Average DO = 1.02 mg/L
25th Percentile = 0.7 mg/L
50th Percentile = 1 mg/L
% Failing Criteria = 98.97 %
Std. Deviation = 0.67 mg/L
Variance = 0.45 mg/L
Dissolved Oxygen (mg/L)
pH
Date/Time
0
1
2
3
4
5
6
7
6.5
6.6
6.7
6.8
6.9
7
7.1
7.2
8/16/2005 00:00
8/16/2005 12:00
8/17/2005 00:00
8/17/2005 12:00
8/18/2005 00:00
8/18/2005 12:00
8/19/2005 00:00



100605 Lake Edwards/Smithport Lake Site Number: CB01 Site Name: Caney Bayou off of Bradshaw Road					
	Temp deg C	pH	SpCond uS/cm	DO %	DO mg/L
Minimum	25.30	6.60	0.11	2.00	0.10
Maximum	28.60	7.10	0.22	84.00	6.50
Average	25.97	6.66	0.12	12.58	1.02
Geometric Mean	25.96	6.66	0.12	10.91	0.89
25th Percentile	25.70	6.60	0.11	9.00	0.70
30th Percentile	25.80	6.60	0.11	10.00	0.80
40th Percentile	25.80	6.60	0.12	11.00	0.90
50th Percentile	25.90	6.70	0.12	12.00	1.00
Standard Deviation	0.41	0.07	0.01	8.58	0.67
Variance	0.16	0.00	0.00	73.56	0.45

Data Row Count	195
Total Values Failing DO Criteria	193
Percent failing DO Criteria	98.97 %

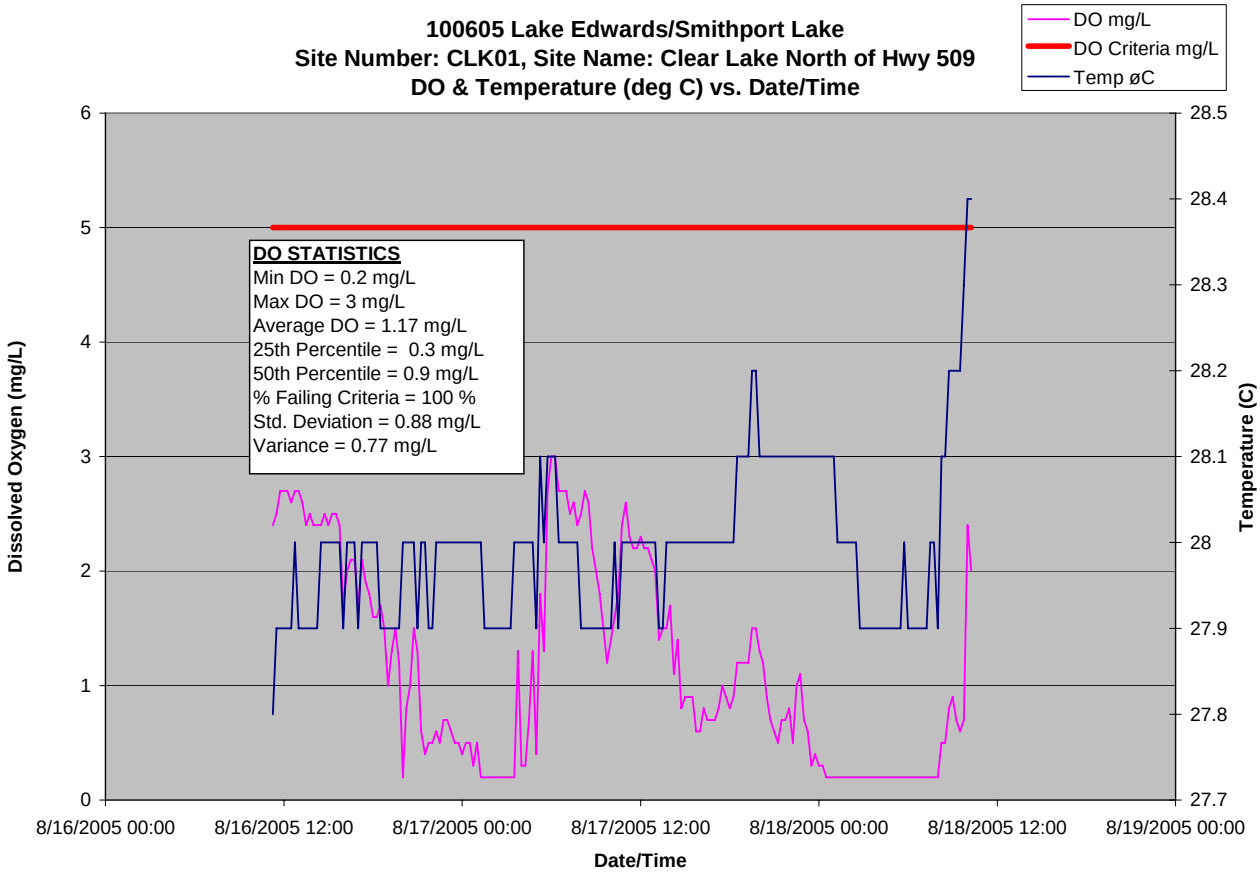
CLK01 Continuous Monitoring Values for Lake Edwards/Smithport Lake Subsegment 100605

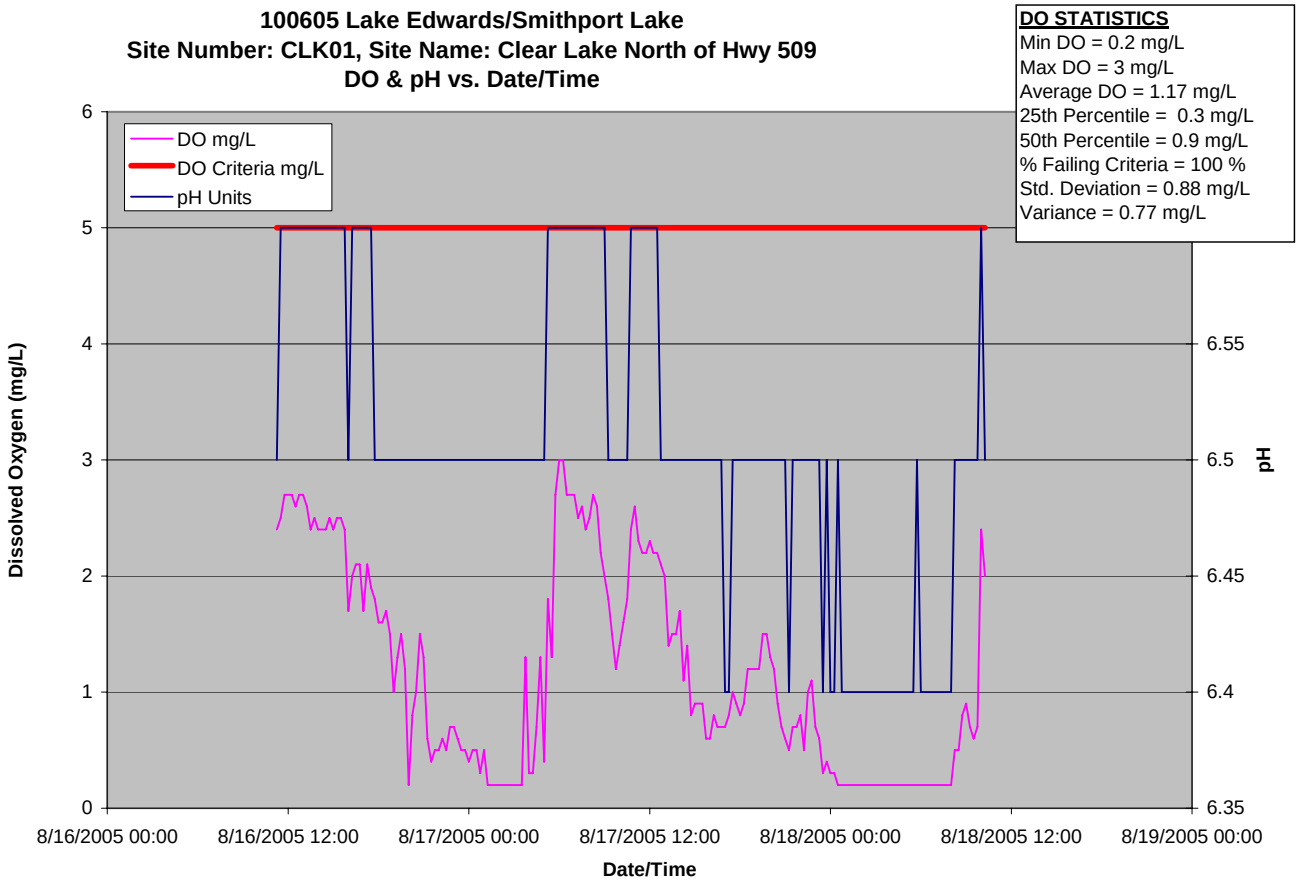
Date MMDDYY	Time HHMM	Date+Time MMDDYYYY HHMM	Temp øC	pH Units	SpCond æS/cm	DO% Sat	DO mg/L	VENTED DEPTH True/False	SALINITY ppt
8/16/2005	11:15	8/16/2005 11:15	27.8	6.5	130	31	2.4	FALSE	0.1
8/16/2005	11:30	8/16/2005 11:30	27.9	6.6	130	32	2.5	FALSE	0.1
8/16/2005	11:45	8/16/2005 11:45	27.9	6.6	130	34	2.7	FALSE	0.1
8/16/2005	12:00	8/16/2005 12:00	27.9	6.6	129	34	2.7	FALSE	0.1
8/16/2005	12:15	8/16/2005 12:15	27.9	6.6	129	34	2.7	FALSE	0.1
8/16/2005	12:30	8/16/2005 12:30	27.9	6.6	129	34	2.6	FALSE	0.1
8/16/2005	12:45	8/16/2005 12:45	28	6.6	129	34	2.7	FALSE	0.1
8/16/2005	13:00	8/16/2005 13:00	27.9	6.6	129	35	2.7	FALSE	0.1
8/16/2005	13:15	8/16/2005 13:15	27.9	6.6	129	34	2.6	FALSE	0.1
8/16/2005	13:30	8/16/2005 13:30	27.9	6.6	130	31	2.4	FALSE	0.1
8/16/2005	13:45	8/16/2005 13:45	27.9	6.6	129	32	2.5	FALSE	0.1
8/16/2005	14:00	8/16/2005 14:00	27.9	6.6	130	30	2.4	FALSE	0.1
8/16/2005	14:15	8/16/2005 14:15	27.9	6.6	129	31	2.4	FALSE	0.1
8/16/2005	14:30	8/16/2005 14:30	28	6.6	129	30	2.4	FALSE	0.1
8/16/2005	14:45	8/16/2005 14:45	28	6.6	129	33	2.5	FALSE	0.1
8/16/2005	15:00	8/16/2005 15:00	28	6.6	129	31	2.4	FALSE	0.1
8/16/2005	15:15	8/16/2005 15:15	28	6.6	129	32	2.5	FALSE	0.1
8/16/2005	15:30	8/16/2005 15:30	28	6.6	129	32	2.5	FALSE	0.1
8/16/2005	15:45	8/16/2005 15:45	28	6.6	129	31	2.4	FALSE	0.1
8/16/2005	16:00	8/16/2005 16:00	27.9	6.5	129	22	1.7	FALSE	0.1
8/16/2005	16:15	8/16/2005 16:15	28	6.6	129	25	2	FALSE	0.1
8/16/2005	16:30	8/16/2005 16:30	28	6.6	129	27	2.1	FALSE	0.1
8/16/2005	16:45	8/16/2005 16:45	28	6.6	130	27	2.1	FALSE	0.1
8/16/2005	17:00	8/16/2005 17:00	27.9	6.6	130	21	1.7	FALSE	0.1
8/16/2005	17:15	8/16/2005 17:15	28	6.6	130	27	2.1	FALSE	0.1
8/16/2005	17:30	8/16/2005 17:30	28	6.6	130	24	1.9	FALSE	0.1
8/16/2005	17:45	8/16/2005 17:45	28	6.5	130	23	1.8	FALSE	0.1
8/16/2005	18:00	8/16/2005 18:00	28	6.5	130	21	1.6	FALSE	0.1
8/16/2005	18:15	8/16/2005 18:15	28	6.5	130	21	1.6	FALSE	0.1
8/16/2005	18:30	8/16/2005 18:30	27.9	6.5	130	22	1.7	FALSE	0.1
8/16/2005	18:45	8/16/2005 18:45	27.9	6.5	130	19	1.5	FALSE	0.1
8/16/2005	19:00	8/16/2005 19:00	27.9	6.5	130	12	1	FALSE	0.1
8/16/2005	19:15	8/16/2005 19:15	27.9	6.5	130	16	1.3	FALSE	0.1
8/16/2005	19:30	8/16/2005 19:30	27.9	6.5	130	19	1.5	FALSE	0.1
8/16/2005	19:45	8/16/2005 19:45	27.9	6.5	131	15	1.2	FALSE	0.1
8/16/2005	20:00	8/16/2005 20:00	28	6.5	128	3	0.2	FALSE	0.1
8/16/2005	20:15	8/16/2005 20:15	28	6.5	128	11	0.8	FALSE	0.1
8/16/2005	20:30	8/16/2005 20:30	28	6.5	128	13	1	FALSE	0.1
8/16/2005	20:45	8/16/2005 20:45	28	6.5	130	19	1.5	FALSE	0.1
8/16/2005	21:00	8/16/2005 21:00	27.9	6.5	132	16	1.3	FALSE	0.1
8/16/2005	21:15	8/16/2005 21:15	28	6.5	131	7	0.6	FALSE	0.1
8/16/2005	21:30	8/16/2005 21:30	28	6.5	131	5	0.4	FALSE	0.1
8/16/2005	21:45	8/16/2005 21:45	27.9	6.5	129	7	0.5	FALSE	0.1
8/16/2005	22:00	8/16/2005 22:00	27.9	6.5	129	6	0.5	FALSE	0.1
8/16/2005	22:15	8/16/2005 22:15	28	6.5	129	7	0.6	FALSE	0.1

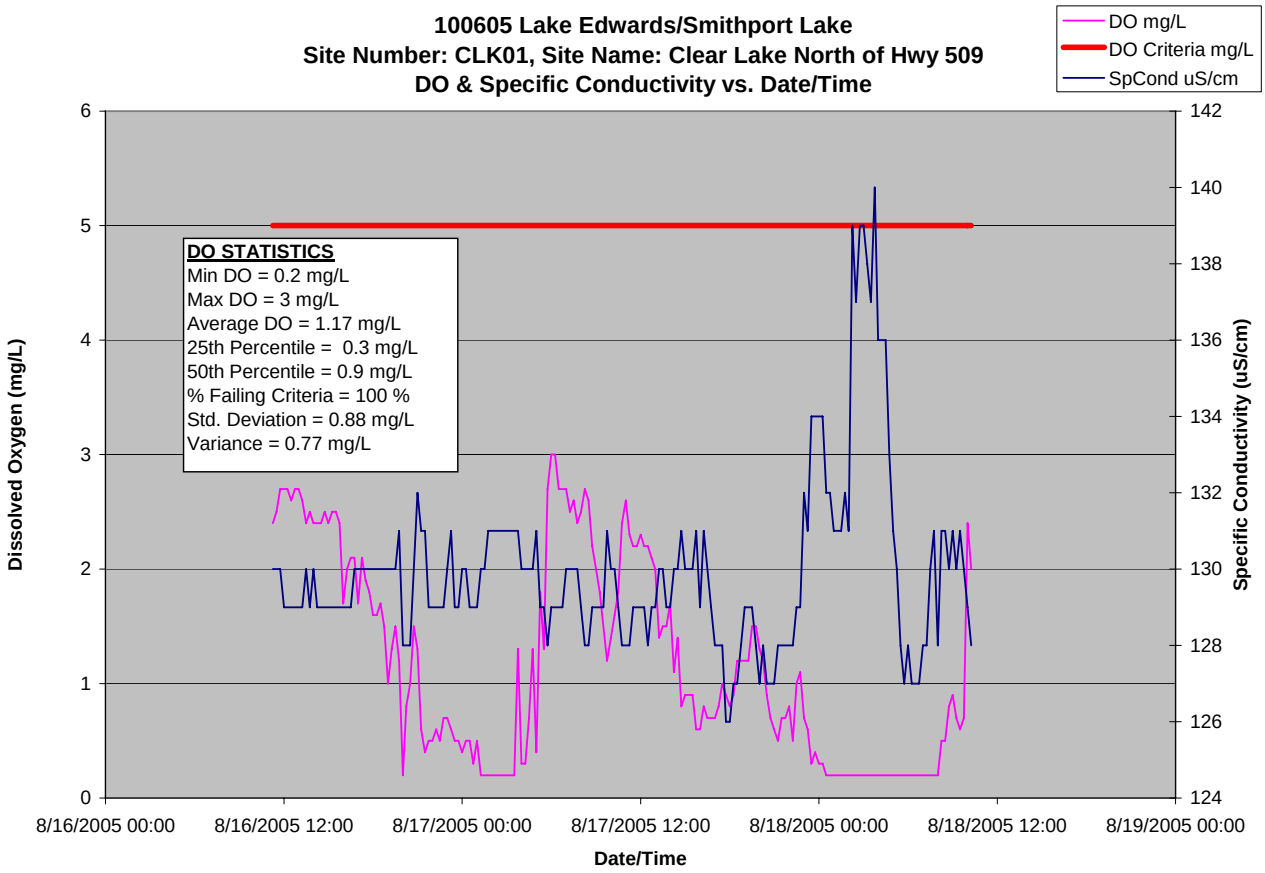
8/16/2005	22:30	8/16/2005 22:30	28	6.5	129	7	0.5	FALSE	0.1
8/16/2005	22:45	8/16/2005 22:45	28	6.5	129	9	0.7	FALSE	0.1
8/16/2005	23:00	8/16/2005 23:00	28	6.5	130	9	0.7	FALSE	0.1
8/16/2005	23:15	8/16/2005 23:15	28	6.5	131	7	0.6	FALSE	0.1
8/16/2005	23:30	8/16/2005 23:30	28	6.5	129	7	0.5	FALSE	0.1
8/16/2005	23:45	8/16/2005 23:45	28	6.5	129	6	0.5	FALSE	0.1
8/17/2005	0:00	8/17/2005 00:00	28	6.5	130	5	0.4	FALSE	0.1
8/17/2005	0:15	8/17/2005 00:15	28	6.5	130	6	0.5	FALSE	0.1
8/17/2005	0:30	8/17/2005 00:30	28	6.5	129	6	0.5	FALSE	0.1
8/17/2005	0:45	8/17/2005 00:45	28	6.5	129	4	0.3	FALSE	0.1
8/17/2005	1:00	8/17/2005 01:00	28	6.5	129	6	0.5	FALSE	0.1
8/17/2005	1:15	8/17/2005 01:15	28	6.5	130	3	0.2	FALSE	0.1
8/17/2005	1:30	8/17/2005 01:30	27.9	6.5	130	2	0.2	FALSE	0.1
8/17/2005	1:45	8/17/2005 01:45	27.9	6.5	131	3	0.2	FALSE	0.1
8/17/2005	2:00	8/17/2005 02:00	27.9	6.5	131	2	0.2	FALSE	0.1
8/17/2005	2:15	8/17/2005 02:15	27.9	6.5	131	2	0.2	FALSE	0.1
8/17/2005	2:30	8/17/2005 02:30	27.9	6.5	131	2	0.2	FALSE	0.1
8/17/2005	2:45	8/17/2005 02:45	27.9	6.5	131	2	0.2	FALSE	0.1
8/17/2005	3:00	8/17/2005 03:00	27.9	6.5	131	2	0.2	FALSE	0.1
8/17/2005	3:15	8/17/2005 03:15	27.9	6.5	131	3	0.2	FALSE	0.1
8/17/2005	3:30	8/17/2005 03:30	28	6.5	131	3	0.2	FALSE	0.1
8/17/2005	3:45	8/17/2005 03:45	28	6.5	131	16	1.3	FALSE	0.1
8/17/2005	4:00	8/17/2005 04:00	28	6.5	130	3	0.3	FALSE	0.1
8/17/2005	4:15	8/17/2005 04:15	28	6.5	130	4	0.3	FALSE	0.1
8/17/2005	4:30	8/17/2005 04:30	28	6.5	130	9	0.7	FALSE	0.1
8/17/2005	4:45	8/17/2005 04:45	28	6.5	130	17	1.3	FALSE	0.1
8/17/2005	5:00	8/17/2005 05:00	27.9	6.5	131	5	0.4	FALSE	0.1
8/17/2005	5:15	8/17/2005 05:15	28.1	6.6	129	23	1.8	FALSE	0.1
8/17/2005	5:30	8/17/2005 05:30	28	6.6	129	16	1.3	FALSE	0.1
8/17/2005	5:45	8/17/2005 05:45	28.1	6.6	128	35	2.7	FALSE	0.1
8/17/2005	6:00	8/17/2005 06:00	28.1	6.6	129	39	3	FALSE	0.1
8/17/2005	6:15	8/17/2005 06:15	28.1	6.6	129	38	3	FALSE	0.1
8/17/2005	6:30	8/17/2005 06:30	28	6.6	129	35	2.7	FALSE	0.1
8/17/2005	6:45	8/17/2005 06:45	28	6.6	129	34	2.7	FALSE	0.1
8/17/2005	7:00	8/17/2005 07:00	28	6.6	130	34	2.7	FALSE	0.1
8/17/2005	7:15	8/17/2005 07:15	28	6.6	130	32	2.5	FALSE	0.1
8/17/2005	7:30	8/17/2005 07:30	28	6.6	130	33	2.6	FALSE	0.1
8/17/2005	7:45	8/17/2005 07:45	28	6.6	130	31	2.4	FALSE	0.1
8/17/2005	8:00	8/17/2005 08:00	27.9	6.6	129	32	2.5	FALSE	0.1
8/17/2005	8:15	8/17/2005 08:15	27.9	6.6	128	34	2.7	FALSE	0.1
8/17/2005	8:30	8/17/2005 08:30	27.9	6.6	128	33	2.6	FALSE	0.1
8/17/2005	8:45	8/17/2005 08:45	27.9	6.6	129	28	2.2	FALSE	0.1
8/17/2005	9:00	8/17/2005 09:00	27.9	6.6	129	25	2	FALSE	0.1
8/17/2005	9:15	8/17/2005 09:15	27.9	6.5	129	23	1.8	FALSE	0.1
8/17/2005	9:30	8/17/2005 09:30	27.9	6.5	129	19	1.5	FALSE	0.1
8/17/2005	9:45	8/17/2005 09:45	27.9	6.5	131	16	1.2	FALSE	0.1
8/17/2005	10:00	8/17/2005 10:00	27.9	6.5	130	17	1.4	FALSE	0.1
8/17/2005	10:15	8/17/2005 10:15	28	6.5	130	20	1.6	FALSE	0.1
8/17/2005	10:30	8/17/2005 10:30	27.9	6.5	129	23	1.8	FALSE	0.1
8/17/2005	10:45	8/17/2005 10:45	28	6.6	128	31	2.4	FALSE	0.1

8/17/2005	11:00	8/17/2005 11:00	28	6.6	128	34	2.6	FALSE	0.1
8/17/2005	11:15	8/17/2005 11:15	28	6.6	128	30	2.3	FALSE	0.1
8/17/2005	11:30	8/17/2005 11:30	28	6.6	129	28	2.2	FALSE	0.1
8/17/2005	11:45	8/17/2005 11:45	28	6.6	129	28	2.2	FALSE	0.1
8/17/2005	12:00	8/17/2005 12:00	28	6.6	129	29	2.3	FALSE	0.1
8/17/2005	12:15	8/17/2005 12:15	28	6.6	129	29	2.2	FALSE	0.1
8/17/2005	12:30	8/17/2005 12:30	28	6.6	128	28	2.2	FALSE	0.1
8/17/2005	12:45	8/17/2005 12:45	28	6.5	129	27	2.1	FALSE	0.1
8/17/2005	13:00	8/17/2005 13:00	28	6.5	129	26	2	FALSE	0.1
8/17/2005	13:15	8/17/2005 13:15	27.9	6.5	130	18	1.4	FALSE	0.1
8/17/2005	13:30	8/17/2005 13:30	27.9	6.5	130	19	1.5	FALSE	0.1
8/17/2005	13:45	8/17/2005 13:45	28	6.5	129	19	1.5	FALSE	0.1
8/17/2005	14:00	8/17/2005 14:00	28	6.5	129	22	1.7	FALSE	0.1
8/17/2005	14:15	8/17/2005 14:15	28	6.5	130	13	1.1	FALSE	0.1
8/17/2005	14:30	8/17/2005 14:30	28	6.5	130	18	1.4	FALSE	0.1
8/17/2005	14:45	8/17/2005 14:45	28	6.5	131	10	0.8	FALSE	0.1
8/17/2005	15:00	8/17/2005 15:00	28	6.5	130	12	0.9	FALSE	0.1
8/17/2005	15:15	8/17/2005 15:15	28	6.5	130	11	0.9	FALSE	0.1
8/17/2005	15:30	8/17/2005 15:30	28	6.5	130	12	0.9	FALSE	0.1
8/17/2005	15:45	8/17/2005 15:45	28	6.5	131	8	0.6	FALSE	0.1
8/17/2005	16:00	8/17/2005 16:00	28	6.5	129	8	0.6	FALSE	0.1
8/17/2005	16:15	8/17/2005 16:15	28	6.5	131	10	0.8	FALSE	0.1
8/17/2005	16:30	8/17/2005 16:30	28	6.5	130	9	0.7	FALSE	0.1
8/17/2005	16:45	8/17/2005 16:45	28	6.5	129	9	0.7	FALSE	0.1
8/17/2005	17:00	8/17/2005 17:00	28	6.4	128	9	0.7	FALSE	0.1
8/17/2005	17:15	8/17/2005 17:15	28	6.4	128	10	0.8	FALSE	0.1
8/17/2005	17:30	8/17/2005 17:30	28	6.5	128	12	1	FALSE	0.1
8/17/2005	17:45	8/17/2005 17:45	28	6.5	126	11	0.9	FALSE	0.1
8/17/2005	18:00	8/17/2005 18:00	28	6.5	126	11	0.8	FALSE	0.1
8/17/2005	18:15	8/17/2005 18:15	28	6.5	127	12	0.9	FALSE	0.1
8/17/2005	18:30	8/17/2005 18:30	28.1	6.5	127	15	1.2	FALSE	0.1
8/17/2005	18:45	8/17/2005 18:45	28.1	6.5	128	15	1.2	FALSE	0.1
8/17/2005	19:00	8/17/2005 19:00	28.1	6.5	129	16	1.2	FALSE	0.1
8/17/2005	19:15	8/17/2005 19:15	28.1	6.5	129	15	1.2	FALSE	0.1
8/17/2005	19:30	8/17/2005 19:30	28.2	6.5	129	19	1.5	FALSE	0.1
8/17/2005	19:45	8/17/2005 19:45	28.2	6.5	128	19	1.5	FALSE	0.1
8/17/2005	20:00	8/17/2005 20:00	28.1	6.5	127	17	1.3	FALSE	0.1
8/17/2005	20:15	8/17/2005 20:15	28.1	6.5	128	15	1.2	FALSE	0.1
8/17/2005	20:30	8/17/2005 20:30	28.1	6.5	127	12	0.9	FALSE	0.1
8/17/2005	20:45	8/17/2005 20:45	28.1	6.5	127	9	0.7	FALSE	0.1
8/17/2005	21:00	8/17/2005 21:00	28.1	6.5	127	8	0.6	FALSE	0.1
8/17/2005	21:15	8/17/2005 21:15	28.1	6.4	128	6	0.5	FALSE	0.1
8/17/2005	21:30	8/17/2005 21:30	28.1	6.5	128	8	0.7	FALSE	0.1
8/17/2005	21:45	8/17/2005 21:45	28.1	6.5	128	9	0.7	FALSE	0.1
8/17/2005	22:00	8/17/2005 22:00	28.1	6.5	128	10	0.8	FALSE	0.1
8/17/2005	22:15	8/17/2005 22:15	28.1	6.5	128	7	0.5	FALSE	0.1
8/17/2005	22:30	8/17/2005 22:30	28.1	6.5	129	13	1	FALSE	0.1
8/17/2005	22:45	8/17/2005 22:45	28.1	6.5	129	14	1.1	FALSE	0.1
8/17/2005	23:00	8/17/2005 23:00	28.1	6.5	132	10	0.7	FALSE	0.1
8/17/2005	23:15	8/17/2005 23:15	28.1	6.5	131	7	0.6	FALSE	0.1

8/17/2005	23:30	8/17/2005 23:30	28.1	6.4	134	4	0.3	FALSE	0.1
8/17/2005	23:45	8/17/2005 23:45	28.1	6.5	134	5	0.4	FALSE	0.1
8/18/2005	0:00	8/18/2005 00:00	28.1	6.4	134	3	0.3	FALSE	0.1
8/18/2005	0:15	8/18/2005 00:15	28.1	6.4	134	4	0.3	FALSE	0.1
8/18/2005	0:30	8/18/2005 00:30	28.1	6.5	132	3	0.2	FALSE	0.1
8/18/2005	0:45	8/18/2005 00:45	28.1	6.4	132	2	0.2	FALSE	0.1
8/18/2005	1:00	8/18/2005 01:00	28.1	6.4	131	2	0.2	FALSE	0.1
8/18/2005	1:15	8/18/2005 01:15	28	6.4	131	2	0.2	FALSE	0.1
8/18/2005	1:30	8/18/2005 01:30	28	6.4	131	2	0.2	FALSE	0.1
8/18/2005	1:45	8/18/2005 01:45	28	6.4	132	2	0.2	FALSE	0.1
8/18/2005	2:00	8/18/2005 02:00	28	6.4	131	2	0.2	FALSE	0.1
8/18/2005	2:15	8/18/2005 02:15	28	6.4	139	2	0.2	FALSE	0.1
8/18/2005	2:30	8/18/2005 02:30	28	6.4	137	2	0.2	FALSE	0.1
8/18/2005	2:45	8/18/2005 02:45	27.9	6.4	139	2	0.2	FALSE	0.1
8/18/2005	3:00	8/18/2005 03:00	27.9	6.4	139	2	0.2	FALSE	0.1
8/18/2005	3:15	8/18/2005 03:15	27.9	6.4	138	2	0.2	FALSE	0.1
8/18/2005	3:30	8/18/2005 03:30	27.9	6.4	137	2	0.2	FALSE	0.1
8/18/2005	3:45	8/18/2005 03:45	27.9	6.4	140	2	0.2	FALSE	0.1
8/18/2005	4:00	8/18/2005 04:00	27.9	6.4	136	2	0.2	FALSE	0.1
8/18/2005	4:15	8/18/2005 04:15	27.9	6.4	136	2	0.2	FALSE	0.1
8/18/2005	4:30	8/18/2005 04:30	27.9	6.4	136	2	0.2	FALSE	0.1
8/18/2005	4:45	8/18/2005 04:45	27.9	6.4	133	2	0.2	FALSE	0.1
8/18/2005	5:00	8/18/2005 05:00	27.9	6.4	131	2	0.2	FALSE	0.1
8/18/2005	5:15	8/18/2005 05:15	27.9	6.4	130	2	0.2	FALSE	0.1
8/18/2005	5:30	8/18/2005 05:30	27.9	6.4	128	2	0.2	FALSE	0.1
8/18/2005	5:45	8/18/2005 05:45	28	6.5	127	2	0.2	FALSE	0.1
8/18/2005	6:00	8/18/2005 06:00	27.9	6.4	128	2	0.2	FALSE	0.1
8/18/2005	6:15	8/18/2005 06:15	27.9	6.4	127	2	0.2	FALSE	0.1
8/18/2005	6:30	8/18/2005 06:30	27.9	6.4	127	2	0.2	FALSE	0.1
8/18/2005	6:45	8/18/2005 06:45	27.9	6.4	127	2	0.2	FALSE	0.1
8/18/2005	7:00	8/18/2005 07:00	27.9	6.4	128	2	0.2	FALSE	0.1
8/18/2005	7:15	8/18/2005 07:15	27.9	6.4	128	2	0.2	FALSE	0.1
8/18/2005	7:30	8/18/2005 07:30	28	6.4	130	2	0.2	FALSE	0.1
8/18/2005	7:45	8/18/2005 07:45	28	6.4	131	3	0.2	FALSE	0.1
8/18/2005	8:00	8/18/2005 08:00	27.9	6.4	128	3	0.2	FALSE	0.1
8/18/2005	8:15	8/18/2005 08:15	28.1	6.5	131	6	0.5	FALSE	0.1
8/18/2005	8:30	8/18/2005 08:30	28.1	6.5	131	7	0.5	FALSE	0.1
8/18/2005	8:45	8/18/2005 08:45	28.2	6.5	130	11	0.8	FALSE	0.1
8/18/2005	9:00	8/18/2005 09:00	28.2	6.5	131	11	0.9	FALSE	0.1
8/18/2005	9:15	8/18/2005 09:15	28.2	6.5	130	9	0.7	FALSE	0.1
8/18/2005	9:30	8/18/2005 09:30	28.2	6.5	131	7	0.6	FALSE	0.1
8/18/2005	9:45	8/18/2005 09:45	28.3	6.5	130	9	0.7	FALSE	0.1
8/18/2005	10:00	8/18/2005 10:00	28.4	6.6	129	30	2.4	FALSE	0.1
8/18/2005	10:15	8/18/2005 10:15	28.4	6.5	128	26	2	FALSE	0.1


100605 Lake Edwards/Smithport Lake
Site Number: CLK01, Site Name: Clear Lake North of Hwy 509
DO & Temperature (deg C) vs. Date/Time
DO mg/L
DO Criteria mg/L
Temp øC
DO STATISTICS
Min DO = 0.2 mg/L
Max DO = 3 mg/L
Average DO = 1.17 mg/L
25th Percentile = 0.3 mg/L
50th Percentile = 0.9 mg/L
% Failing Criteria = 100 %
Std. Deviation = 0.88 mg/L
Variance = 0.77 mg/L
Dissolved Oxygen (mg/L)
Temperature (C)
Date/Time
0
1
2
3
4
5
6
27.7
27.8
27.9
28
28.1
28.2
28.3
28.4
28.5
8/16/2005 00:00
8/16/2005 12:00
8/17/2005 00:00
8/17/2005 12:00
8/18/2005 00:00
8/18/2005 12:00
8/19/2005 00:00


100605 Lake Edwards/Smithport Lake
Site Number: CLK01, Site Name: Clear Lake North of Hwy 509
DO & pH vs. Date/Time
DO STATISTICS
Min DO = 0.2 mg/L
Max DO = 3 mg/L
Average DO = 1.17 mg/L
25th Percentile = 0.3 mg/L
50th Percentile = 0.9 mg/L
% Failing Criteria = 100 %
Std. Deviation = 0.88 mg/L
Variance = 0.77 mg/L
DO mg/L
DO Criteria mg/L
pH Units
Dissolved Oxygen (mg/L)
pH
Date/Time
0
1
2
3
4
5
6
6.35
6.4
6.45
6.5
6.55
8/16/2005 00:00
8/16/2005 12:00
8/17/2005 00:00
8/17/2005 12:00
8/18/2005 00:00
8/18/2005 12:00
8/19/2005 00:00



100605 Lake Edwards/Smithport Lake
Site Number: CLK01
Site Name: Clear Lake North of Hwy 509

	Temp deg C	pH	SpCond uS/cm	DO %	DO mg/L
Minimum	27.80	6.40	126.00	2.00	0.20
Maximum	28.40	6.60	140.00	39.00	3.00
Average	27.99	6.51	129.94	14.89	1.17
Geometric Mean	27.99	6.51		9.91	0.81
25th Percentile	27.90	6.50	129.00	4.00	0.30
30th Percentile	27.90	6.50	129.00	6.00	0.50
40th Percentile	28.00	6.50	129.00	9.00	0.70
50th Percentile	28.00	6.50	130.00	12.00	0.90
Standard Deviation	0.09	0.07	2.33	11.37	0.88
Variance	0.01	0.00	5.42	129.25	0.77

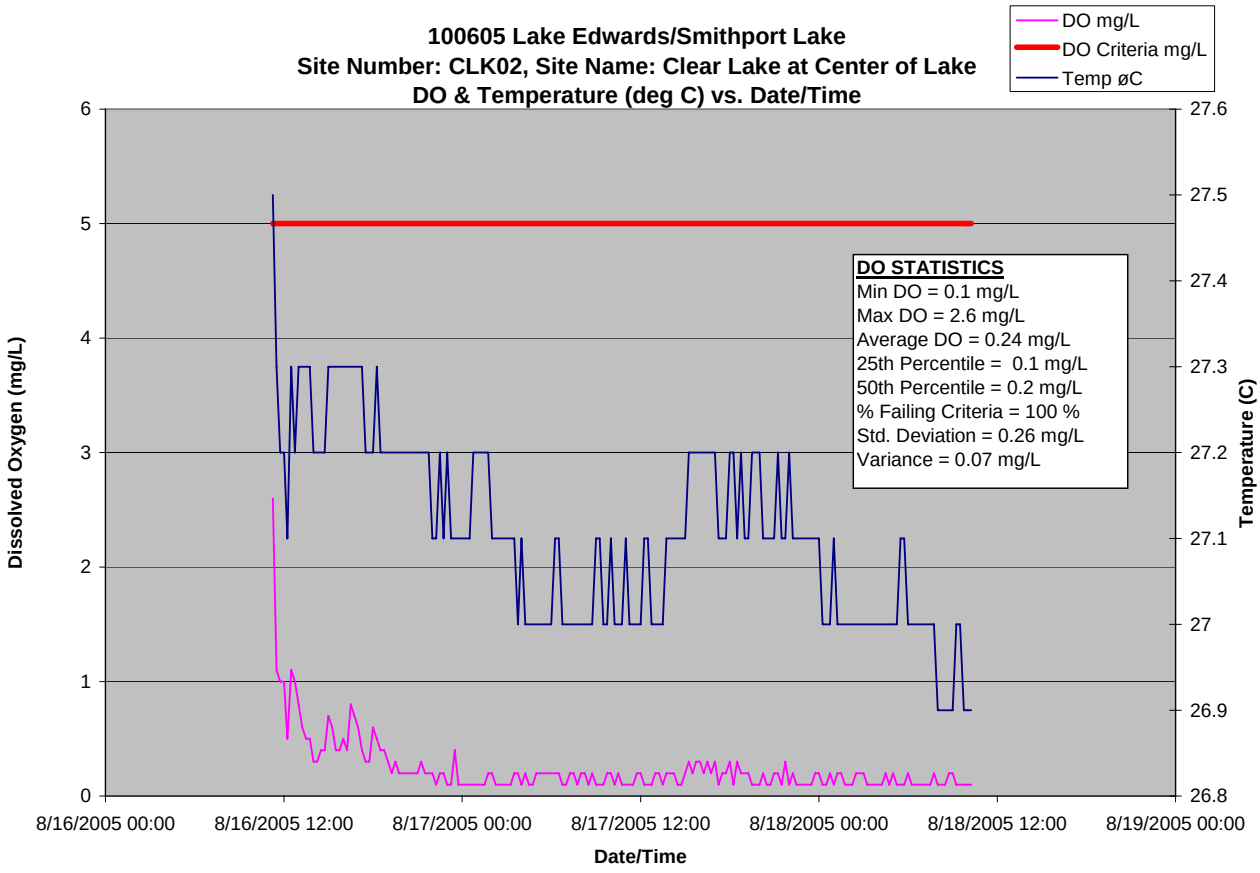
Data Row Count	189
Total Values Failing DO Criteria	189
Percent failing DO Criteria	100.00 %

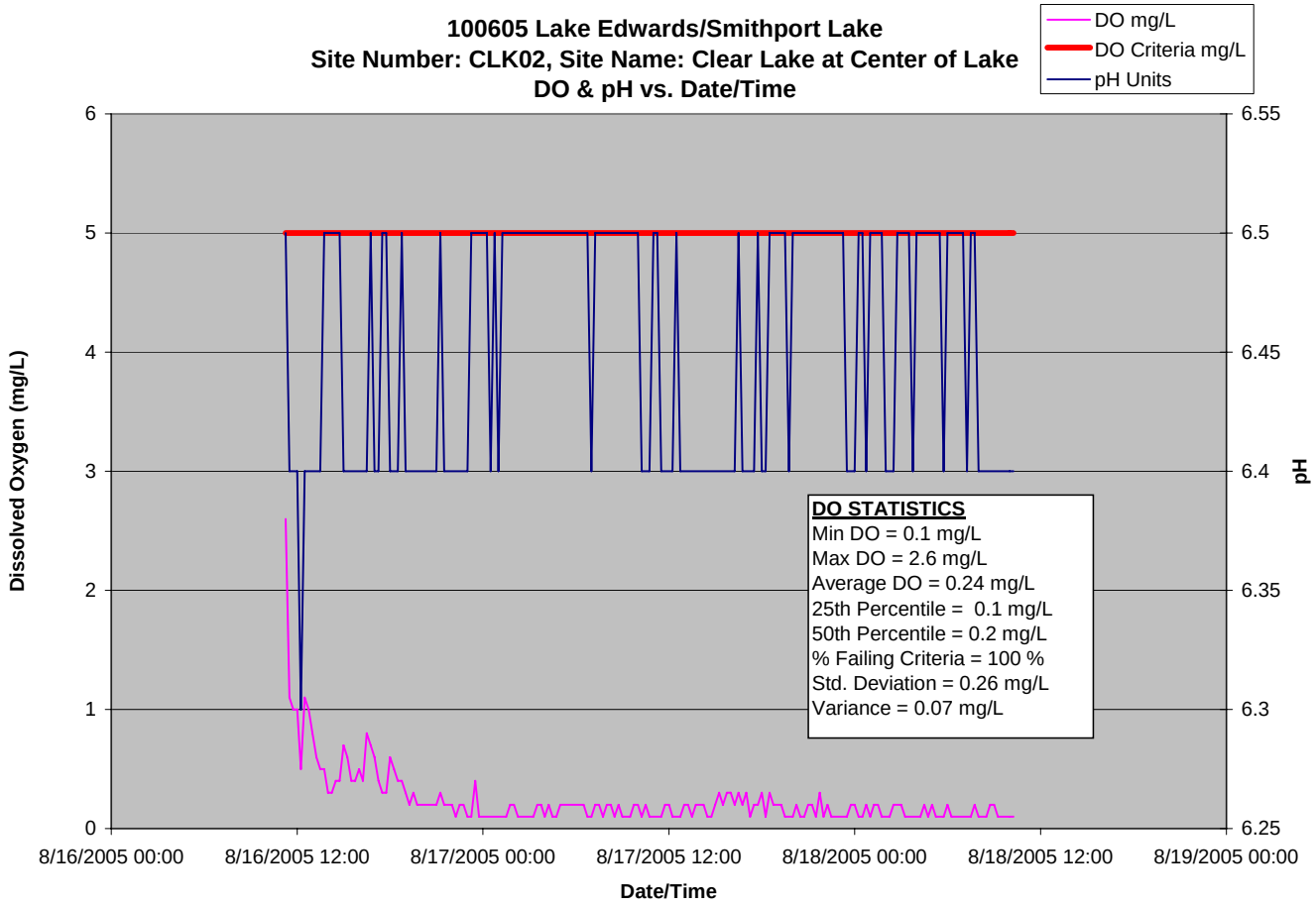
CLK02 Continuous Monitoring Data for Lake Edwards/Smithport Lake Subsegment 100605									
Date	Time	Date+Time	Temp	pH	SpCond	DO%	DO	VENTED DEPTH	SALINITY
MMDDYY	HHMM	MMDDYYYY HHMM	øC	Units	æS/cm	Sat	mg/L	True/False	ppt
8/16/2005	11:15	8/16/2005 11:15	27.5	6.5	0.1446	33	2.6	FALSE	0.1
8/16/2005	11:30	8/16/2005 11:30	27.3	6.4	0.1536	14	1.1	FALSE	0.1
8/16/2005	11:45	8/16/2005 11:45	27.2	6.4	0.1563	12	1	FALSE	0.1
8/16/2005	12:00	8/16/2005 12:00	27.2	6.4	0.1561	12	1	FALSE	0.1
8/16/2005	12:15	8/16/2005 12:15	27.1	6.3	0.1609	6	0.5	FALSE	0.1
8/16/2005	12:30	8/16/2005 12:30	27.3	6.4	0.1543	14	1.1	FALSE	0.1
8/16/2005	12:45	8/16/2005 12:45	27.2	6.4	0.1569	13	1	FALSE	0.1
8/16/2005	13:00	8/16/2005 13:00	27.3	6.4	0.1527	10	0.8	FALSE	0.1
8/16/2005	13:15	8/16/2005 13:15	27.3	6.4	0.1536	8	0.6	FALSE	0.1
8/16/2005	13:30	8/16/2005 13:30	27.3	6.4	0.1487	7	0.5	FALSE	0.1
8/16/2005	13:45	8/16/2005 13:45	27.3	6.5	0.1399	6	0.5	FALSE	0.1
8/16/2005	14:00	8/16/2005 14:00	27.2	6.5	0.1385	3	0.3	FALSE	0.1
8/16/2005	14:15	8/16/2005 14:15	27.2	6.5	0.1384	4	0.3	FALSE	0.1
8/16/2005	14:30	8/16/2005 14:30	27.2	6.5	0.14	5	0.4	FALSE	0.1
8/16/2005	14:45	8/16/2005 14:45	27.2	6.5	0.1403	5	0.4	FALSE	0.1
8/16/2005	15:00	8/16/2005 15:00	27.3	6.4	0.1524	9	0.7	FALSE	0.1
8/16/2005	15:15	8/16/2005 15:15	27.3	6.4	0.1521	7	0.6	FALSE	0.1
8/16/2005	15:30	8/16/2005 15:30	27.3	6.4	0.1487	5	0.4	FALSE	0.1
8/16/2005	15:45	8/16/2005 15:45	27.3	6.4	0.1436	6	0.4	FALSE	0.1
8/16/2005	16:00	8/16/2005 16:00	27.3	6.4	0.1472	6	0.5	FALSE	0.1
8/16/2005	16:15	8/16/2005 16:15	27.3	6.4	0.1546	5	0.4	FALSE	0.1
8/16/2005	16:30	8/16/2005 16:30	27.3	6.4	0.152	10	0.8	FALSE	0.1
8/16/2005	16:45	8/16/2005 16:45	27.3	6.5	0.1431	9	0.7	FALSE	0.1
8/16/2005	17:00	8/16/2005 17:00	27.3	6.4	0.1457	7	0.6	FALSE	0.1
8/16/2005	17:15	8/16/2005 17:15	27.3	6.4	0.1485	5	0.4	FALSE	0.1
8/16/2005	17:30	8/16/2005 17:30	27.2	6.5	0.1384	4	0.3	FALSE	0.1
8/16/2005	17:45	8/16/2005 17:45	27.2	6.5	0.1398	3	0.3	FALSE	0.1
8/16/2005	18:00	8/16/2005 18:00	27.2	6.4	0.1445	8	0.6	FALSE	0.1
8/16/2005	18:15	8/16/2005 18:15	27.3	6.4	0.1478	7	0.5	FALSE	0.1
8/16/2005	18:30	8/16/2005 18:30	27.2	6.4	0.1419	5	0.4	FALSE	0.1
8/16/2005	18:45	8/16/2005 18:45	27.2	6.5	0.1447	5	0.4	FALSE	0.1
8/16/2005	19:00	8/16/2005 19:00	27.2	6.4	0.1455	3	0.3	FALSE	0.1
8/16/2005	19:15	8/16/2005 19:15	27.2	6.4	0.1461	3	0.2	FALSE	0.1
8/16/2005	19:30	8/16/2005 19:30	27.2	6.4	0.1443	4	0.3	FALSE	0.1
8/16/2005	19:45	8/16/2005 19:45	27.2	6.4	0.1452	3	0.2	FALSE	0.1
8/16/2005	20:00	8/16/2005 20:00	27.2	6.4	0.1462	3	0.2	FALSE	0.1
8/16/2005	20:15	8/16/2005 20:15	27.2	6.4	0.1377	3	0.2	FALSE	0.1
8/16/2005	20:30	8/16/2005 20:30	27.2	6.4	0.1432	3	0.2	FALSE	0.1
8/16/2005	20:45	8/16/2005 20:45	27.2	6.4	0.1469	3	0.2	FALSE	0.1
8/16/2005	21:00	8/16/2005 21:00	27.2	6.4	0.1482	3	0.2	FALSE	0.1
8/16/2005	21:15	8/16/2005 21:15	27.2	6.5	0.1427	4	0.3	FALSE	0.1
8/16/2005	21:30	8/16/2005 21:30	27.2	6.4	0.1461	3	0.2	FALSE	0.1
8/16/2005	21:45	8/16/2005 21:45	27.2	6.4	0.1418	2	0.2	FALSE	0.1
8/16/2005	22:00	8/16/2005 22:00	27.1	6.4	0.149	2	0.2	FALSE	0.1
8/16/2005	22:15	8/16/2005 22:15	27.1	6.4	0.1457	1	0.1	FALSE	0.1
8/16/2005	22:30	8/16/2005 22:30	27.2	6.4	0.1458	3	0.2	FALSE	0.1

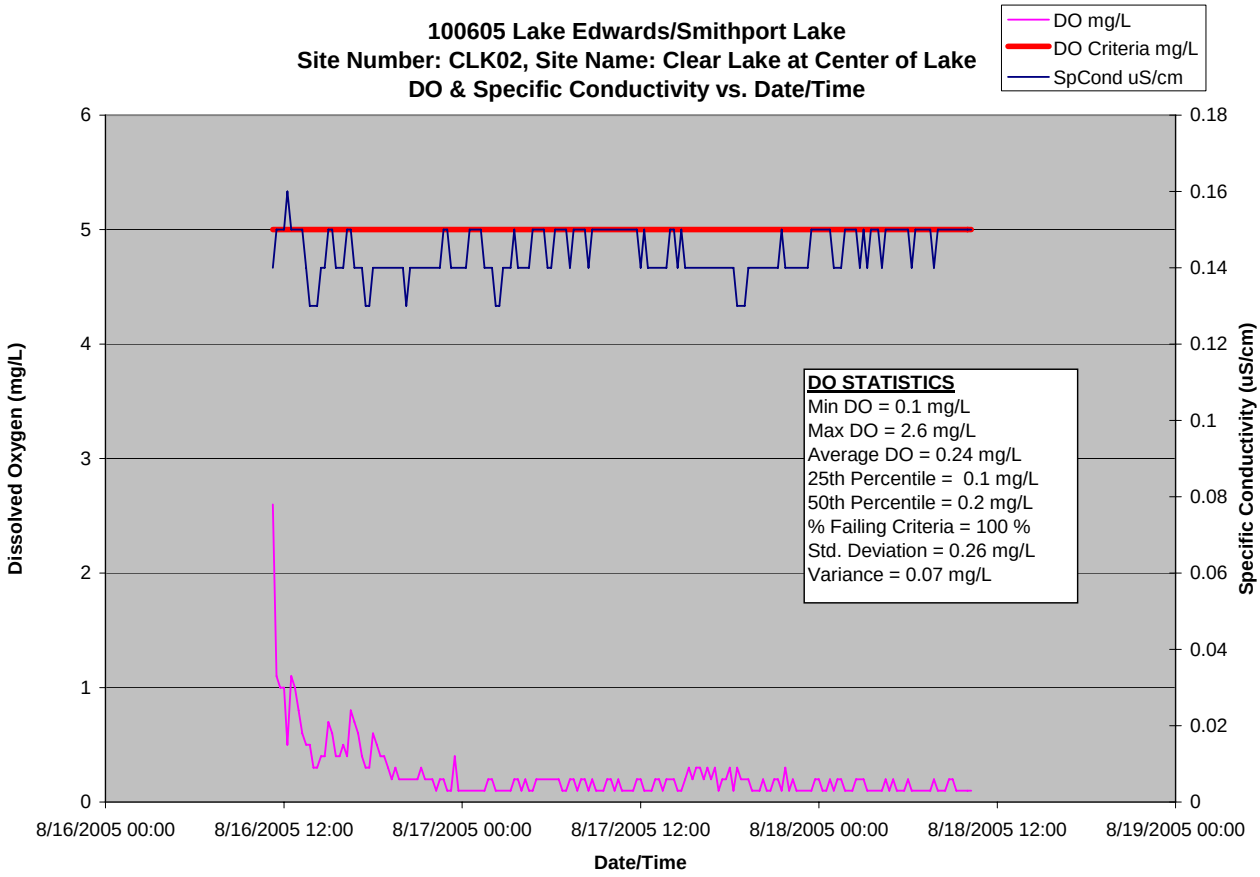
8/16/2005	22:45	8/16/2005 22:45	27.1	6.4	0.1528	2	0.2	FALSE	0.1
8/16/2005	23:00	8/16/2005 23:00	27.2	6.4	0.1537	2	0.1	FALSE	0.1
8/16/2005	23:15	8/16/2005 23:15	27.1	6.5	0.1492	2	0.1	FALSE	0.1
8/16/2005	23:30	8/16/2005 23:30	27.1	6.5	0.1409	5	0.4	FALSE	0.1
8/16/2005	23:45	8/16/2005 23:45	27.1	6.5	0.1463	2	0.1	FALSE	0.1
8/17/2005	0:00	8/17/2005 00:00	27.1	6.5	0.1489	2	0.1	FALSE	0.1
8/17/2005	0:15	8/17/2005 00:15	27.1	6.5	0.1467	1	0.1	FALSE	0.1
8/17/2005	0:30	8/17/2005 00:30	27.1	6.4	0.1545	1	0.1	FALSE	0.1
8/17/2005	0:45	8/17/2005 00:45	27.2	6.5	0.1551	1	0.1	FALSE	0.1
8/17/2005	1:00	8/17/2005 01:00	27.2	6.4	0.1539	2	0.1	FALSE	0.1
8/17/2005	1:15	8/17/2005 01:15	27.2	6.5	0.1534	1	0.1	FALSE	0.1
8/17/2005	1:30	8/17/2005 01:30	27.2	6.5	0.1486	1	0.1	FALSE	0.1
8/17/2005	1:45	8/17/2005 01:45	27.2	6.5	0.148	2	0.2	FALSE	0.1
8/17/2005	2:00	8/17/2005 02:00	27.1	6.5	0.1444	2	0.2	FALSE	0.1
8/17/2005	2:15	8/17/2005 02:15	27.1	6.5	0.1386	2	0.1	FALSE	0.1
8/17/2005	2:30	8/17/2005 02:30	27.1	6.5	0.139	2	0.1	FALSE	0.1
8/17/2005	2:45	8/17/2005 02:45	27.1	6.5	0.1427	1	0.1	FALSE	0.1
8/17/2005	3:00	8/17/2005 03:00	27.1	6.5	0.1481	1	0.1	FALSE	0.1
8/17/2005	3:15	8/17/2005 03:15	27.1	6.5	0.1483	1	0.1	FALSE	0.1
8/17/2005	3:30	8/17/2005 03:30	27.1	6.5	0.1507	2	0.2	FALSE	0.1
8/17/2005	3:45	8/17/2005 03:45	27	6.5	0.1483	2	0.2	FALSE	0.1
8/17/2005	4:00	8/17/2005 04:00	27.1	6.5	0.1498	1	0.1	FALSE	0.1
8/17/2005	4:15	8/17/2005 04:15	27	6.5	0.144	3	0.2	FALSE	0.1
8/17/2005	4:30	8/17/2005 04:30	27	6.5	0.1428	1	0.1	FALSE	0.1
8/17/2005	4:45	8/17/2005 04:45	27	6.5	0.1513	2	0.1	FALSE	0.1
8/17/2005	5:00	8/17/2005 05:00	27	6.5	0.154	2	0.2	FALSE	0.1
8/17/2005	5:15	8/17/2005 05:15	27	6.5	0.1531	3	0.2	FALSE	0.1
8/17/2005	5:30	8/17/2005 05:30	27	6.5	0.1504	3	0.2	FALSE	0.1
8/17/2005	5:45	8/17/2005 05:45	27	6.5	0.1482	2	0.2	FALSE	0.1
8/17/2005	6:00	8/17/2005 06:00	27	6.5	0.1485	2	0.2	FALSE	0.1
8/17/2005	6:15	8/17/2005 06:15	27.1	6.5	0.1511	2	0.2	FALSE	0.1
8/17/2005	6:30	8/17/2005 06:30	27.1	6.5	0.1535	3	0.2	FALSE	0.1
8/17/2005	6:45	8/17/2005 06:45	27	6.5	0.1549	1	0.1	FALSE	0.1
8/17/2005	7:00	8/17/2005 07:00	27	6.4	0.1555	2	0.1	FALSE	0.1
8/17/2005	7:15	8/17/2005 07:15	27	6.5	0.1444	3	0.2	FALSE	0.1
8/17/2005	7:30	8/17/2005 07:30	27	6.5	0.1552	2	0.2	FALSE	0.1
8/17/2005	7:45	8/17/2005 07:45	27	6.5	0.1544	2	0.1	FALSE	0.1
8/17/2005	8:00	8/17/2005 08:00	27	6.5	0.1512	2	0.2	FALSE	0.1
8/17/2005	8:15	8/17/2005 08:15	27	6.5	0.1546	2	0.2	FALSE	0.1
8/17/2005	8:30	8/17/2005 08:30	27	6.5	0.1455	1	0.1	FALSE	0.1
8/17/2005	8:45	8/17/2005 08:45	27	6.5	0.1527	2	0.2	FALSE	0.1
8/17/2005	9:00	8/17/2005 09:00	27.1	6.5	0.1553	1	0.1	FALSE	0.1
8/17/2005	9:15	8/17/2005 09:15	27.1	6.5	0.1523	2	0.1	FALSE	0.1
8/17/2005	9:30	8/17/2005 09:30	27	6.5	0.1547	1	0.1	FALSE	0.1
8/17/2005	9:45	8/17/2005 09:45	27	6.5	0.1515	2	0.2	FALSE	0.1
8/17/2005	10:00	8/17/2005 10:00	27.1	6.5	0.152	2	0.2	FALSE	0.1
8/17/2005	10:15	8/17/2005 10:15	27	6.4	0.1574	2	0.1	FALSE	0.1
8/17/2005	10:30	8/17/2005 10:30	27	6.4	0.1566	2	0.2	FALSE	0.1
8/17/2005	10:45	8/17/2005 10:45	27	6.4	0.155	1	0.1	FALSE	0.1
8/17/2005	11:00	8/17/2005 11:00	27.1	6.5	0.1508	2	0.1	FALSE	0.1

8/17/2005	11:15	8/17/2005 11:15	27	6.5	0.1508	2	0.1	FALSE	0.1
8/17/2005	11:30	8/17/2005 11:30	27	6.4	0.1508	1	0.1	FALSE	0.1
8/17/2005	11:45	8/17/2005 11:45	27	6.4	0.1571	2	0.2	FALSE	0.1
8/17/2005	12:00	8/17/2005 12:00	27	6.4	0.1489	2	0.2	FALSE	0.1
8/17/2005	12:15	8/17/2005 12:15	27.1	6.4	0.152	1	0.1	FALSE	0.1
8/17/2005	12:30	8/17/2005 12:30	27.1	6.5	0.1417	2	0.1	FALSE	0.1
8/17/2005	12:45	8/17/2005 12:45	27	6.4	0.1408	2	0.1	FALSE	0.1
8/17/2005	13:00	8/17/2005 13:00	27	6.4	0.142	2	0.2	FALSE	0.1
8/17/2005	13:15	8/17/2005 13:15	27	6.4	0.1426	2	0.2	FALSE	0.1
8/17/2005	13:30	8/17/2005 13:30	27	6.4	0.1419	2	0.1	FALSE	0.1
8/17/2005	13:45	8/17/2005 13:45	27.1	6.4	0.1428	2	0.2	FALSE	0.1
8/17/2005	14:00	8/17/2005 14:00	27.1	6.4	0.1512	3	0.2	FALSE	0.1
8/17/2005	14:15	8/17/2005 14:15	27.1	6.4	0.1502	2	0.2	FALSE	0.1
8/17/2005	14:30	8/17/2005 14:30	27.1	6.4	0.1496	2	0.1	FALSE	0.1
8/17/2005	14:45	8/17/2005 14:45	27.1	6.4	0.1504	2	0.1	FALSE	0.1
8/17/2005	15:00	8/17/2005 15:00	27.1	6.4	0.149	3	0.2	FALSE	0.1
8/17/2005	15:15	8/17/2005 15:15	27.2	6.4	0.1464	3	0.3	FALSE	0.1
8/17/2005	15:30	8/17/2005 15:30	27.2	6.4	0.1462	2	0.2	FALSE	0.1
8/17/2005	15:45	8/17/2005 15:45	27.2	6.4	0.1421	3	0.3	FALSE	0.1
8/17/2005	16:00	8/17/2005 16:00	27.2	6.4	0.1421	4	0.3	FALSE	0.1
8/17/2005	16:15	8/17/2005 16:15	27.2	6.4	0.1442	2	0.2	FALSE	0.1
8/17/2005	16:30	8/17/2005 16:30	27.2	6.5	0.1402	3	0.3	FALSE	0.1
8/17/2005	16:45	8/17/2005 16:45	27.2	6.4	0.1454	2	0.2	FALSE	0.1
8/17/2005	17:00	8/17/2005 17:00	27.2	6.4	0.1431	3	0.3	FALSE	0.1
8/17/2005	17:15	8/17/2005 17:15	27.1	6.4	0.1423	2	0.1	FALSE	0.1
8/17/2005	17:30	8/17/2005 17:30	27.1	6.4	0.1469	3	0.2	FALSE	0.1
8/17/2005	17:45	8/17/2005 17:45	27.1	6.5	0.1437	3	0.2	FALSE	0.1
8/17/2005	18:00	8/17/2005 18:00	27.2	6.4	0.1442	3	0.3	FALSE	0.1
8/17/2005	18:15	8/17/2005 18:15	27.2	6.4	0.1433	1	0.1	FALSE	0.1
8/17/2005	18:30	8/17/2005 18:30	27.1	6.5	0.1392	4	0.3	FALSE	0.1
8/17/2005	18:45	8/17/2005 18:45	27.2	6.5	0.1397	3	0.2	FALSE	0.1
8/17/2005	19:00	8/17/2005 19:00	27.1	6.5	0.1392	2	0.2	FALSE	0.1
8/17/2005	19:15	8/17/2005 19:15	27.1	6.5	0.1435	2	0.2	FALSE	0.1
8/17/2005	19:30	8/17/2005 19:30	27.2	6.5	0.146	1	0.1	FALSE	0.1
8/17/2005	19:45	8/17/2005 19:45	27.2	6.4	0.1478	1	0.1	FALSE	0.1
8/17/2005	20:00	8/17/2005 20:00	27.2	6.5	0.142	2	0.1	FALSE	0.1
8/17/2005	20:15	8/17/2005 20:15	27.1	6.5	0.143	2	0.2	FALSE	0.1
8/17/2005	20:30	8/17/2005 20:30	27.1	6.5	0.1448	2	0.1	FALSE	0.1
8/17/2005	20:45	8/17/2005 20:45	27.1	6.5	0.1463	1	0.1	FALSE	0.1
8/17/2005	21:00	8/17/2005 21:00	27.1	6.5	0.1433	2	0.2	FALSE	0.1
8/17/2005	21:15	8/17/2005 21:15	27.2	6.5	0.1454	3	0.2	FALSE	0.1
8/17/2005	21:30	8/17/2005 21:30	27.1	6.5	0.1503	1	0.1	FALSE	0.1
8/17/2005	21:45	8/17/2005 21:45	27.1	6.5	0.1411	3	0.3	FALSE	0.1
8/17/2005	22:00	8/17/2005 22:00	27.2	6.5	0.147	1	0.1	FALSE	0.1
8/17/2005	22:15	8/17/2005 22:15	27.1	6.5	0.1477	2	0.2	FALSE	0.1
8/17/2005	22:30	8/17/2005 22:30	27.1	6.5	0.1481	2	0.1	FALSE	0.1
8/17/2005	22:45	8/17/2005 22:45	27.1	6.5	0.1479	1	0.1	FALSE	0.1
8/17/2005	23:00	8/17/2005 23:00	27.1	6.5	0.1493	1	0.1	FALSE	0.1
8/17/2005	23:15	8/17/2005 23:15	27.1	6.5	0.1488	1	0.1	FALSE	0.1
8/17/2005	23:30	8/17/2005 23:30	27.1	6.4	0.1566	1	0.1	FALSE	0.1

8/17/2005	23:45	8/17/2005 23:45	27.1	6.4	0.1549	2	0.2	FALSE	0.1
8/18/2005	0:00	8/18/2005 00:00	27.1	6.4	0.1522	2	0.2	FALSE	0.1
8/18/2005	0:15	8/18/2005 00:15	27	6.5	0.15	1	0.1	FALSE	0.1
8/18/2005	0:30	8/18/2005 00:30	27	6.5	0.1513	1	0.1	FALSE	0.1
8/18/2005	0:45	8/18/2005 00:45	27	6.4	0.1532	2	0.2	FALSE	0.1
8/18/2005	1:00	8/18/2005 01:00	27.1	6.5	0.1475	1	0.1	FALSE	0.1
8/18/2005	1:15	8/18/2005 01:15	27	6.5	0.1482	3	0.2	FALSE	0.1
8/18/2005	1:30	8/18/2005 01:30	27	6.5	0.1488	2	0.2	FALSE	0.1
8/18/2005	1:45	8/18/2005 01:45	27	6.5	0.152	2	0.1	FALSE	0.1
8/18/2005	2:00	8/18/2005 02:00	27	6.4	0.1552	1	0.1	FALSE	0.1
8/18/2005	2:15	8/18/2005 02:15	27	6.4	0.1556	2	0.1	FALSE	0.1
8/18/2005	2:30	8/18/2005 02:30	27	6.4	0.1517	2	0.2	FALSE	0.1
8/18/2005	2:45	8/18/2005 02:45	27	6.5	0.1457	2	0.2	FALSE	0.1
8/18/2005	3:00	8/18/2005 03:00	27	6.5	0.1511	2	0.2	FALSE	0.1
8/18/2005	3:15	8/18/2005 03:15	27	6.5	0.1472	1	0.1	FALSE	0.1
8/18/2005	3:30	8/18/2005 03:30	27	6.5	0.152	1	0.1	FALSE	0.1
8/18/2005	3:45	8/18/2005 03:45	27	6.4	0.1512	1	0.1	FALSE	0.1
8/18/2005	4:00	8/18/2005 04:00	27	6.5	0.1517	1	0.1	FALSE	0.1
8/18/2005	4:15	8/18/2005 04:15	27	6.5	0.1476	1	0.1	FALSE	0.1
8/18/2005	4:30	8/18/2005 04:30	27	6.5	0.1538	2	0.2	FALSE	0.1
8/18/2005	4:45	8/18/2005 04:45	27	6.5	0.1513	2	0.1	FALSE	0.1
8/18/2005	5:00	8/18/2005 05:00	27	6.5	0.1526	2	0.2	FALSE	0.1
8/18/2005	5:15	8/18/2005 05:15	27	6.5	0.1532	1	0.1	FALSE	0.1
8/18/2005	5:30	8/18/2005 05:30	27.1	6.5	0.1524	1	0.1	FALSE	0.1
8/18/2005	5:45	8/18/2005 05:45	27.1	6.4	0.1559	2	0.1	FALSE	0.1
8/18/2005	6:00	8/18/2005 06:00	27	6.5	0.1526	2	0.2	FALSE	0.1
8/18/2005	6:15	8/18/2005 06:15	27	6.5	0.1477	1	0.1	FALSE	0.1
8/18/2005	6:30	8/18/2005 06:30	27	6.5	0.1512	1	0.1	FALSE	0.1
8/18/2005	6:45	8/18/2005 06:45	27	6.5	0.1536	1	0.1	FALSE	0.1
8/18/2005	7:00	8/18/2005 07:00	27	6.5	0.1539	1	0.1	FALSE	0.1
8/18/2005	7:15	8/18/2005 07:15	27	6.4	0.1564	1	0.1	FALSE	0.1
8/18/2005	7:30	8/18/2005 07:30	27	6.5	0.1529	1	0.1	FALSE	0.1
8/18/2005	7:45	8/18/2005 07:45	27	6.5	0.1489	2	0.2	FALSE	0.1
8/18/2005	8:00	8/18/2005 08:00	26.9	6.4	0.1542	2	0.1	FALSE	0.1
8/18/2005	8:15	8/18/2005 08:15	26.9	6.4	0.1525	1	0.1	FALSE	0.1
8/18/2005	8:30	8/18/2005 08:30	26.9	6.4	0.1535	1	0.1	FALSE	0.1
8/18/2005	8:45	8/18/2005 08:45	26.9	6.4	0.1537	2	0.2	FALSE	0.1
8/18/2005	9:00	8/18/2005 09:00	26.9	6.4	0.1542	2	0.2	FALSE	0.1
8/18/2005	9:15	8/18/2005 09:15	27	6.4	0.1531	2	0.1	FALSE	0.1
8/18/2005	9:30	8/18/2005 09:30	27	6.4	0.1518	1	0.1	FALSE	0.1
8/18/2005	9:45	8/18/2005 09:45	26.9	6.4	0.1519	1	0.1	FALSE	0.1
8/18/2005	10:00	8/18/2005 10:00	26.9	6.4	0.1526	2	0.1	FALSE	0.1
8/18/2005	10:15	8/18/2005 10:15	26.9	6.4	0.1548	1	0.1	FALSE	0.1


100605 Lake Edwards/Smithport Lake
Site Number: CLK02, Site Name: Clear Lake at Center of Lake
DO & Temperature (deg C) vs. Date/Time
DO mg/L
DO Criteria mg/L
Temp øC
DO STATISTICS
Min DO = 0.1 mg/L
Max DO = 2.6 mg/L
Average DO = 0.24 mg/L
25th Percentile = 0.1 mg/L
50th Percentile = 0.2 mg/L
% Failing Criteria = 100 %
Std. Deviation = 0.26 mg/L
Variance = 0.07 mg/L
Dissolved Oxygen (mg/L)
Temperature (C)
Date/Time
0
1
2
3
4
5
6
26.8
26.9
27
27.1
27.2
27.3
27.4
27.5
27.6
8/16/2005 00:00
8/16/2005 12:00
8/17/2005 00:00
8/17/2005 12:00
8/18/2005 00:00
8/18/2005 12:00
8/19/2005 00:00


100605 Lake Edwards/Smithport Lake
Site Number: CLK02, Site Name: Clear Lake at Center of Lake
DO & pH vs. Date/Time
DO mg/L
DO Criteria mg/L
pH Units
Dissolved Oxygen (mg/L)
pH
Date/Time
0
1
2
3
4
5
6
6.25
6.3
6.35
6.4
6.45
6.5
6.55
8/16/2005 00:00
8/16/2005 12:00
8/17/2005 00:00
8/17/2005 12:00
8/18/2005 00:00
8/18/2005 12:00
8/19/2005 00:00
DO STATISTICS
Min DO = 0.1 mg/L
Max DO = 2.6 mg/L
Average DO = 0.24 mg/L
25th Percentile = 0.1 mg/L
50th Percentile = 0.2 mg/L
% Failing Criteria = 100 %
Std. Deviation = 0.26 mg/L
Variance = 0.07 mg/L



100605 Lake Edwards/Smithport Lake Site Number: CLK02 Site Name: Clear Lake at Center of Lake					
	Temp deg C	pH	SpCond uS/cm	DO %	DO mg/L
Minimum	26.90	6.30	0.13	1.00	0.10
Maximum	27.50	6.50	0.16	33.00	2.60
Average	27.10	6.45	0.14	2.95	0.24
Geometric Mean	27.10	6.45	0.14	2.22	0.18
25th Percentile	27.00	6.40	0.14	1.00	0.10
30th Percentile	27.00	6.40	0.14	2.00	0.10
40th Percentile	27.10	6.40	0.14	2.00	0.10
50th Percentile	27.10	6.50	0.14	2.00	0.20
Standard Deviation	0.11	0.05	0.01	3.29	0.26
Variance	0.01	0.00	0.00	10.83	0.07

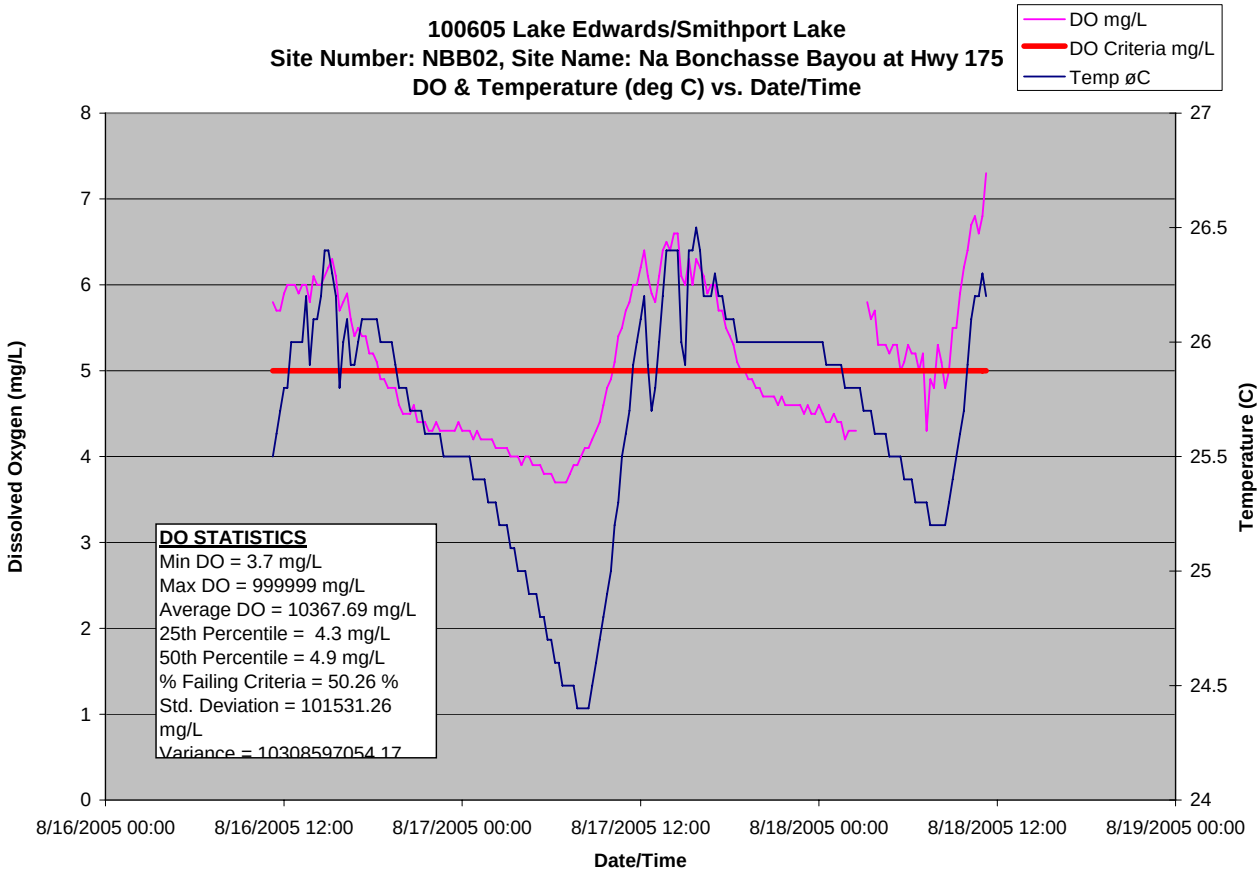
Data Row Count	189
Total Values Failing DO Criteria	189
Percent failing DO Criteria	100.00 %

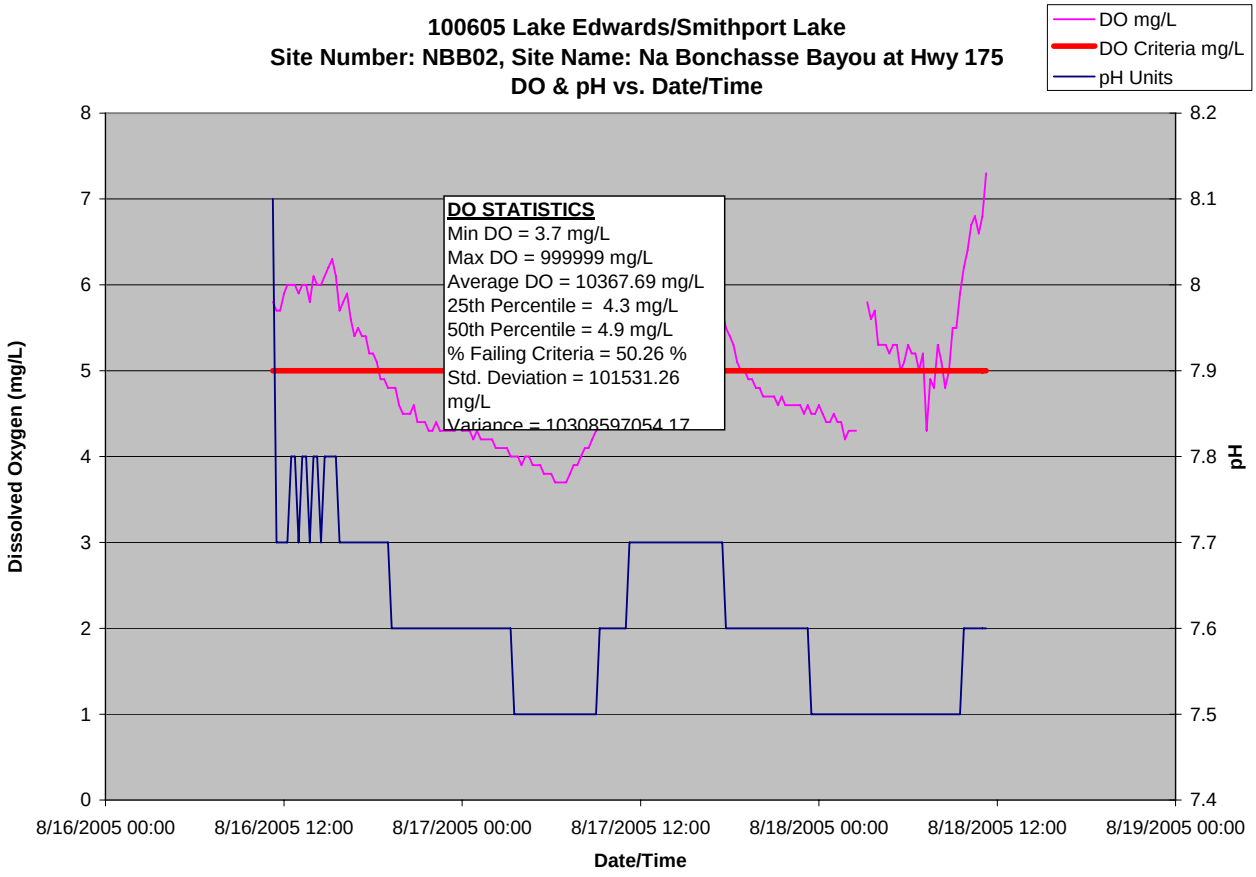
NBB02 Continuous Monitoring Data for Lake Edwards/Smithport Lake Subsegment 100605									
Date	Time	Date+Time	Temp	pH	SpCond	DO%	DO	VENTED DEPTH	SALINITY
MMDDYY	HHMM	MMDDYYYY HHMM	øC	Units	æS/cm	Sat	mg/L	True/False	ppt
8/16/2005	11:15	8/16/2005 11:15	25.5	8.1	434	71	5.8	FALSE	0.2
8/16/2005	11:30	8/16/2005 11:30	25.6	7.7	436	70	5.7	FALSE	0.2
8/16/2005	11:45	8/16/2005 11:45	25.7	7.7	436	70	5.7	FALSE	0.2
8/16/2005	12:00	8/16/2005 12:00	25.8	7.7	438	73	5.9	FALSE	0.2
8/16/2005	12:15	8/16/2005 12:15	25.8	7.7	439	74	6	FALSE	0.2
8/16/2005	12:30	8/16/2005 12:30	26	7.8	439	74	6	FALSE	0.2
8/16/2005	12:45	8/16/2005 12:45	26	7.8	440	74	6	FALSE	0.2
8/16/2005	13:00	8/16/2005 13:00	26	7.7	441	73	5.9	FALSE	0.2
8/16/2005	13:15	8/16/2005 13:15	26	7.8	442	74	6	FALSE	0.2
8/16/2005	13:30	8/16/2005 13:30	26.2	7.8	443	74	6	FALSE	0.2
8/16/2005	13:45	8/16/2005 13:45	25.9	7.7	443	72	5.8	FALSE	0.2
8/16/2005	14:00	8/16/2005 14:00	26.1	7.8	444	75	6.1	FALSE	0.2
8/16/2005	14:15	8/16/2005 14:15	26.1	7.8	445	75	6	FALSE	0.2
8/16/2005	14:30	8/16/2005 14:30	26.2	7.7	445	74	6	FALSE	0.2
8/16/2005	14:45	8/16/2005 14:45	26.4	7.8	446	75	6.1	FALSE	0.2
8/16/2005	15:00	8/16/2005 15:00	26.4	7.8	447	78	6.2	FALSE	0.2
8/16/2005	15:15	8/16/2005 15:15	26.3	7.8	447	78	6.3	FALSE	0.2
8/16/2005	15:30	8/16/2005 15:30	26.2	7.8	448	76	6.1	FALSE	0.2
8/16/2005	15:45	8/16/2005 15:45	25.8	7.7	448	70	5.7	FALSE	0.2
8/16/2005	16:00	8/16/2005 16:00	26	7.7	449	71	5.8	FALSE	0.2
8/16/2005	16:15	8/16/2005 16:15	26.1	7.7	449	73	5.9	FALSE	0.2
8/16/2005	16:30	8/16/2005 16:30	25.9	7.7	450	69	5.6	FALSE	0.2
8/16/2005	16:45	8/16/2005 16:45	25.9	7.7	450	67	5.4	FALSE	0.2
8/16/2005	17:00	8/16/2005 17:00	26	7.7	450	68	5.5	FALSE	0.2
8/16/2005	17:15	8/16/2005 17:15	26.1	7.7	451	67	5.4	FALSE	0.2
8/16/2005	17:30	8/16/2005 17:30	26.1	7.7	452	66	5.4	FALSE	0.2
8/16/2005	17:45	8/16/2005 17:45	26.1	7.7	452	65	5.2	FALSE	0.2
8/16/2005	18:00	8/16/2005 18:00	26.1	7.7	453	64	5.2	FALSE	0.2
8/16/2005	18:15	8/16/2005 18:15	26.1	7.7	453	63	5.1	FALSE	0.2
8/16/2005	18:30	8/16/2005 18:30	26	7.7	454	61	4.9	FALSE	0.2
8/16/2005	18:45	8/16/2005 18:45	26	7.7	455	60	4.9	FALSE	0.2
8/16/2005	19:00	8/16/2005 19:00	26	7.7	455	60	4.8	FALSE	0.2
8/16/2005	19:15	8/16/2005 19:15	26	7.6	455	59	4.8	FALSE	0.2
8/16/2005	19:30	8/16/2005 19:30	25.9	7.6	456	59	4.8	FALSE	0.2
8/16/2005	19:45	8/16/2005 19:45	25.8	7.6	455	57	4.6	FALSE	0.2
8/16/2005	20:00	8/16/2005 20:00	25.8	7.6	456	55	4.5	FALSE	0.2
8/16/2005	20:15	8/16/2005 20:15	25.8	7.6	456	56	4.5	FALSE	0.2
8/16/2005	20:30	8/16/2005 20:30	25.7	7.6	457	55	4.5	FALSE	0.2
8/16/2005	20:45	8/16/2005 20:45	25.7	7.6	457	56	4.6	FALSE	0.2
8/16/2005	21:00	8/16/2005 21:00	25.7	7.6	457	54	4.4	FALSE	0.2
8/16/2005	21:15	8/16/2005 21:15	25.7	7.6	457	53	4.4	FALSE	0.2
8/16/2005	21:30	8/16/2005 21:30	25.6	7.6	457	54	4.4	FALSE	0.2
8/16/2005	21:45	8/16/2005 21:45	25.6	7.6	457	53	4.3	FALSE	0.2
8/16/2005	22:00	8/16/2005 22:00	25.6	7.6	458	53	4.3	FALSE	0.2
8/16/2005	22:15	8/16/2005 22:15	25.6	7.6	458	54	4.4	FALSE	0.2
8/16/2005	22:30	8/16/2005 22:30	25.6	7.6	458	53	4.3	FALSE	0.2

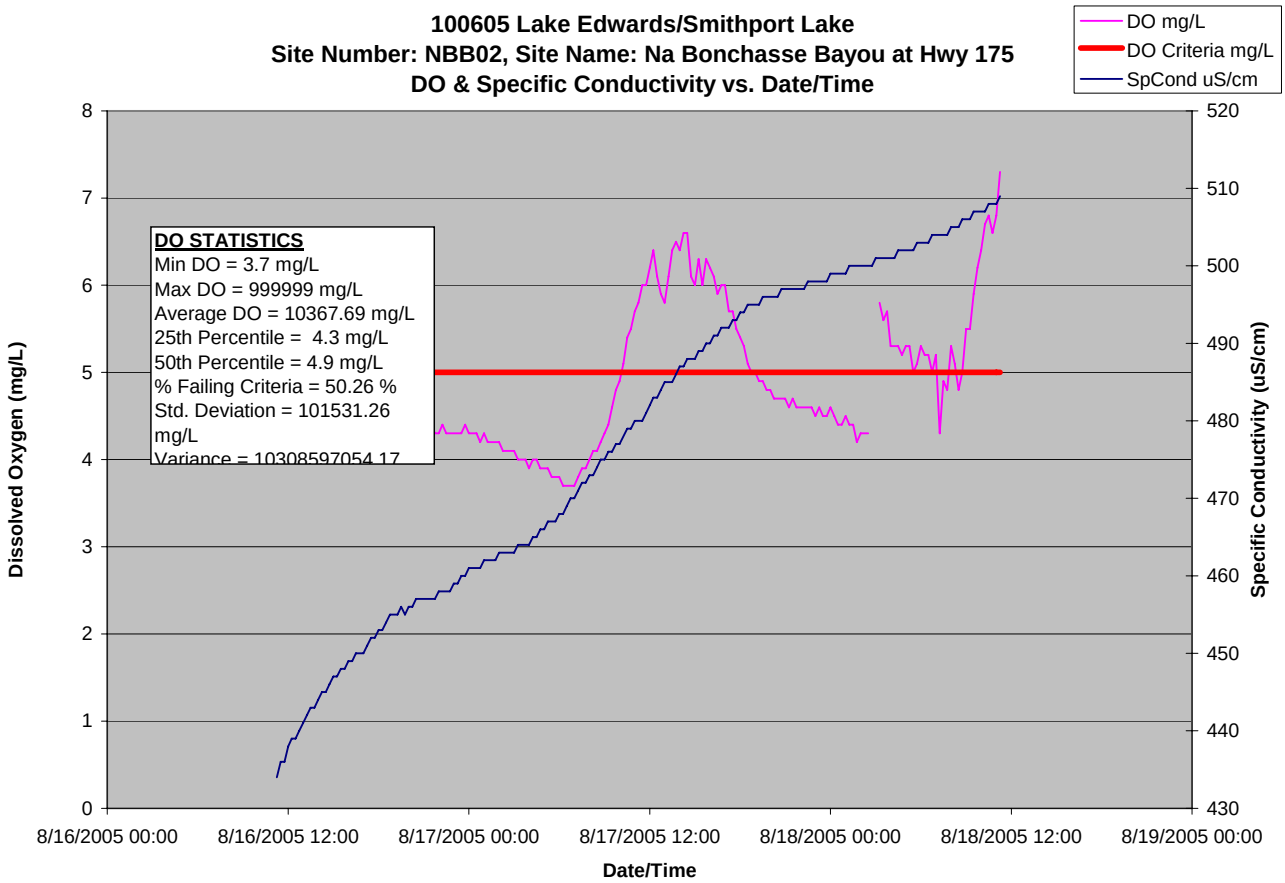
8/16/2005	22:45	8/16/2005 22:45	25.5	7.6	458	52	4.3	FALSE	0.2
8/16/2005	23:00	8/16/2005 23:00	25.5	7.6	459	53	4.3	FALSE	0.2
8/16/2005	23:15	8/16/2005 23:15	25.5	7.6	459	53	4.3	FALSE	0.2
8/16/2005	23:30	8/16/2005 23:30	25.5	7.6	460	53	4.3	FALSE	0.2
8/16/2005	23:45	8/16/2005 23:45	25.5	7.6	460	54	4.4	FALSE	0.2
8/17/2005	0:00	8/17/2005 00:00	25.5	7.6	461	53	4.3	FALSE	0.2
8/17/2005	0:15	8/17/2005 00:15	25.5	7.6	461	52	4.3	FALSE	0.2
8/17/2005	0:30	8/17/2005 00:30	25.5	7.6	461	53	4.3	FALSE	0.2
8/17/2005	0:45	8/17/2005 00:45	25.4	7.6	461	51	4.2	FALSE	0.2
8/17/2005	1:00	8/17/2005 01:00	25.4	7.6	462	52	4.3	FALSE	0.2
8/17/2005	1:15	8/17/2005 01:15	25.4	7.6	462	52	4.2	FALSE	0.2
8/17/2005	1:30	8/17/2005 01:30	25.4	7.6	462	51	4.2	FALSE	0.2
8/17/2005	1:45	8/17/2005 01:45	25.3	7.6	462	51	4.2	FALSE	0.2
8/17/2005	2:00	8/17/2005 02:00	25.3	7.6	463	51	4.2	FALSE	0.2
8/17/2005	2:15	8/17/2005 02:15	25.3	7.6	463	50	4.1	FALSE	0.2
8/17/2005	2:30	8/17/2005 02:30	25.2	7.6	463	50	4.1	FALSE	0.2
8/17/2005	2:45	8/17/2005 02:45	25.2	7.6	463	50	4.1	FALSE	0.2
8/17/2005	3:00	8/17/2005 03:00	25.2	7.6	463	49	4.1	FALSE	0.2
8/17/2005	3:15	8/17/2005 03:15	25.1	7.6	464	48	4	FALSE	0.2
8/17/2005	3:30	8/17/2005 03:30	25.1	7.5	464	49	4	FALSE	0.2
8/17/2005	3:45	8/17/2005 03:45	25	7.5	464	49	4	FALSE	0.2
8/17/2005	4:00	8/17/2005 04:00	25	7.5	464	48	3.9	FALSE	0.2
8/17/2005	4:15	8/17/2005 04:15	25	7.5	465	48	4	FALSE	0.2
8/17/2005	4:30	8/17/2005 04:30	24.9	7.5	465	49	4	FALSE	0.2
8/17/2005	4:45	8/17/2005 04:45	24.9	7.5	466	47	3.9	FALSE	0.2
8/17/2005	5:00	8/17/2005 05:00	24.9	7.5	466	47	3.9	FALSE	0.2
8/17/2005	5:15	8/17/2005 05:15	24.8	7.5	467	47	3.9	FALSE	0.2
8/17/2005	5:30	8/17/2005 05:30	24.8	7.5	467	46	3.8	FALSE	0.2
8/17/2005	5:45	8/17/2005 05:45	24.7	7.5	467	45	3.8	FALSE	0.2
8/17/2005	6:00	8/17/2005 06:00	24.7	7.5	468	46	3.8	FALSE	0.2
8/17/2005	6:15	8/17/2005 06:15	24.6	7.5	468	45	3.7	FALSE	0.2
8/17/2005	6:30	8/17/2005 06:30	24.6	7.5	469	45	3.7	FALSE	0.2
8/17/2005	6:45	8/17/2005 06:45	24.5	7.5	470	44	3.7	FALSE	0.2
8/17/2005	7:00	8/17/2005 07:00	24.5	7.5	470	44	3.7	FALSE	0.2
8/17/2005	7:15	8/17/2005 07:15	24.5	7.5	471	45	3.8	FALSE	0.2
8/17/2005	7:30	8/17/2005 07:30	24.5	7.5	472	47	3.9	FALSE	0.2
8/17/2005	7:45	8/17/2005 07:45	24.4	7.5	472	46	3.9	FALSE	0.2
8/17/2005	8:00	8/17/2005 08:00	24.4	7.5	473	48	4	FALSE	0.2
8/17/2005	8:15	8/17/2005 08:15	24.4	7.5	473	49	4.1	FALSE	0.2
8/17/2005	8:30	8/17/2005 08:30	24.4	7.5	474	49	4.1	FALSE	0.2
8/17/2005	8:45	8/17/2005 08:45	24.5	7.5	475	50	4.2	FALSE	0.2
8/17/2005	9:00	8/17/2005 09:00	24.6	7.5	475	52	4.3	FALSE	0.2
8/17/2005	9:15	8/17/2005 09:15	24.7	7.6	476	53	4.4	FALSE	0.2
8/17/2005	9:30	8/17/2005 09:30	24.8	7.6	476	55	4.6	FALSE	0.2
8/17/2005	9:45	8/17/2005 09:45	24.9	7.6	477	58	4.8	FALSE	0.2
8/17/2005	10:00	8/17/2005 10:00	25	7.6	477	60	4.9	FALSE	0.2
8/17/2005	10:15	8/17/2005 10:15	25.2	7.6	478	63	5.1	FALSE	0.2
8/17/2005	10:30	8/17/2005 10:30	25.3	7.6	479	66	5.4	FALSE	0.2
8/17/2005	10:45	8/17/2005 10:45	25.5	7.6	479	68	5.5	FALSE	0.2
8/17/2005	11:00	8/17/2005 11:00	25.6	7.6	480	69	5.7	FALSE	0.2

8/17/2005	11:15	8/17/2005 11:15	25.7	7.7	480	71	5.8	FALSE	0.2
8/17/2005	11:30	8/17/2005 11:30	25.9	7.7	480	74	6	FALSE	0.2
8/17/2005	11:45	8/17/2005 11:45	26	7.7	481	75	6	FALSE	0.2
8/17/2005	12:00	8/17/2005 12:00	26.1	7.7	482	77	6.2	FALSE	0.2
8/17/2005	12:15	8/17/2005 12:15	26.2	7.7	483	79	6.4	FALSE	0.2
8/17/2005	12:30	8/17/2005 12:30	25.9	7.7	483	76	6.1	FALSE	0.2
8/17/2005	12:45	8/17/2005 12:45	25.7	7.7	484	72	5.9	FALSE	0.2
8/17/2005	13:00	8/17/2005 13:00	25.8	7.7	485	72	5.8	FALSE	0.2
8/17/2005	13:15	8/17/2005 13:15	26	7.7	485	75	6.1	FALSE	0.2
8/17/2005	13:30	8/17/2005 13:30	26.2	7.7	485	80	6.4	FALSE	0.2
8/17/2005	13:45	8/17/2005 13:45	26.4	7.7	486	81	6.5	FALSE	0.3
8/17/2005	14:00	8/17/2005 14:00	26.4	7.7	487	80	6.4	FALSE	0.3
8/17/2005	14:15	8/17/2005 14:15	26.4	7.7	487	81	6.6	FALSE	0.3
8/17/2005	14:30	8/17/2005 14:30	26.4	7.7	488	82	6.6	FALSE	0.3
8/17/2005	14:45	8/17/2005 14:45	26	7.7	488	75	6.1	FALSE	0.3
8/17/2005	15:00	8/17/2005 15:00	25.9	7.7	488	74	6	FALSE	0.3
8/17/2005	15:15	8/17/2005 15:15	26.4	7.7	489	79	6.3	FALSE	0.3
8/17/2005	15:30	8/17/2005 15:30	26.4	7.7	489	75	6	FALSE	0.3
8/17/2005	15:45	8/17/2005 15:45	26.5	7.7	490	78	6.3	FALSE	0.3
8/17/2005	16:00	8/17/2005 16:00	26.4	7.7	490	78	6.2	FALSE	0.3
8/17/2005	16:15	8/17/2005 16:15	26.2	7.7	491	76	6.1	FALSE	0.3
8/17/2005	16:30	8/17/2005 16:30	26.2	7.7	491	73	5.9	FALSE	0.3
8/17/2005	16:45	8/17/2005 16:45	26.2	7.7	492	74	6	FALSE	0.3
8/17/2005	17:00	8/17/2005 17:00	26.3	7.7	492	74	6	FALSE	0.3
8/17/2005	17:15	8/17/2005 17:15	26.2	7.7	492	71	5.7	FALSE	0.3
8/17/2005	17:30	8/17/2005 17:30	26.2	7.7	493	70	5.7	FALSE	0.3
8/17/2005	17:45	8/17/2005 17:45	26.1	7.6	493	68	5.5	FALSE	0.3
8/17/2005	18:00	8/17/2005 18:00	26.1	7.6	494	67	5.4	FALSE	0.3
8/17/2005	18:15	8/17/2005 18:15	26.1	7.6	494	66	5.3	FALSE	0.3
8/17/2005	18:30	8/17/2005 18:30	26	7.6	495	63	5.1	FALSE	0.3
8/17/2005	18:45	8/17/2005 18:45	26	7.6	495	62	5	FALSE	0.3
8/17/2005	19:00	8/17/2005 19:00	26	7.6	495	62	5	FALSE	0.3
8/17/2005	19:15	8/17/2005 19:15	26	7.6	495	61	4.9	FALSE	0.3
8/17/2005	19:30	8/17/2005 19:30	26	7.6	496	60	4.9	FALSE	0.3
8/17/2005	19:45	8/17/2005 19:45	26	7.6	496	60	4.8	FALSE	0.3
8/17/2005	20:00	8/17/2005 20:00	26	7.6	496	59	4.8	FALSE	0.3
8/17/2005	20:15	8/17/2005 20:15	26	7.6	496	59	4.7	FALSE	0.3
8/17/2005	20:30	8/17/2005 20:30	26	7.6	496	59	4.7	FALSE	0.3
8/17/2005	20:45	8/17/2005 20:45	26	7.6	497	58	4.7	FALSE	0.3
8/17/2005	21:00	8/17/2005 21:00	26	7.6	497	58	4.7	FALSE	0.3
8/17/2005	21:15	8/17/2005 21:15	26	7.6	497	57	4.6	FALSE	0.3
8/17/2005	21:30	8/17/2005 21:30	26	7.6	497	58	4.7	FALSE	0.3
8/17/2005	21:45	8/17/2005 21:45	26	7.6	497	57	4.6	FALSE	0.3
8/17/2005	22:00	8/17/2005 22:00	26	7.6	497	57	4.6	FALSE	0.3
8/17/2005	22:15	8/17/2005 22:15	26	7.6	497	56	4.6	FALSE	0.3
8/17/2005	22:30	8/17/2005 22:30	26	7.6	498	57	4.6	FALSE	0.3
8/17/2005	22:45	8/17/2005 22:45	26	7.6	498	57	4.6	FALSE	0.3
8/17/2005	23:00	8/17/2005 23:00	26	7.6	498	56	4.5	FALSE	0.3
8/17/2005	23:15	8/17/2005 23:15	26	7.6	498	57	4.6	FALSE	0.3
8/17/2005	23:30	8/17/2005 23:30	26	7.5	498	56	4.5	FALSE	0.3

8/17/2005	23:45	8/17/2005 23:45	26	7.5	498	56	4.5	FALSE	0.3
8/18/2005	0:00	8/18/2005 00:00	26	7.5	499	56	4.6	FALSE	0.3
8/18/2005	0:15	8/18/2005 00:15	26	7.5	499	55	4.5	FALSE	0.3
8/18/2005	0:30	8/18/2005 00:30	25.9	7.5	499	55	4.4	FALSE	0.3
8/18/2005	0:45	8/18/2005 00:45	25.9	7.5	499	55	4.4	FALSE	0.3
8/18/2005	1:00	8/18/2005 01:00	25.9	7.5	499	55	4.5	FALSE	0.3
8/18/2005	1:15	8/18/2005 01:15	25.9	7.5	500	54	4.4	FALSE	0.3
8/18/2005	1:30	8/18/2005 01:30	25.9	7.5	500	54	4.4	FALSE	0.3
8/18/2005	1:45	8/18/2005 01:45	25.8	7.5	500	52	4.2	FALSE	0.3
8/18/2005	2:00	8/18/2005 02:00	25.8	7.5	500	53	4.3	FALSE	0.3
8/18/2005	2:15	8/18/2005 02:15	25.8	7.5	500	52	4.3	FALSE	0.3
8/18/2005	2:30	8/18/2005 02:30	25.8	7.5	500	52	4.3	FALSE	0.3
8/18/2005	3:15	8/18/2005 03:15	25.7	7.5	501	71	5.8	FALSE	0.3
8/18/2005	3:30	8/18/2005 03:30	25.7	7.5	501	69	5.6	FALSE	0.3
8/18/2005	3:45	8/18/2005 03:45	25.6	7.5	501	70	5.7	FALSE	0.3
8/18/2005	4:00	8/18/2005 04:00	25.6	7.5	501	65	5.3	FALSE	0.3
8/18/2005	4:15	8/18/2005 04:15	25.6	7.5	501	65	5.3	FALSE	0.3
8/18/2005	4:30	8/18/2005 04:30	25.6	7.5	502	65	5.3	FALSE	0.3
8/18/2005	4:45	8/18/2005 04:45	25.5	7.5	502	64	5.2	FALSE	0.3
8/18/2005	5:00	8/18/2005 05:00	25.5	7.5	502	64	5.3	FALSE	0.3
8/18/2005	5:15	8/18/2005 05:15	25.5	7.5	502	65	5.3	FALSE	0.3
8/18/2005	5:30	8/18/2005 05:30	25.5	7.5	502	61	5	FALSE	0.3
8/18/2005	5:45	8/18/2005 05:45	25.4	7.5	503	63	5.1	FALSE	0.3
8/18/2005	6:00	8/18/2005 06:00	25.4	7.5	503	65	5.3	FALSE	0.3
8/18/2005	6:15	8/18/2005 06:15	25.4	7.5	503	64	5.2	FALSE	0.3
8/18/2005	6:30	8/18/2005 06:30	25.3	7.5	503	63	5.2	FALSE	0.3
8/18/2005	6:45	8/18/2005 06:45	25.3	7.5	504	60	5	FALSE	0.3
8/18/2005	7:00	8/18/2005 07:00	25.3	7.5	504	63	5.2	FALSE	0.3
8/18/2005	7:15	8/18/2005 07:15	25.3	7.5	504	52	4.3	FALSE	0.3
8/18/2005	7:30	8/18/2005 07:30	25.2	7.5	504	60	4.9	FALSE	0.3
8/18/2005	7:45	8/18/2005 07:45	25.2	7.5	504	59	4.8	FALSE	0.3
8/18/2005	8:00	8/18/2005 08:00	25.2	7.5	505	64	5.3	FALSE	0.3
8/18/2005	8:15	8/18/2005 08:15	25.2	7.5	505	62	5.1	FALSE	0.3
8/18/2005	8:30	8/18/2005 08:30	25.2	7.5	505	59	4.8	FALSE	0.3
8/18/2005	8:45	8/18/2005 08:45	25.3	7.5	506	61	5	FALSE	0.3
8/18/2005	9:00	8/18/2005 09:00	25.4	7.5	506	68	5.5	FALSE	0.3
8/18/2005	9:15	8/18/2005 09:15	25.5	7.5	506	68	5.5	FALSE	0.3
8/18/2005	9:30	8/18/2005 09:30	25.6	7.5	507	72	5.9	FALSE	0.3
8/18/2005	9:45	8/18/2005 09:45	25.7	7.6	507	77	6.2	FALSE	0.3
8/18/2005	10:00	8/18/2005 10:00	25.9	7.6	507	79	6.4	FALSE	0.3
8/18/2005	10:15	8/18/2005 10:15	26.1	7.6	507	83	6.7	FALSE	0.3
8/18/2005	10:30	8/18/2005 10:30	26.2	7.6	508	85	6.8	FALSE	0.3
8/18/2005	10:45	8/18/2005 10:45	26.2	7.6	508	82	6.6	FALSE	0.3
8/18/2005	11:00	8/18/2005 11:00	26.3	7.6	508	84	6.8	FALSE	0.3
8/18/2005	11:15	8/18/2005 11:15	26.2	7.6	509	91	7.3	FALSE	0.3


100605 Lake Edwards/Smithport Lake
Site Number: NBB02, Site Name: Na Bonchasse Bayou at Hwy 175
DO & Temperature (deg C) vs. Date/Time
DO mg/L
DO Criteria mg/L
Temp øC
Dissolved Oxygen (mg/L)
Temperature (C)
Date/Time
8/16/2005 00:00
8/16/2005 12:00
8/17/2005 00:00
8/17/2005 12:00
8/18/2005 00:00
8/18/2005 12:00
8/19/2005 00:00
DO STATISTICS
Min DO = 3.7 mg/L
Max DO = 999999 mg/L
Average DO = 10367.69 mg/L
25th Percentile = 4.3 mg/L
50th Percentile = 4.9 mg/L
% Failing Criteria = 50.26 %
Std. Deviation = 101531.26 mg/L
Variance = 10308597054.17


100605 Lake Edwards/Smithport Lake
Site Number: NBB02, Site Name: Na Bonchasse Bayou at Hwy 175
DO & pH vs. Date/Time
DO mg/L
DO Criteria mg/L
pH Units
DO STATISTICS
Min DO = 3.7 mg/L
Max DO = 999999 mg/L
Average DO = 10367.69 mg/L
25th Percentile = 4.3 mg/L
50th Percentile = 4.9 mg/L
% Failing Criteria = 50.26 %
Std. Deviation = 101531.26 mg/L
Variance = 10308597054.17
Dissolved Oxygen (mg/L)
pH
Date/Time
8/16/2005 00:00
8/16/2005 12:00
8/17/2005 00:00
8/17/2005 12:00
8/18/2005 00:00
8/18/2005 12:00
8/19/2005 00:00



100605 Lake Edwards/Smithport Lake					
Site Number:	NBB02	Site Name:	Na Bonchasse Bayou at Hwy 175		
	Temp deg C	pH	SpCond uS/cm	DO %	DO mg/L
Minimum	24.40	7.50	434.00	44.00	3.70
Maximum	26.50	8.10	509.00	91.00	7.30
Average	25.67	7.60	477.97	62.17	5.06
Geometric Mean	25.66	7.60			4.99
25th Percentile	25.40	7.50	459.00	53.00	4.30
30th Percentile	25.50	7.50	462.00	55.00	4.40
40th Percentile	25.60	7.60	468.80	57.00	4.60
50th Percentile	25.80	7.60	480.00	60.00	4.90
Standard Deviation	0.50	0.10	21.36	10.66	0.83
Variance	0.25	0.01	456.16	113.60	0.69

Data Row Count	193
Total Values Failing DO Criteria	99
Percent failing DO Criteria	51.30 %

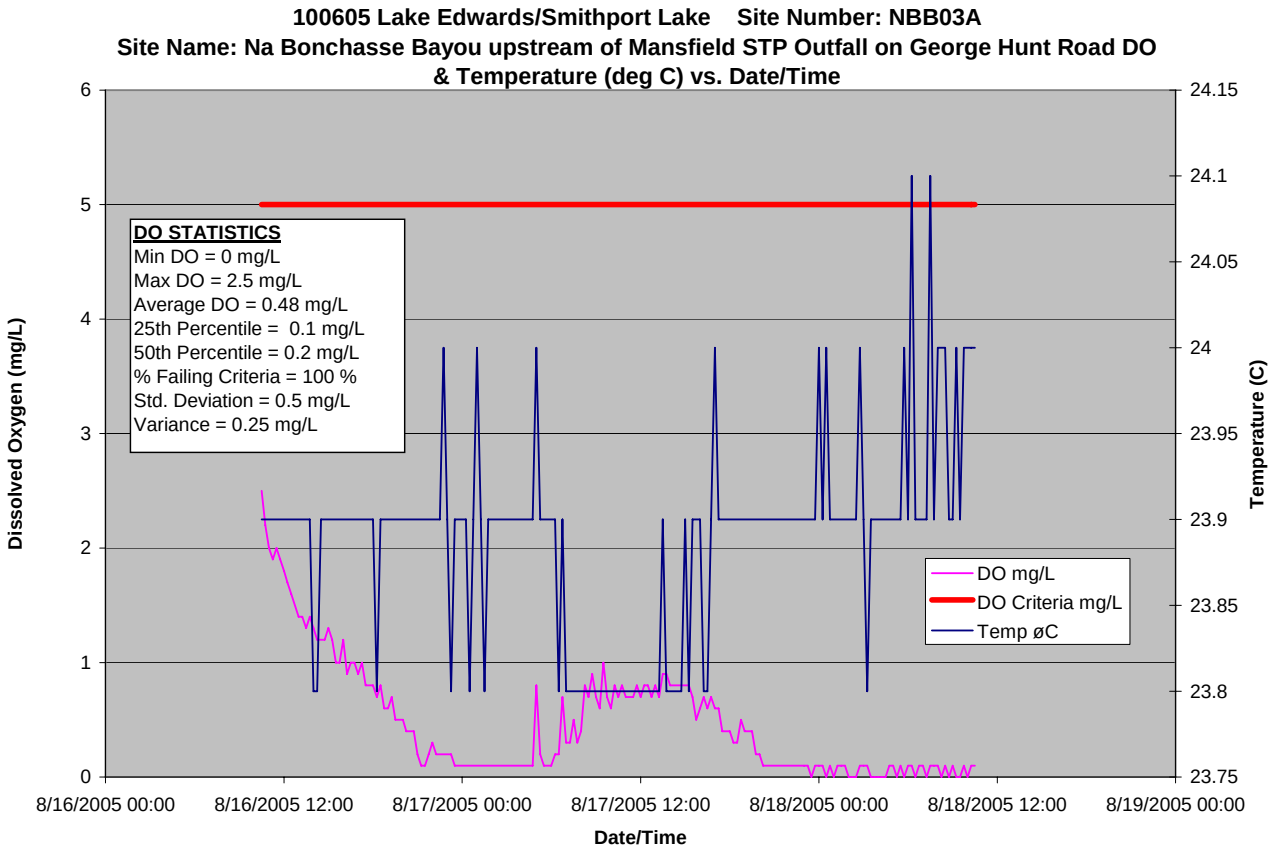
NBB03A Continuous Monitoring Data for Lake Edwards/Smithport Lake Subsegment 100605

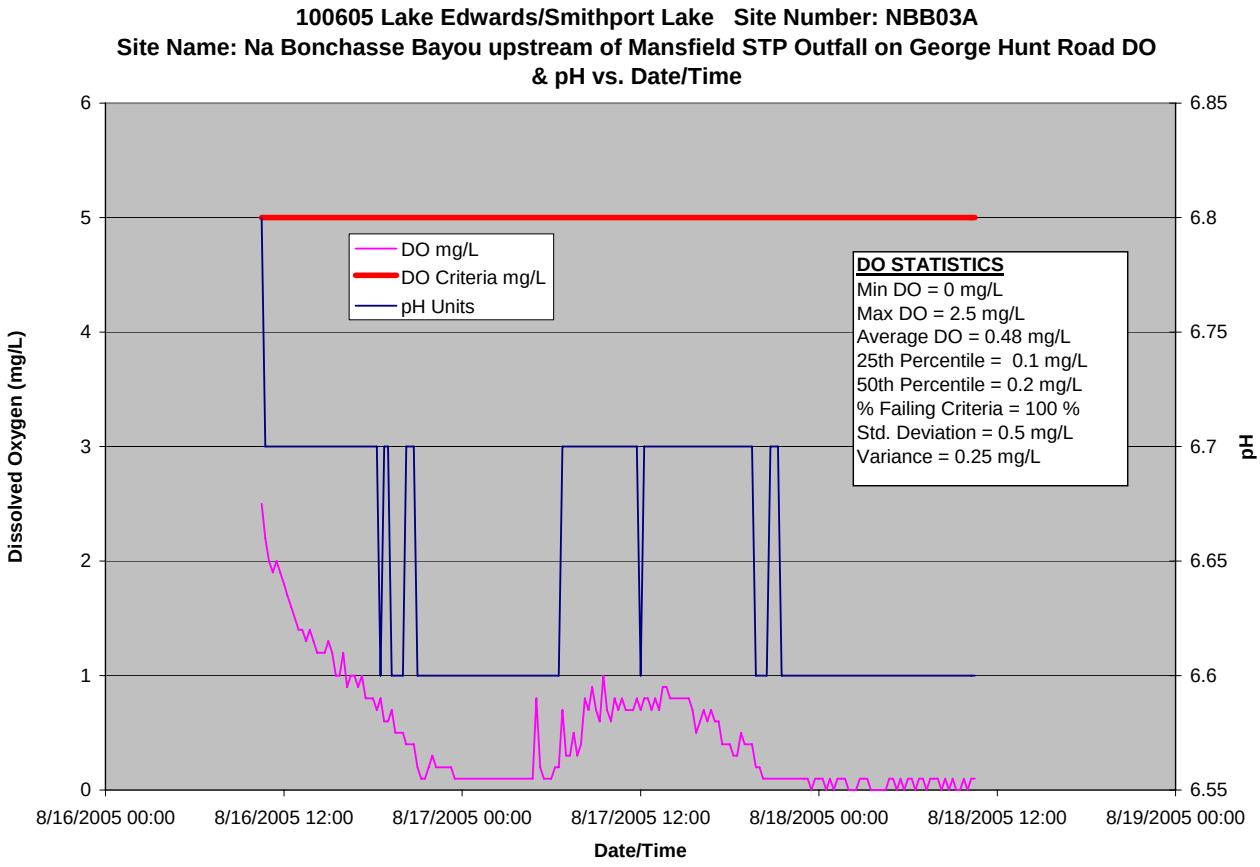
Date MMDDYY	Time HHMM	Date+Time MMDDYYYY HHMM	Temp øC	pH Units	SpCond æS/cm	DO% Sat	DO mg/L	VENTED DEPTH True/False	SALINITY ppt
8/16/2005	10:30	8/16/2005 10:30	23.9	6.8	350	30	2.5	FALSE	0.2
8/16/2005	10:45	8/16/2005 10:45	23.9	6.7	354	26	2.2	FALSE	0.2
8/16/2005	11:00	8/16/2005 11:00	23.9	6.7	355	24	2	FALSE	0.2
8/16/2005	11:15	8/16/2005 11:15	23.9	6.7	355	23	1.9	FALSE	0.2
8/16/2005	11:30	8/16/2005 11:30	23.9	6.7	354	23	2	FALSE	0.2
8/16/2005	11:45	8/16/2005 11:45	23.9	6.7	354	22	1.9	FALSE	0.2
8/16/2005	12:00	8/16/2005 12:00	23.9	6.7	354	22	1.8	FALSE	0.2
8/16/2005	12:15	8/16/2005 12:15	23.9	6.7	354	21	1.7	FALSE	0.2
8/16/2005	12:30	8/16/2005 12:30	23.9	6.7	355	19	1.6	FALSE	0.2
8/16/2005	12:45	8/16/2005 12:45	23.9	6.7	357	18	1.5	FALSE	0.2
8/16/2005	13:00	8/16/2005 13:00	23.9	6.7	356	17	1.4	FALSE	0.2
8/16/2005	13:15	8/16/2005 13:15	23.9	6.7	355	17	1.4	FALSE	0.2
8/16/2005	13:30	8/16/2005 13:30	23.9	6.7	357	16	1.3	FALSE	0.2
8/16/2005	13:45	8/16/2005 13:45	23.9	6.7	356	16	1.4	FALSE	0.2
8/16/2005	14:00	8/16/2005 14:00	23.8	6.7	357	16	1.3	FALSE	0.2
8/16/2005	14:15	8/16/2005 14:15	23.8	6.7	357	14	1.2	FALSE	0.2
8/16/2005	14:30	8/16/2005 14:30	23.9	6.7	358	14	1.2	FALSE	0.2
8/16/2005	14:45	8/16/2005 14:45	23.9	6.7	357	14	1.2	FALSE	0.2
8/16/2005	15:00	8/16/2005 15:00	23.9	6.7	357	15	1.3	FALSE	0.2
8/16/2005	15:15	8/16/2005 15:15	23.9	6.7	358	14	1.2	FALSE	0.2
8/16/2005	15:30	8/16/2005 15:30	23.9	6.7	358	12	1	FALSE	0.2
8/16/2005	15:45	8/16/2005 15:45	23.9	6.7	359	12	1	FALSE	0.2
8/16/2005	16:00	8/16/2005 16:00	23.9	6.7	357	14	1.2	FALSE	0.2
8/16/2005	16:15	8/16/2005 16:15	23.9	6.7	357	11	0.9	FALSE	0.2
8/16/2005	16:30	8/16/2005 16:30	23.9	6.7	358	12	1	FALSE	0.2
8/16/2005	16:45	8/16/2005 16:45	23.9	6.7	358	11	1	FALSE	0.2
8/16/2005	17:00	8/16/2005 17:00	23.9	6.7	358	11	0.9	FALSE	0.2
8/16/2005	17:15	8/16/2005 17:15	23.9	6.7	359	12	1	FALSE	0.2
8/16/2005	17:30	8/16/2005 17:30	23.9	6.7	359	10	0.8	FALSE	0.2
8/16/2005	17:45	8/16/2005 17:45	23.9	6.7	359	9	0.8	FALSE	0.2
8/16/2005	18:00	8/16/2005 18:00	23.9	6.7	360	9	0.8	FALSE	0.2
8/16/2005	18:15	8/16/2005 18:15	23.8	6.7	360	9	0.7	FALSE	0.2
8/16/2005	18:30	8/16/2005 18:30	23.9	6.6	362	9	0.8	FALSE	0.2
8/16/2005	18:45	8/16/2005 18:45	23.9	6.7	361	7	0.6	FALSE	0.2
8/16/2005	19:00	8/16/2005 19:00	23.9	6.7	361	7	0.6	FALSE	0.2
8/16/2005	19:15	8/16/2005 19:15	23.9	6.6	361	8	0.7	FALSE	0.2
8/16/2005	19:30	8/16/2005 19:30	23.9	6.6	363	6	0.5	FALSE	0.2
8/16/2005	19:45	8/16/2005 19:45	23.9	6.6	361	6	0.5	FALSE	0.2
8/16/2005	20:00	8/16/2005 20:00	23.9	6.6	363	6	0.5	FALSE	0.2
8/16/2005	20:15	8/16/2005 20:15	23.9	6.7	362	5	0.4	FALSE	0.2
8/16/2005	20:30	8/16/2005 20:30	23.9	6.7	362	4	0.4	FALSE	0.2
8/16/2005	20:45	8/16/2005 20:45	23.9	6.7	362	5	0.4	FALSE	0.2
8/16/2005	21:00	8/16/2005 21:00	23.9	6.6	364	3	0.2	FALSE	0.2
8/16/2005	21:15	8/16/2005 21:15	23.9	6.6	366	2	0.1	FALSE	0.2
8/16/2005	21:30	8/16/2005 21:30	23.9	6.6	364	1	0.1	FALSE	0.2

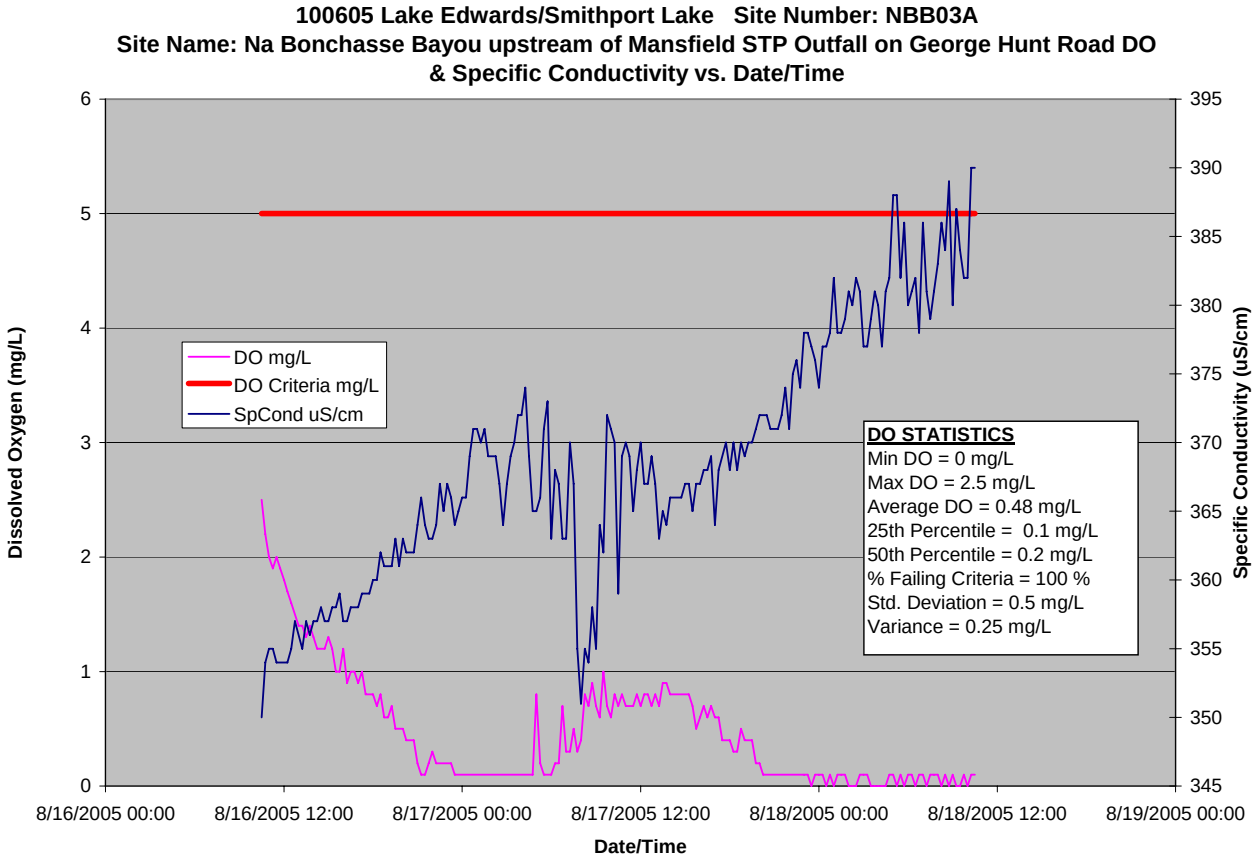
8/16/2005	21:45	8/16/2005 21:45	23.9	6.6	363	2	0.2	FALSE	0.2
8/16/2005	22:00	8/16/2005 22:00	23.9	6.6	363	3	0.3	FALSE	0.2
8/16/2005	22:15	8/16/2005 22:15	23.9	6.6	364	3	0.2	FALSE	0.2
8/16/2005	22:30	8/16/2005 22:30	23.9	6.6	367	2	0.2	FALSE	0.2
8/16/2005	22:45	8/16/2005 22:45	24	6.6	365	2	0.2	FALSE	0.2
8/16/2005	23:00	8/16/2005 23:00	23.9	6.6	367	2	0.2	FALSE	0.2
8/16/2005	23:15	8/16/2005 23:15	23.8	6.6	366	2	0.2	FALSE	0.2
8/16/2005	23:30	8/16/2005 23:30	23.9	6.6	364	2	0.1	FALSE	0.2
8/16/2005	23:45	8/16/2005 23:45	23.9	6.6	365	1	0.1	FALSE	0.2
8/17/2005	0:00	8/17/2005 00:00	23.9	6.6	366	2	0.1	FALSE	0.2
8/17/2005	0:15	8/17/2005 00:15	23.9	6.6	366	1	0.1	FALSE	0.2
8/17/2005	0:30	8/17/2005 00:30	23.8	6.6	369	1	0.1	FALSE	0.2
8/17/2005	0:45	8/17/2005 00:45	23.9	6.6	371	1	0.1	FALSE	0.2
8/17/2005	1:00	8/17/2005 01:00	24	6.6	371	1	0.1	FALSE	0.2
8/17/2005	1:15	8/17/2005 01:15	23.9	6.6	370	2	0.1	FALSE	0.2
8/17/2005	1:30	8/17/2005 01:30	23.8	6.6	371	1	0.1	FALSE	0.2
8/17/2005	1:45	8/17/2005 01:45	23.9	6.6	369	1	0.1	FALSE	0.2
8/17/2005	2:00	8/17/2005 02:00	23.9	6.6	369	1	0.1	FALSE	0.2
8/17/2005	2:15	8/17/2005 02:15	23.9	6.6	369	1	0.1	FALSE	0.2
8/17/2005	2:30	8/17/2005 02:30	23.9	6.6	367	1	0.1	FALSE	0.2
8/17/2005	2:45	8/17/2005 02:45	23.9	6.6	364	2	0.1	FALSE	0.2
8/17/2005	3:00	8/17/2005 03:00	23.9	6.6	367	1	0.1	FALSE	0.2
8/17/2005	3:15	8/17/2005 03:15	23.9	6.6	369	1	0.1	FALSE	0.2
8/17/2005	3:30	8/17/2005 03:30	23.9	6.6	370	1	0.1	FALSE	0.2
8/17/2005	3:45	8/17/2005 03:45	23.9	6.6	372	1	0.1	FALSE	0.2
8/17/2005	4:00	8/17/2005 04:00	23.9	6.6	372	1	0.1	FALSE	0.2
8/17/2005	4:15	8/17/2005 04:15	23.9	6.6	374	1	0.1	FALSE	0.2
8/17/2005	4:30	8/17/2005 04:30	23.9	6.6	369	1	0.1	FALSE	0.2
8/17/2005	4:45	8/17/2005 04:45	23.9	6.6	365	1	0.1	FALSE	0.2
8/17/2005	5:00	8/17/2005 05:00	24	6.6	365	10	0.8	FALSE	0.2
8/17/2005	5:15	8/17/2005 05:15	23.9	6.6	366	3	0.2	FALSE	0.2
8/17/2005	5:30	8/17/2005 05:30	23.9	6.6	371	1	0.1	FALSE	0.2
8/17/2005	5:45	8/17/2005 05:45	23.9	6.6	373	1	0.1	FALSE	0.2
8/17/2005	6:00	8/17/2005 06:00	23.9	6.6	363	1	0.1	FALSE	0.2
8/17/2005	6:15	8/17/2005 06:15	23.9	6.6	368	2	0.2	FALSE	0.2
8/17/2005	6:30	8/17/2005 06:30	23.8	6.6	367	2	0.2	FALSE	0.2
8/17/2005	6:45	8/17/2005 06:45	23.9	6.7	363	8	0.7	FALSE	0.2
8/17/2005	7:00	8/17/2005 07:00	23.8	6.7	363	4	0.3	FALSE	0.2
8/17/2005	7:15	8/17/2005 07:15	23.8	6.7	370	4	0.3	FALSE	0.2
8/17/2005	7:30	8/17/2005 07:30	23.8	6.7	367	6	0.5	FALSE	0.2
8/17/2005	7:45	8/17/2005 07:45	23.8	6.7	355	4	0.3	FALSE	0.2
8/17/2005	8:00	8/17/2005 08:00	23.8	6.7	351	5	0.4	FALSE	0.2
8/17/2005	8:15	8/17/2005 08:15	23.8	6.7	355	9	0.8	FALSE	0.2
8/17/2005	8:30	8/17/2005 08:30	23.8	6.7	354	8	0.7	FALSE	0.2
8/17/2005	8:45	8/17/2005 08:45	23.8	6.7	358	11	0.9	FALSE	0.2
8/17/2005	9:00	8/17/2005 09:00	23.8	6.7	355	8	0.7	FALSE	0.2
8/17/2005	9:15	8/17/2005 09:15	23.8	6.7	364	7	0.6	FALSE	0.2
8/17/2005	9:30	8/17/2005 09:30	23.8	6.7	362	12	1	FALSE	0.2
8/17/2005	9:45	8/17/2005 09:45	23.8	6.7	372	8	0.7	FALSE	0.2
8/17/2005	10:00	8/17/2005 10:00	23.8	6.7	371	7	0.6	FALSE	0.2

8/17/2005	10:15	8/17/2005 10:15	23.8	6.7	370	10	0.8	FALSE	0.2
8/17/2005	10:30	8/17/2005 10:30	23.8	6.7	359	8	0.7	FALSE	0.2
8/17/2005	10:45	8/17/2005 10:45	23.8	6.7	369	10	0.8	FALSE	0.2
8/17/2005	11:00	8/17/2005 11:00	23.8	6.7	370	9	0.7	FALSE	0.2
8/17/2005	11:15	8/17/2005 11:15	23.8	6.7	369	9	0.7	FALSE	0.2
8/17/2005	11:30	8/17/2005 11:30	23.8	6.7	365	8	0.7	FALSE	0.2
8/17/2005	11:45	8/17/2005 11:45	23.8	6.7	368	10	0.8	FALSE	0.2
8/17/2005	12:00	8/17/2005 12:00	23.8	6.6	370	8	0.7	FALSE	0.2
8/17/2005	12:15	8/17/2005 12:15	23.8	6.7	367	9	0.8	FALSE	0.2
8/17/2005	12:30	8/17/2005 12:30	23.8	6.7	367	10	0.8	FALSE	0.2
8/17/2005	12:45	8/17/2005 12:45	23.8	6.7	369	8	0.7	FALSE	0.2
8/17/2005	13:00	8/17/2005 13:00	23.8	6.7	367	10	0.8	FALSE	0.2
8/17/2005	13:15	8/17/2005 13:15	23.8	6.7	363	9	0.7	FALSE	0.2
8/17/2005	13:30	8/17/2005 13:30	23.9	6.7	365	11	0.9	FALSE	0.2
8/17/2005	13:45	8/17/2005 13:45	23.8	6.7	364	11	0.9	FALSE	0.2
8/17/2005	14:00	8/17/2005 14:00	23.8	6.7	366	10	0.8	FALSE	0.2
8/17/2005	14:15	8/17/2005 14:15	23.8	6.7	366	10	0.8	FALSE	0.2
8/17/2005	14:30	8/17/2005 14:30	23.8	6.7	366	9	0.8	FALSE	0.2
8/17/2005	14:45	8/17/2005 14:45	23.8	6.7	366	9	0.8	FALSE	0.2
8/17/2005	15:00	8/17/2005 15:00	23.9	6.7	367	10	0.8	FALSE	0.2
8/17/2005	15:15	8/17/2005 15:15	23.8	6.7	367	9	0.8	FALSE	0.2
8/17/2005	15:30	8/17/2005 15:30	23.9	6.7	365	8	0.7	FALSE	0.2
8/17/2005	15:45	8/17/2005 15:45	23.9	6.7	367	6	0.5	FALSE	0.2
8/17/2005	16:00	8/17/2005 16:00	23.9	6.7	367	8	0.6	FALSE	0.2
8/17/2005	16:15	8/17/2005 16:15	23.8	6.7	368	8	0.7	FALSE	0.2
8/17/2005	16:30	8/17/2005 16:30	23.8	6.7	368	7	0.6	FALSE	0.2
8/17/2005	16:45	8/17/2005 16:45	23.9	6.7	369	8	0.7	FALSE	0.2
8/17/2005	17:00	8/17/2005 17:00	24	6.7	364	7	0.6	FALSE	0.2
8/17/2005	17:15	8/17/2005 17:15	23.9	6.7	368	7	0.6	FALSE	0.2
8/17/2005	17:30	8/17/2005 17:30	23.9	6.7	369	4	0.4	FALSE	0.2
8/17/2005	17:45	8/17/2005 17:45	23.9	6.7	370	5	0.4	FALSE	0.2
8/17/2005	18:00	8/17/2005 18:00	23.9	6.7	368	4	0.4	FALSE	0.2
8/17/2005	18:15	8/17/2005 18:15	23.9	6.7	370	4	0.3	FALSE	0.2
8/17/2005	18:30	8/17/2005 18:30	23.9	6.7	368	3	0.3	FALSE	0.2
8/17/2005	18:45	8/17/2005 18:45	23.9	6.7	370	6	0.5	FALSE	0.2
8/17/2005	19:00	8/17/2005 19:00	23.9	6.7	369	5	0.4	FALSE	0.2
8/17/2005	19:15	8/17/2005 19:15	23.9	6.7	370	5	0.4	FALSE	0.2
8/17/2005	19:30	8/17/2005 19:30	23.9	6.7	370	5	0.4	FALSE	0.2
8/17/2005	19:45	8/17/2005 19:45	23.9	6.6	371	3	0.2	FALSE	0.2
8/17/2005	20:00	8/17/2005 20:00	23.9	6.6	372	3	0.2	FALSE	0.2
8/17/2005	20:15	8/17/2005 20:15	23.9	6.6	372	1	0.1	FALSE	0.2
8/17/2005	20:30	8/17/2005 20:30	23.9	6.6	372	1	0.1	FALSE	0.2
8/17/2005	20:45	8/17/2005 20:45	23.9	6.7	371	2	0.1	FALSE	0.2
8/17/2005	21:00	8/17/2005 21:00	23.9	6.7	371	1	0.1	FALSE	0.2
8/17/2005	21:15	8/17/2005 21:15	23.9	6.7	371	1	0.1	FALSE	0.2
8/17/2005	21:30	8/17/2005 21:30	23.9	6.6	372	1	0.1	FALSE	0.2
8/17/2005	21:45	8/17/2005 21:45	23.9	6.6	374	1	0.1	FALSE	0.2
8/17/2005	22:00	8/17/2005 22:00	23.9	6.6	371	1	0.1	FALSE	0.2
8/17/2005	22:15	8/17/2005 22:15	23.9	6.6	375	1	0.1	FALSE	0.2
8/17/2005	22:30	8/17/2005 22:30	23.9	6.6	376	1	0.1	FALSE	0.2

8/17/2005	22:45	8/17/2005 22:45	23.9	6.6	374	1	0.1	FALSE	0.2
8/17/2005	23:00	8/17/2005 23:00	23.9	6.6	378	1	0.1	FALSE	0.2
8/17/2005	23:15	8/17/2005 23:15	23.9	6.6	378	1	0.1	FALSE	0.2
8/17/2005	23:30	8/17/2005 23:30	23.9	6.6	377	0	0	FALSE	0.2
8/17/2005	23:45	8/17/2005 23:45	23.9	6.6	376	1	0.1	FALSE	0.2
8/18/2005	0:00	8/18/2005 00:00	24	6.6	374	1	0.1	FALSE	0.2
8/18/2005	0:15	8/18/2005 00:15	23.9	6.6	377	1	0.1	FALSE	0.2
8/18/2005	0:30	8/18/2005 00:30	24	6.6	377	1	0	FALSE	0.2
8/18/2005	0:45	8/18/2005 00:45	23.9	6.6	378	1	0.1	FALSE	0.2
8/18/2005	1:00	8/18/2005 01:00	23.9	6.6	382	0	0	FALSE	0.2
8/18/2005	1:15	8/18/2005 01:15	23.9	6.6	378	1	0.1	FALSE	0.2
8/18/2005	1:30	8/18/2005 01:30	23.9	6.6	378	1	0.1	FALSE	0.2
8/18/2005	1:45	8/18/2005 01:45	23.9	6.6	379	1	0.1	FALSE	0.2
8/18/2005	2:00	8/18/2005 02:00	23.9	6.6	381	0	0	FALSE	0.2
8/18/2005	2:15	8/18/2005 02:15	23.9	6.6	380	0	0	FALSE	0.2
8/18/2005	2:30	8/18/2005 02:30	23.9	6.6	382	0	0	FALSE	0.2
8/18/2005	2:45	8/18/2005 02:45	24	6.6	381	1	0.1	FALSE	0.2
8/18/2005	3:00	8/18/2005 03:00	23.9	6.6	377	1	0.1	FALSE	0.2
8/18/2005	3:15	8/18/2005 03:15	23.8	6.6	377	1	0.1	FALSE	0.2
8/18/2005	3:30	8/18/2005 03:30	23.9	6.6	379	1	0	FALSE	0.2
8/18/2005	3:45	8/18/2005 03:45	23.9	6.6	381	0	0	FALSE	0.2
8/18/2005	4:00	8/18/2005 04:00	23.9	6.6	380	0	0	FALSE	0.2
8/18/2005	4:15	8/18/2005 04:15	23.9	6.6	377	0	0	FALSE	0.2
8/18/2005	4:30	8/18/2005 04:30	23.9	6.6	381	0	0	FALSE	0.2
8/18/2005	4:45	8/18/2005 04:45	23.9	6.6	382	1	0.1	FALSE	0.2
8/18/2005	5:00	8/18/2005 05:00	23.9	6.6	388	1	0.1	FALSE	0.2
8/18/2005	5:15	8/18/2005 05:15	23.9	6.6	388	0	0	FALSE	0.2
8/18/2005	5:30	8/18/2005 05:30	23.9	6.6	382	1	0.1	FALSE	0.2
8/18/2005	5:45	8/18/2005 05:45	24	6.6	386	0	0	FALSE	0.2
8/18/2005	6:00	8/18/2005 06:00	23.9	6.6	380	1	0.1	FALSE	0.2
8/18/2005	6:15	8/18/2005 06:15	24.1	6.6	381	1	0.1	FALSE	0.2
8/18/2005	6:30	8/18/2005 06:30	23.9	6.6	382	0	0	FALSE	0.2
8/18/2005	6:45	8/18/2005 06:45	23.9	6.6	378	1	0.1	FALSE	0.2
8/18/2005	7:00	8/18/2005 07:00	23.9	6.6	386	1	0.1	FALSE	0.2
8/18/2005	7:15	8/18/2005 07:15	23.9	6.6	381	0	0	FALSE	0.2
8/18/2005	7:30	8/18/2005 07:30	24.1	6.6	379	1	0.1	FALSE	0.2
8/18/2005	7:45	8/18/2005 07:45	23.9	6.6	381	1	0.1	FALSE	0.2
8/18/2005	8:00	8/18/2005 08:00	24	6.6	383	1	0.1	FALSE	0.2
8/18/2005	8:15	8/18/2005 08:15	24	6.6	386	0	0	FALSE	0.2
8/18/2005	8:30	8/18/2005 08:30	24	6.6	384	1	0.1	FALSE	0.2
8/18/2005	8:45	8/18/2005 08:45	23.9	6.6	389	0	0	FALSE	0.2
8/18/2005	9:00	8/18/2005 09:00	23.9	6.6	380	1	0.1	FALSE	0.2
8/18/2005	9:15	8/18/2005 09:15	24	6.6	387	1	0	FALSE	0.2
8/18/2005	9:30	8/18/2005 09:30	23.9	6.6	384	0	0	FALSE	0.2
8/18/2005	9:45	8/18/2005 09:45	24	6.6	382	1	0.1	FALSE	0.2
8/18/2005	10:00	8/18/2005 10:00	24	6.6	382	0	0	FALSE	0.2
8/18/2005	10:15	8/18/2005 10:15	24	6.6	390	1	0.1	FALSE	0.2
8/18/2005	10:30	8/18/2005 10:30	24	6.6	390	1	0.1	FALSE	0.2


100605 Lake Edwards/Smithport Lake Site Number: NBB03A
Site Name: Na Bonchasse Bayou upstream of Mansfield STP Outfall on George Hunt Road DO & Temperature (deg C) vs. Date/Time
DO STATISTICS
Min DO = 0 mg/L
Max DO = 2.5 mg/L
Average DO = 0.48 mg/L
25th Percentile = 0.1 mg/L
50th Percentile = 0.2 mg/L
% Failing Criteria = 100 %
Std. Deviation = 0.5 mg/L
Variance = 0.25 mg/L
DO mg/L
DO Criteria mg/L
Temp øC
Dissolved Oxygen (mg/L)
Temperature (C)
Date/Time
0
1
2
3
4
5
6
23.75
23.8
23.85
23.9
23.95
24
24.05
24.1
24.15
8/16/2005 00:00
8/16/2005 12:00
8/17/2005 00:00
8/17/2005 12:00
8/18/2005 00:00
8/18/2005 12:00
8/19/2005 00:00


100605 Lake Edwards/Smithport Lake Site Number: NBB03A
Site Name: Na Bonchasse Bayou upstream of Mansfield STP Outfall on George Hunt Road DO & pH vs. Date/Time
Dissolved Oxygen (mg/L)
pH
Date/Time
DO mg/L
DO Criteria mg/L
pH Units
DO STATISTICS
Min DO = 0 mg/L
Max DO = 2.5 mg/L
Average DO = 0.48 mg/L
25th Percentile = 0.1 mg/L
50th Percentile = 0.2 mg/L
% Failing Criteria = 100 %
Std. Deviation = 0.5 mg/L
Variance = 0.25 mg/L
0
1
2
3
4
5
6
6.55
6.6
6.65
6.7
6.75
6.8
6.85
8/16/2005 00:00
8/16/2005 12:00
8/17/2005 00:00
8/17/2005 12:00
8/18/2005 00:00
8/18/2005 12:00
8/19/2005 00:00



100605 Lake Edwards/Smithport Lake
Site Number: NBB03A
Na Bonchasse Bayou upstream of Mansfield STP Outfall

	Temp deg C	pH	SpCond uS/cm	DO %	DO mg/L
Minimum	23.80	6.60	350.00	0.00	0.00
Maximum	24.10	6.80	390.00	30.00	2.50
Average	23.89	6.65	368.61	5.65	0.48
Geometric Mean	23.89	6.65			
25th Percentile	23.90	6.60	363.00	1.00	0.10
30th Percentile	23.90	6.60	364.00	1.00	0.10
40th Percentile	23.90	6.60	366.00	1.00	0.10
50th Percentile	23.90	6.60	368.00	3.00	0.20
Standard Deviation	0.06	0.05	9.03	6.03	0.50
Variance	0.00	0.00	81.60	36.31	0.25

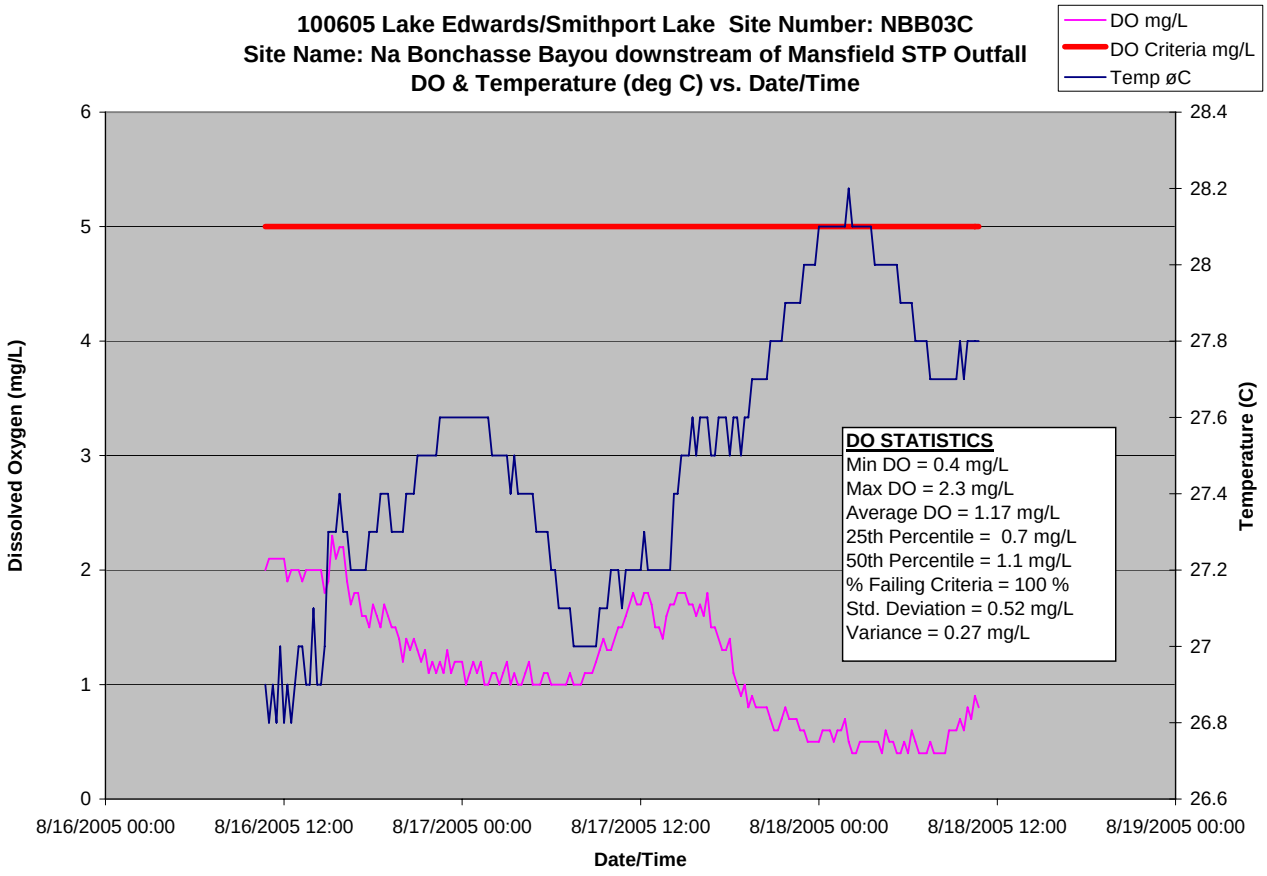
Data Row Count	193
Total Values Failing DO Criteria	193
Percent failing DO Criteria	100.00 %

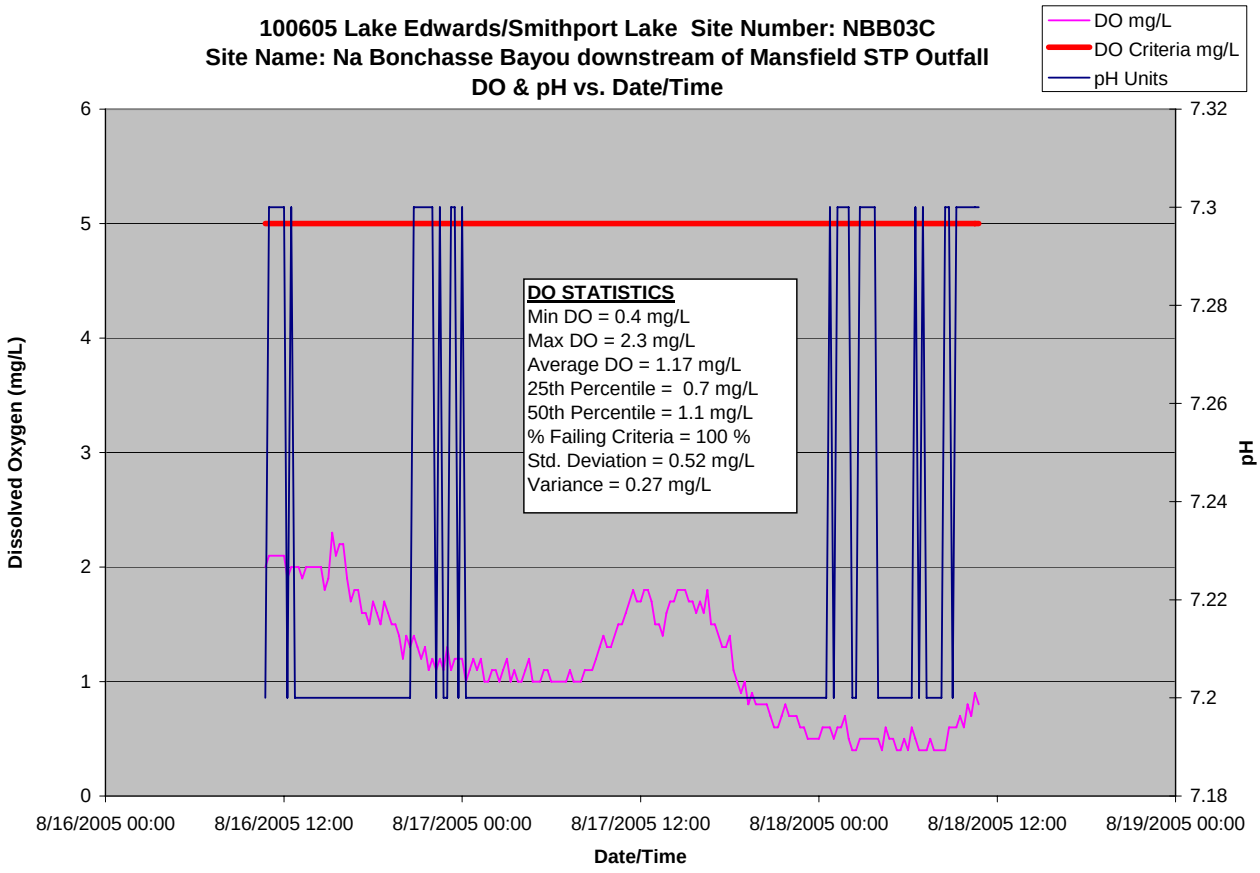
NBB03C Continuous Monitoring Data for Lake Edwards/Smithport Lake Subsegment 100605										
Date	Time	Date+Time	Temp	pH	SpCond	DO%	DO	iBatt	VENTED DEPTH	SALINITY
MMDDYY	HHMM	MMDDYYYY HHMM	øC	Units	æS/cm	Sat	mg/L	Volts	True/False	ppt
8/16/2005	10:45	8/16/2005 10:45	26.9	7.2	694	25	2	11.5	FALSE	0.4
8/16/2005	11:00	8/16/2005 11:00	26.8	7.3	693	27	2.1	11.5	FALSE	0.4
8/16/2005	11:15	8/16/2005 11:15	26.9	7.3	692	26	2.1	11.6	FALSE	0.4
8/16/2005	11:30	8/16/2005 11:30	26.8	7.3	686	26	2.1	11.6	FALSE	0.4
8/16/2005	11:45	8/16/2005 11:45	27	7.3	689	26	2.1	11.5	FALSE	0.4
8/16/2005	12:00	8/16/2005 12:00	26.8	7.3	680	27	2.1	11.4	FALSE	0.4
8/16/2005	12:15	8/16/2005 12:15	26.9	7.2	687	24	1.9	11.5	FALSE	0.4
8/16/2005	12:30	8/16/2005 12:30	26.8	7.3	689	26	2	11.6	FALSE	0.4
8/16/2005	12:45	8/16/2005 12:45	26.9	7.2	687	25	2	11.4	FALSE	0.4
8/16/2005	13:00	8/16/2005 13:00	27	7.2	681	25	2	11.4	FALSE	0.4
8/16/2005	13:15	8/16/2005 13:15	27	7.2	677	24	1.9	11.4	FALSE	0.4
8/16/2005	13:30	8/16/2005 13:30	26.9	7.2	682	25	2	11.5	FALSE	0.4
8/16/2005	13:45	8/16/2005 13:45	26.9	7.2	678	25	2	11.4	FALSE	0.4
8/16/2005	14:00	8/16/2005 14:00	27.1	7.2	683	25	2	11.5	FALSE	0.4
8/16/2005	14:15	8/16/2005 14:15	26.9	7.2	679	25	2	11.4	FALSE	0.4
8/16/2005	14:30	8/16/2005 14:30	26.9	7.2	678	25	2	11.4	FALSE	0.4
8/16/2005	14:45	8/16/2005 14:45	27	7.2	680	23	1.8	11.5	FALSE	0.4
8/16/2005	15:00	8/16/2005 15:00	27.3	7.2	683	24	1.9	11.5	FALSE	0.4
8/16/2005	15:15	8/16/2005 15:15	27.3	7.2	682	29	2.3	11.4	FALSE	0.4
8/16/2005	15:30	8/16/2005 15:30	27.3	7.2	678	27	2.1	11.5	FALSE	0.4
8/16/2005	15:45	8/16/2005 15:45	27.4	7.2	680	28	2.2	11.4	FALSE	0.4
8/16/2005	16:00	8/16/2005 16:00	27.3	7.2	670	28	2.2	11.5	FALSE	0.3
8/16/2005	16:15	8/16/2005 16:15	27.3	7.2	674	25	1.9	11.5	FALSE	0.4
8/16/2005	16:30	8/16/2005 16:30	27.2	7.2	676	21	1.7	11.4	FALSE	0.4
8/16/2005	16:45	8/16/2005 16:45	27.2	7.2	676	23	1.8	11.5	FALSE	0.4
8/16/2005	17:00	8/16/2005 17:00	27.2	7.2	678	22	1.8	11.4	FALSE	0.4
8/16/2005	17:15	8/16/2005 17:15	27.2	7.2	676	21	1.6	11.4	FALSE	0.4
8/16/2005	17:30	8/16/2005 17:30	27.2	7.2	676	21	1.6	11.4	FALSE	0.4
8/16/2005	17:45	8/16/2005 17:45	27.3	7.2	678	19	1.5	11.4	FALSE	0.4
8/16/2005	18:00	8/16/2005 18:00	27.3	7.2	678	22	1.7	11.4	FALSE	0.4
8/16/2005	18:15	8/16/2005 18:15	27.3	7.2	678	21	1.6	11.4	FALSE	0.4
8/16/2005	18:30	8/16/2005 18:30	27.4	7.2	679	19	1.5	11.4	FALSE	0.4
8/16/2005	18:45	8/16/2005 18:45	27.4	7.2	679	21	1.7	11.5	FALSE	0.4
8/16/2005	19:00	8/16/2005 19:00	27.4	7.2	673	20	1.6	11.5	FALSE	0.4
8/16/2005	19:15	8/16/2005 19:15	27.3	7.2	670	19	1.5	11.5	FALSE	0.3
8/16/2005	19:30	8/16/2005 19:30	27.3	7.2	678	19	1.5	11.4	FALSE	0.4
8/16/2005	19:45	8/16/2005 19:45	27.3	7.2	677	18	1.4	11.4	FALSE	0.4
8/16/2005	20:00	8/16/2005 20:00	27.3	7.2	680	15	1.2	11.5	FALSE	0.4
8/16/2005	20:15	8/16/2005 20:15	27.4	7.2	680	18	1.4	11.5	FALSE	0.4
8/16/2005	20:30	8/16/2005 20:30	27.4	7.2	678	17	1.3	11.4	FALSE	0.4
8/16/2005	20:45	8/16/2005 20:45	27.4	7.3	681	17	1.4	11.4	FALSE	0.4
8/16/2005	21:00	8/16/2005 21:00	27.5	7.3	682	16	1.3	11.4	FALSE	0.4
8/16/2005	21:15	8/16/2005 21:15	27.5	7.3	684	15	1.2	11.4	FALSE	0.4
8/16/2005	21:30	8/16/2005 21:30	27.5	7.3	683	16	1.3	11.4	FALSE	0.4
8/16/2005	21:45	8/16/2005 21:45	27.5	7.3	684	14	1.1	11.4	FALSE	0.4
8/16/2005	22:00	8/16/2005 22:00	27.5	7.3	683	15	1.2	11.4	FALSE	0.4

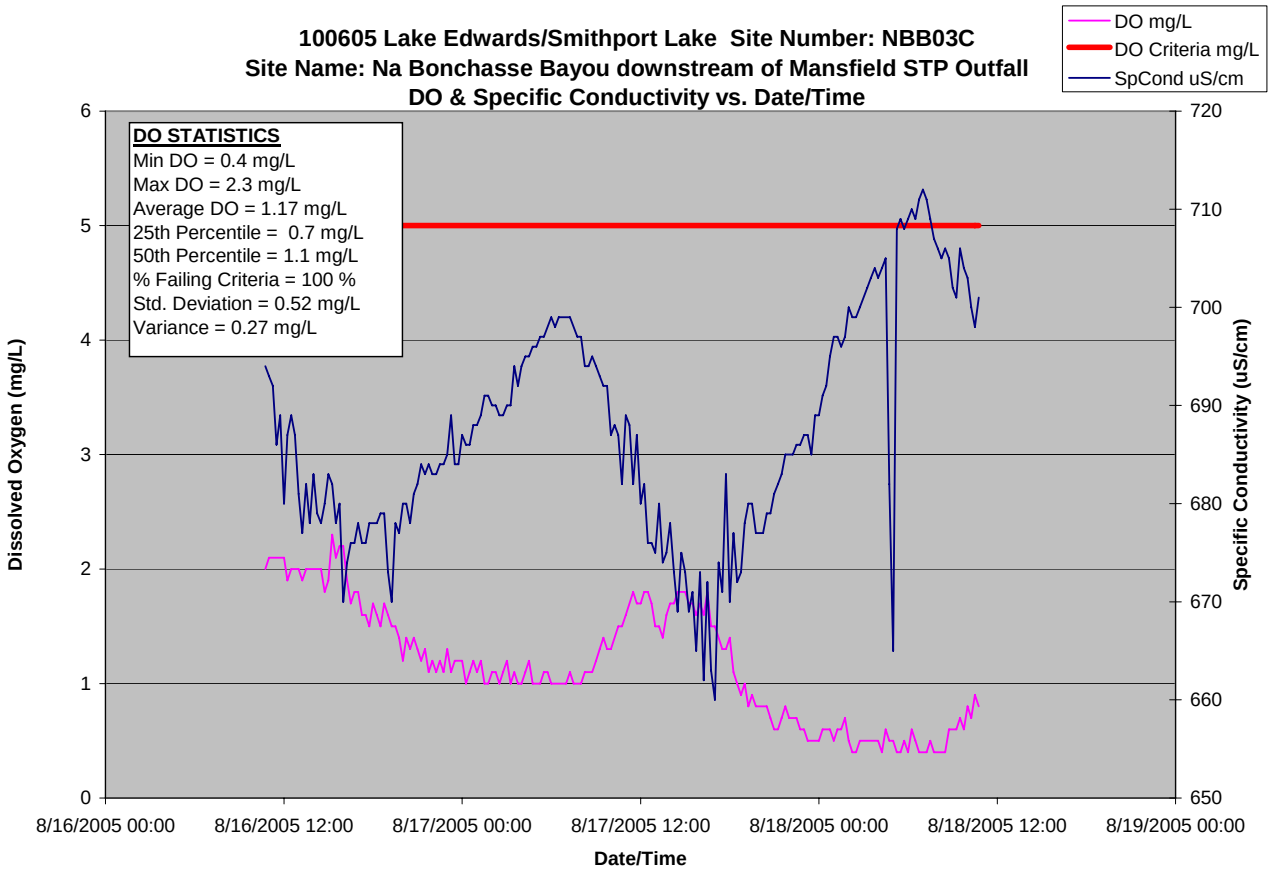
8/16/2005	22:15	8/16/2005 22:15	27.5	7.2	683	14	1.1	11.4	FALSE	0.4
8/16/2005	22:30	8/16/2005 22:30	27.6	7.3	684	16	1.2	11.4	FALSE	0.4
8/16/2005	22:45	8/16/2005 22:45	27.6	7.2	684	14	1.1	11.4	FALSE	0.4
8/16/2005	23:00	8/16/2005 23:00	27.6	7.2	685	16	1.3	11.4	FALSE	0.4
8/16/2005	23:15	8/16/2005 23:15	27.6	7.3	689	14	1.1	11.4	FALSE	0.4
8/16/2005	23:30	8/16/2005 23:30	27.6	7.3	684	15	1.2	11.4	FALSE	0.4
8/16/2005	23:45	8/16/2005 23:45	27.6	7.2	684	16	1.2	11.4	FALSE	0.4
8/17/2005	0:00	8/17/2005 00:00	27.6	7.3	687	15	1.2	11.4	FALSE	0.4
8/17/2005	0:15	8/17/2005 00:15	27.6	7.2	686	13	1	11.4	FALSE	0.4
8/17/2005	0:30	8/17/2005 00:30	27.6	7.2	686	14	1.1	11.4	FALSE	0.4
8/17/2005	0:45	8/17/2005 00:45	27.6	7.2	688	15	1.2	11.4	FALSE	0.4
8/17/2005	1:00	8/17/2005 01:00	27.6	7.2	688	15	1.1	11.4	FALSE	0.4
8/17/2005	1:15	8/17/2005 01:15	27.6	7.2	689	15	1.2	11.4	FALSE	0.4
8/17/2005	1:30	8/17/2005 01:30	27.6	7.2	691	12	1	11.4	FALSE	0.4
8/17/2005	1:45	8/17/2005 01:45	27.6	7.2	691	13	1	11.4	FALSE	0.4
8/17/2005	2:00	8/17/2005 02:00	27.5	7.2	690	14	1.1	11.4	FALSE	0.4
8/17/2005	2:15	8/17/2005 02:15	27.5	7.2	690	14	1.1	11.4	FALSE	0.4
8/17/2005	2:30	8/17/2005 02:30	27.5	7.2	689	13	1	11.4	FALSE	0.4
8/17/2005	2:45	8/17/2005 02:45	27.5	7.2	689	14	1.1	11.3	FALSE	0.4
8/17/2005	3:00	8/17/2005 03:00	27.5	7.2	690	15	1.2	11.3	FALSE	0.4
8/17/2005	3:15	8/17/2005 03:15	27.4	7.2	690	13	1	11.4	FALSE	0.4
8/17/2005	3:30	8/17/2005 03:30	27.5	7.2	694	14	1.1	11.4	FALSE	0.4
8/17/2005	3:45	8/17/2005 03:45	27.4	7.2	692	13	1	11.4	FALSE	0.4
8/17/2005	4:00	8/17/2005 04:00	27.4	7.2	694	12	1	11.4	FALSE	0.4
8/17/2005	4:15	8/17/2005 04:15	27.4	7.2	695	15	1.1	11.2	FALSE	0.4
8/17/2005	4:30	8/17/2005 04:30	27.4	7.2	695	15	1.2	11.3	FALSE	0.4
8/17/2005	4:45	8/17/2005 04:45	27.4	7.2	696	13	1	11.4	FALSE	0.4
8/17/2005	5:00	8/17/2005 05:00	27.3	7.2	696	13	1	11.4	FALSE	0.4
8/17/2005	5:15	8/17/2005 05:15	27.3	7.2	697	13	1	11.2	FALSE	0.4
8/17/2005	5:30	8/17/2005 05:30	27.3	7.2	697	14	1.1	11.4	FALSE	0.4
8/17/2005	5:45	8/17/2005 05:45	27.3	7.2	698	13	1.1	11.4	FALSE	0.4
8/17/2005	6:00	8/17/2005 06:00	27.2	7.2	699	12	1	11.4	FALSE	0.4
8/17/2005	6:15	8/17/2005 06:15	27.2	7.2	698	13	1	11.3	FALSE	0.4
8/17/2005	6:30	8/17/2005 06:30	27.1	7.2	699	13	1	11.3	FALSE	0.4
8/17/2005	6:45	8/17/2005 06:45	27.1	7.2	699	13	1	11.2	FALSE	0.4
8/17/2005	7:00	8/17/2005 07:00	27.1	7.2	699	13	1	11.3	FALSE	0.4
8/17/2005	7:15	8/17/2005 07:15	27.1	7.2	699	14	1.1	11.3	FALSE	0.4
8/17/2005	7:30	8/17/2005 07:30	27	7.2	698	13	1	11.2	FALSE	0.4
8/17/2005	7:45	8/17/2005 07:45	27	7.2	697	12	1	11.4	FALSE	0.4
8/17/2005	8:00	8/17/2005 08:00	27	7.2	697	12	1	11.4	FALSE	0.4
8/17/2005	8:15	8/17/2005 08:15	27	7.2	694	14	1.1	11.2	FALSE	0.4
8/17/2005	8:30	8/17/2005 08:30	27	7.2	694	14	1.1	11.2	FALSE	0.4
8/17/2005	8:45	8/17/2005 08:45	27	7.2	695	14	1.1	11.3	FALSE	0.4
8/17/2005	9:00	8/17/2005 09:00	27	7.2	694	15	1.2	11.2	FALSE	0.4
8/17/2005	9:15	8/17/2005 09:15	27.1	7.2	693	16	1.3	11.2	FALSE	0.4
8/17/2005	9:30	8/17/2005 09:30	27.1	7.2	692	17	1.4	11.4	FALSE	0.4
8/17/2005	9:45	8/17/2005 09:45	27.1	7.2	692	16	1.3	11.3	FALSE	0.4
8/17/2005	10:00	8/17/2005 10:00	27.2	7.2	687	17	1.3	11.3	FALSE	0.4
8/17/2005	10:15	8/17/2005 10:15	27.2	7.2	688	18	1.4	11.2	FALSE	0.4
8/17/2005	10:30	8/17/2005 10:30	27.2	7.2	687	19	1.5	11.2	FALSE	0.4

8/17/2005	10:45	8/17/2005 10:45	27.1	7.2	682	19	1.5	11.2	FALSE	0.4
8/17/2005	11:00	8/17/2005 11:00	27.2	7.2	689	21	1.6	11.3	FALSE	0.4
8/17/2005	11:15	8/17/2005 11:15	27.2	7.2	688	22	1.7	11.2	FALSE	0.4
8/17/2005	11:30	8/17/2005 11:30	27.2	7.2	682	23	1.8	11.2	FALSE	0.4
8/17/2005	11:45	8/17/2005 11:45	27.2	7.2	687	22	1.7	11.3	FALSE	0.4
8/17/2005	12:00	8/17/2005 12:00	27.2	7.2	680	22	1.7	11.2	FALSE	0.4
8/17/2005	12:15	8/17/2005 12:15	27.3	7.2	682	23	1.8	11.2	FALSE	0.4
8/17/2005	12:30	8/17/2005 12:30	27.2	7.2	676	22	1.8	11.3	FALSE	0.4
8/17/2005	12:45	8/17/2005 12:45	27.2	7.2	676	21	1.7	11.3	FALSE	0.4
8/17/2005	13:00	8/17/2005 13:00	27.2	7.2	675	18	1.5	11.3	FALSE	0.4
8/17/2005	13:15	8/17/2005 13:15	27.2	7.2	680	19	1.5	11.3	FALSE	0.4
8/17/2005	13:30	8/17/2005 13:30	27.2	7.2	674	18	1.4	11.3	FALSE	0.4
8/17/2005	13:45	8/17/2005 13:45	27.2	7.2	675	20	1.6	11.3	FALSE	0.4
8/17/2005	14:00	8/17/2005 14:00	27.2	7.2	678	21	1.7	11.3	FALSE	0.4
8/17/2005	14:15	8/17/2005 14:15	27.4	7.2	673	21	1.7	11.2	FALSE	0.4
8/17/2005	14:30	8/17/2005 14:30	27.4	7.2	669	23	1.8	11.2	FALSE	0.3
8/17/2005	14:45	8/17/2005 14:45	27.5	7.2	675	22	1.8	11.2	FALSE	0.4
8/17/2005	15:00	8/17/2005 15:00	27.5	7.2	673	23	1.8	11.3	FALSE	0.4
8/17/2005	15:15	8/17/2005 15:15	27.5	7.2	669	22	1.7	11.3	FALSE	0.3
8/17/2005	15:30	8/17/2005 15:30	27.6	7.2	671	22	1.7	11.3	FALSE	0.4
8/17/2005	15:45	8/17/2005 15:45	27.5	7.2	665	20	1.6	11.2	FALSE	0.3
8/17/2005	16:00	8/17/2005 16:00	27.6	7.2	673	22	1.7	11.2	FALSE	0.4
8/17/2005	16:15	8/17/2005 16:15	27.6	7.2	662	21	1.6	11.3	FALSE	0.3
8/17/2005	16:30	8/17/2005 16:30	27.6	7.2	672	22	1.8	11.3	FALSE	0.4
8/17/2005	16:45	8/17/2005 16:45	27.5	7.2	663	19	1.5	11.4	FALSE	0.3
8/17/2005	17:00	8/17/2005 17:00	27.5	7.2	660	19	1.5	11.3	FALSE	0.3
8/17/2005	17:15	8/17/2005 17:15	27.6	7.2	674	18	1.4	11.3	FALSE	0.4
8/17/2005	17:30	8/17/2005 17:30	27.6	7.2	671	17	1.3	11.3	FALSE	0.4
8/17/2005	17:45	8/17/2005 17:45	27.6	7.2	683	16	1.3	11.4	FALSE	0.4
8/17/2005	18:00	8/17/2005 18:00	27.5	7.2	670	17	1.4	11.4	FALSE	0.3
8/17/2005	18:15	8/17/2005 18:15	27.6	7.2	677	13	1.1	11.3	FALSE	0.4
8/17/2005	18:30	8/17/2005 18:30	27.6	7.2	672	13	1	11.3	FALSE	0.4
8/17/2005	18:45	8/17/2005 18:45	27.5	7.2	673	12	0.9	11.3	FALSE	0.4
8/17/2005	19:00	8/17/2005 19:00	27.6	7.2	678	13	1	11.3	FALSE	0.4
8/17/2005	19:15	8/17/2005 19:15	27.6	7.2	680	10	0.8	11.4	FALSE	0.4
8/17/2005	19:30	8/17/2005 19:30	27.7	7.2	680	12	0.9	11.2	FALSE	0.4
8/17/2005	19:45	8/17/2005 19:45	27.7	7.2	677	10	0.8	11.4	FALSE	0.4
8/17/2005	20:00	8/17/2005 20:00	27.7	7.2	677	11	0.8	11.2	FALSE	0.4
8/17/2005	20:15	8/17/2005 20:15	27.7	7.2	677	11	0.8	11.4	FALSE	0.4
8/17/2005	20:30	8/17/2005 20:30	27.7	7.2	679	10	0.8	11.3	FALSE	0.4
8/17/2005	20:45	8/17/2005 20:45	27.8	7.2	679	9	0.7	11.4	FALSE	0.4
8/17/2005	21:00	8/17/2005 21:00	27.8	7.2	681	8	0.6	11.3	FALSE	0.4
8/17/2005	21:15	8/17/2005 21:15	27.8	7.2	682	7	0.6	11.3	FALSE	0.4
8/17/2005	21:30	8/17/2005 21:30	27.8	7.2	683	9	0.7	11.4	FALSE	0.4
8/17/2005	21:45	8/17/2005 21:45	27.9	7.2	685	11	0.8	11.2	FALSE	0.4
8/17/2005	22:00	8/17/2005 22:00	27.9	7.2	685	8	0.7	11.3	FALSE	0.4
8/17/2005	22:15	8/17/2005 22:15	27.9	7.2	685	9	0.7	11.4	FALSE	0.4
8/17/2005	22:30	8/17/2005 22:30	27.9	7.2	686	9	0.7	11.2	FALSE	0.4
8/17/2005	22:45	8/17/2005 22:45	27.9	7.2	686	8	0.6	11.2	FALSE	0.4
8/17/2005	23:00	8/17/2005 23:00	28	7.2	687	8	0.6	11.2	FALSE	0.4

8/17/2005	23:15	8/17/2005 23:15	28	7.2	687	6	0.5	11.4	FALSE	0.4
8/17/2005	23:30	8/17/2005 23:30	28	7.2	685	7	0.5	11.2	FALSE	0.4
8/17/2005	23:45	8/17/2005 23:45	28	7.2	689	7	0.5	11.4	FALSE	0.4
8/18/2005	0:00	8/18/2005 00:00	28.1	7.2	689	7	0.5	11.3	FALSE	0.4
8/18/2005	0:15	8/18/2005 00:15	28.1	7.2	691	8	0.6	11.1	FALSE	0.4
8/18/2005	0:30	8/18/2005 00:30	28.1	7.2	692	8	0.6	11.3	FALSE	0.4
8/18/2005	0:45	8/18/2005 00:45	28.1	7.3	695	8	0.6	11.2	FALSE	0.4
8/18/2005	1:00	8/18/2005 01:00	28.1	7.2	697	6	0.5	11.3	FALSE	0.4
8/18/2005	1:15	8/18/2005 01:15	28.1	7.3	697	8	0.6	11.3	FALSE	0.4
8/18/2005	1:30	8/18/2005 01:30	28.1	7.3	696	8	0.6	11.3	FALSE	0.4
8/18/2005	1:45	8/18/2005 01:45	28.1	7.3	697	9	0.7	11.1	FALSE	0.4
8/18/2005	2:00	8/18/2005 02:00	28.2	7.3	700	7	0.5	11.3	FALSE	0.4
8/18/2005	2:15	8/18/2005 02:15	28.1	7.2	699	5	0.4	11.2	FALSE	0.4
8/18/2005	2:30	8/18/2005 02:30	28.1	7.2	699	5	0.4	11.3	FALSE	0.4
8/18/2005	2:45	8/18/2005 02:45	28.1	7.3	700	7	0.5	11.2	FALSE	0.4
8/18/2005	3:00	8/18/2005 03:00	28.1	7.3	701	6	0.5	11.3	FALSE	0.4
8/18/2005	3:15	8/18/2005 03:15	28.1	7.3	702	7	0.5	11.2	FALSE	0.4
8/18/2005	3:30	8/18/2005 03:30	28.1	7.3	703	6	0.5	11.2	FALSE	0.4
8/18/2005	3:45	8/18/2005 03:45	28	7.3	704	6	0.5	11.3	FALSE	0.4
8/18/2005	4:00	8/18/2005 04:00	28	7.2	703	6	0.5	11.1	FALSE	0.4
8/18/2005	4:15	8/18/2005 04:15	28	7.2	704	6	0.4	11.1	FALSE	0.4
8/18/2005	4:30	8/18/2005 04:30	28	7.2	705	8	0.6	11.1	FALSE	0.4
8/18/2005	4:45	8/18/2005 04:45	28	7.2	682	6	0.5	11.1	FALSE	0.4
8/18/2005	5:00	8/18/2005 05:00	28	7.2	665	6	0.5	11.2	FALSE	0.3
8/18/2005	5:15	8/18/2005 05:15	28	7.2	708	5	0.4	11.1	FALSE	0.4
8/18/2005	5:30	8/18/2005 05:30	27.9	7.2	709	6	0.4	11.1	FALSE	0.4
8/18/2005	5:45	8/18/2005 05:45	27.9	7.2	708	7	0.5	11.2	FALSE	0.4
8/18/2005	6:00	8/18/2005 06:00	27.9	7.2	709	5	0.4	11.3	FALSE	0.4
8/18/2005	6:15	8/18/2005 06:15	27.9	7.2	710	7	0.6	11.1	FALSE	0.4
8/18/2005	6:30	8/18/2005 06:30	27.8	7.3	709	6	0.5	11.2	FALSE	0.4
8/18/2005	6:45	8/18/2005 06:45	27.8	7.2	711	5	0.4	11.1	FALSE	0.4
8/18/2005	7:00	8/18/2005 07:00	27.8	7.3	712	5	0.4	11.2	FALSE	0.4
8/18/2005	7:15	8/18/2005 07:15	27.8	7.2	711	4	0.4	11.1	FALSE	0.4
8/18/2005	7:30	8/18/2005 07:30	27.7	7.2	709	6	0.5	11.2	FALSE	0.4
8/18/2005	7:45	8/18/2005 07:45	27.7	7.2	707	6	0.4	11.2	FALSE	0.4
8/18/2005	8:00	8/18/2005 08:00	27.7	7.2	706	5	0.4	11.2	FALSE	0.4
8/18/2005	8:15	8/18/2005 08:15	27.7	7.2	705	5	0.4	11.2	FALSE	0.4
8/18/2005	8:30	8/18/2005 08:30	27.7	7.3	706	6	0.4	11.1	FALSE	0.4
8/18/2005	8:45	8/18/2005 08:45	27.7	7.3	705	7	0.6	11.2	FALSE	0.4
8/18/2005	9:00	8/18/2005 09:00	27.7	7.2	702	8	0.6	11.2	FALSE	0.4
8/18/2005	9:15	8/18/2005 09:15	27.7	7.3	701	8	0.6	11.1	FALSE	0.4
8/18/2005	9:30	8/18/2005 09:30	27.8	7.3	706	8	0.7	11.2	FALSE	0.4
8/18/2005	9:45	8/18/2005 09:45	27.7	7.3	704	8	0.6	11.2	FALSE	0.4
8/18/2005	10:00	8/18/2005 10:00	27.8	7.3	703	10	0.8	11.1	FALSE	0.4
8/18/2005	10:15	8/18/2005 10:15	27.8	7.3	700	9	0.7	11.1	FALSE	0.4
8/18/2005	10:30	8/18/2005 10:30	27.8	7.3	698	11	0.9	11.1	FALSE	0.4
8/18/2005	10:45	8/18/2005 10:45	27.8	7.3	701	10	0.8	11.2	FALSE	0.4


100605 Lake Edwards/Smithport Lake Site Number: NBB03C
Site Name: Na Bonchasse Bayou downstream of Mansfield STP Outfall
DO & Temperature (deg C) vs. Date/Time
DO mg/L
DO Criteria mg/L
Temp øC
Dissolved Oxygen (mg/L)
Temperature (C)
Date/Time
0
1
2
3
4
5
6
26.6
26.8
27
27.2
27.4
27.6
27.8
28
28.2
28.4
8/16/2005 00:00
8/16/2005 12:00
8/17/2005 00:00
8/17/2005 12:00
8/18/2005 00:00
8/18/2005 12:00
8/19/2005 00:00
DO STATISTICS
Min DO = 0.4 mg/L
Max DO = 2.3 mg/L
Average DO = 1.17 mg/L
25th Percentile = 0.7 mg/L
50th Percentile = 1.1 mg/L
% Failing Criteria = 100 %
Std. Deviation = 0.52 mg/L
Variance = 0.27 mg/L


100605 Lake Edwards/Smithport Lake Site Number: NBB03C
Site Name: Na Bonchasse Bayou downstream of Mansfield STP Outfall
DO & pH vs. Date/Time
DO mg/L
DO Criteria mg/L
pH Units
DO STATISTICS
Min DO = 0.4 mg/L
Max DO = 2.3 mg/L
Average DO = 1.17 mg/L
25th Percentile = 0.7 mg/L
50th Percentile = 1.1 mg/L
% Failing Criteria = 100 %
Std. Deviation = 0.52 mg/L
Variance = 0.27 mg/L
Dissolved Oxygen (mg/L)
pH
Date/Time
0
1
2
3
4
5
6
7.18
7.2
7.22
7.24
7.26
7.28
7.3
7.32
8/16/2005 00:00
8/16/2005 12:00
8/17/2005 00:00
8/17/2005 12:00
8/18/2005 00:00
8/18/2005 12:00
8/19/2005 00:00



100605 Lake Edwards/Smithport Lake Site Number: NBB03C Na Bonchasse Bayou downstream of Mansfield STP Outfall					
	Temp deg	pH	SpCond uS	DO %	DO mg/L
Minimum	26.80	7.20	660.00	4.00	0.40
Maximum	28.20	7.30	712.00	29.00	2.30
Average	27.50	7.22	687.46	14.84	1.17
Geometric Mean	27.49	7.22	#NUM!	13.30	1.04
25th Percentile	27.20	7.20	679.00	9.00	0.70
30th Percentile	27.30	7.20	680.00	10.60	0.80
40th Percentile	27.40	7.20	683.00	13.00	1.00
50th Percentile	27.50	7.20	687.00	14.00	1.10
Standard Deviation	0.35	0.04	11.36	6.50	0.52
Variance	0.12	0.00	129.15	42.23	0.27

Data Row Count	193
Total Values Failing DO Criteria	193
Percent failing DO Criteria	100.00 %

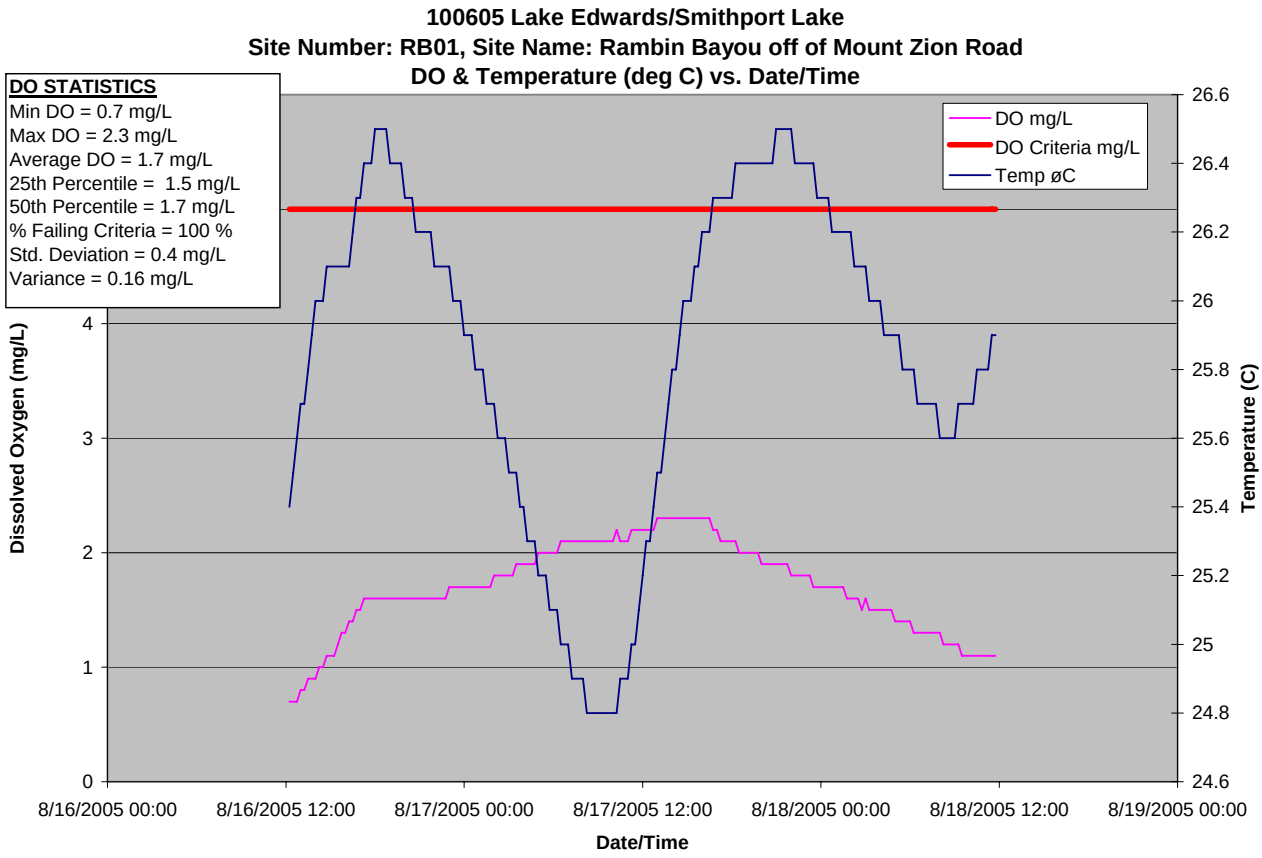
RB01 Continuous Monitoring Data for Lake Edwards/Smithport Lake Subsegment 100605

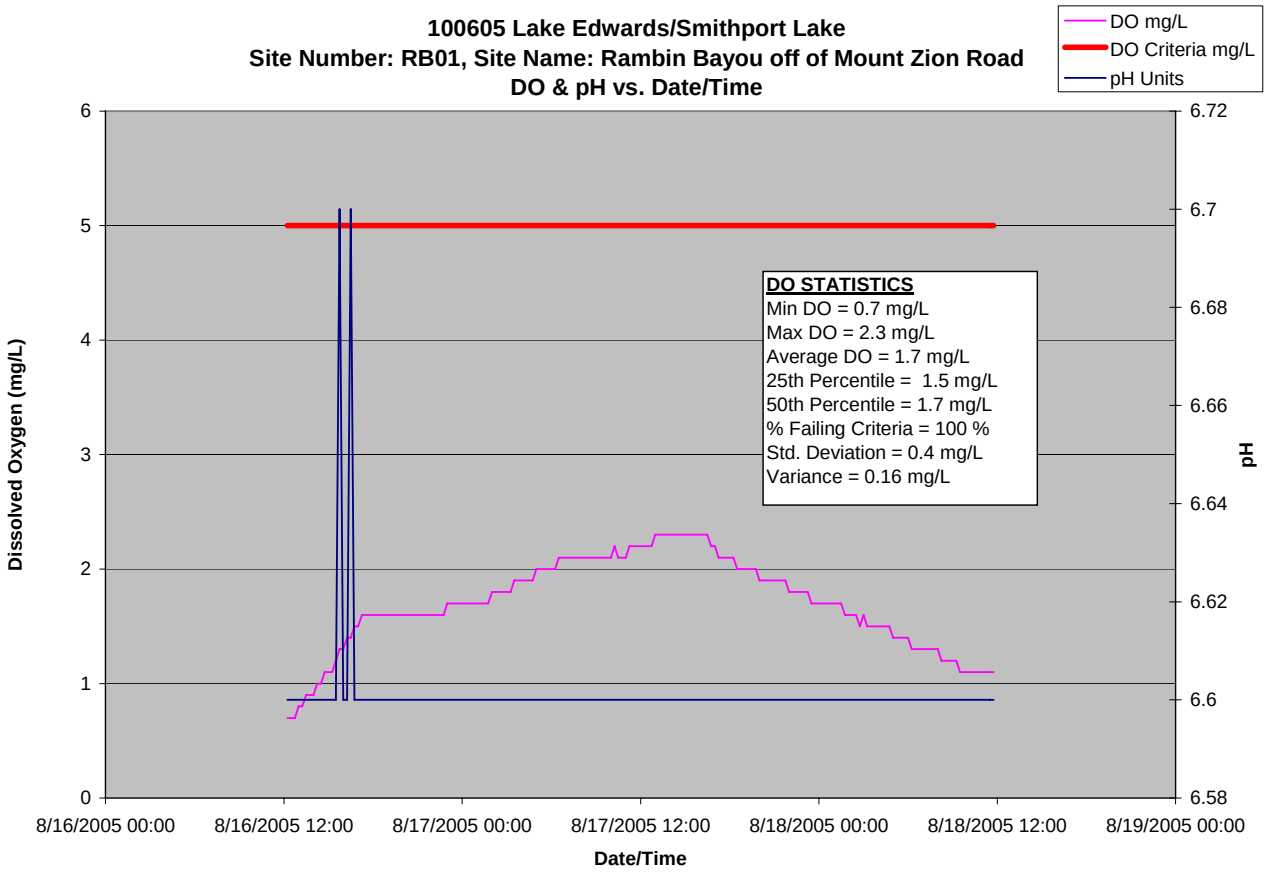
Date	Time	Date+Time	Temp	pH	SpCond	DO%	DO	VENTED DEPTH	SALINITY
MMDDYY	HHMM	MMDDYYYY HHMM	øC	Units	æS/cm	Sat	mg/L	True/False	ppt
8/16/2005	12:15	8/16/2005 12:15	25.4	6.6	129	8	0.7	FALSE	0.1
8/16/2005	12:30	8/16/2005 12:30	25.5	6.6	130	9	0.7	FALSE	0.1
8/16/2005	12:45	8/16/2005 12:45	25.6	6.6	129	9	0.7	FALSE	0.1
8/16/2005	13:00	8/16/2005 13:00	25.7	6.6	130	10	0.8	FALSE	0.1
8/16/2005	13:15	8/16/2005 13:15	25.7	6.6	130	10	0.8	FALSE	0.1
8/16/2005	13:30	8/16/2005 13:30	25.8	6.6	130	11	0.9	FALSE	0.1
8/16/2005	13:45	8/16/2005 13:45	25.9	6.6	130	11	0.9	FALSE	0.1
8/16/2005	14:00	8/16/2005 14:00	26	6.6	130	12	0.9	FALSE	0.1
8/16/2005	14:15	8/16/2005 14:15	26	6.6	130	12	1	FALSE	0.1
8/16/2005	14:30	8/16/2005 14:30	26	6.6	131	13	1	FALSE	0.1
8/16/2005	14:45	8/16/2005 14:45	26.1	6.6	130	13	1.1	FALSE	0.1
8/16/2005	15:00	8/16/2005 15:00	26.1	6.6	130	13	1.1	FALSE	0.1
8/16/2005	15:15	8/16/2005 15:15	26.1	6.6	130	14	1.1	FALSE	0.1
8/16/2005	15:30	8/16/2005 15:30	26.1	6.6	129	15	1.2	FALSE	0.1
8/16/2005	15:45	8/16/2005 15:45	26.1	6.7	129	16	1.3	FALSE	0.1
8/16/2005	16:00	8/16/2005 16:00	26.1	6.6	129	16	1.3	FALSE	0.1
8/16/2005	16:15	8/16/2005 16:15	26.1	6.6	129	17	1.4	FALSE	0.1
8/16/2005	16:30	8/16/2005 16:30	26.2	6.7	129	18	1.4	FALSE	0.1
8/16/2005	16:45	8/16/2005 16:45	26.3	6.6	128	18	1.5	FALSE	0.1
8/16/2005	17:00	8/16/2005 17:00	26.3	6.6	128	19	1.5	FALSE	0.1
8/16/2005	17:15	8/16/2005 17:15	26.4	6.6	128	20	1.6	FALSE	0.1
8/16/2005	17:30	8/16/2005 17:30	26.4	6.6	128	20	1.6	FALSE	0.1
8/16/2005	17:45	8/16/2005 17:45	26.4	6.6	129	20	1.6	FALSE	0.1
8/16/2005	18:00	8/16/2005 18:00	26.5	6.6	129	20	1.6	FALSE	0.1
8/16/2005	18:15	8/16/2005 18:15	26.5	6.6	129	20	1.6	FALSE	0.1
8/16/2005	18:30	8/16/2005 18:30	26.5	6.6	130	20	1.6	FALSE	0.1
8/16/2005	18:45	8/16/2005 18:45	26.5	6.6	130	20	1.6	FALSE	0.1
8/16/2005	19:00	8/16/2005 19:00	26.4	6.6	131	20	1.6	FALSE	0.1
8/16/2005	19:15	8/16/2005 19:15	26.4	6.6	131	20	1.6	FALSE	0.1
8/16/2005	19:30	8/16/2005 19:30	26.4	6.6	131	20	1.6	FALSE	0.1
8/16/2005	19:45	8/16/2005 19:45	26.4	6.6	131	20	1.6	FALSE	0.1
8/16/2005	20:00	8/16/2005 20:00	26.3	6.6	130	20	1.6	FALSE	0.1
8/16/2005	20:15	8/16/2005 20:15	26.3	6.6	130	20	1.6	FALSE	0.1
8/16/2005	20:30	8/16/2005 20:30	26.3	6.6	130	20	1.6	FALSE	0.1
8/16/2005	20:45	8/16/2005 20:45	26.2	6.6	129	20	1.6	FALSE	0.1
8/16/2005	21:00	8/16/2005 21:00	26.2	6.6	129	20	1.6	FALSE	0.1
8/16/2005	21:15	8/16/2005 21:15	26.2	6.6	129	20	1.6	FALSE	0.1
8/16/2005	21:30	8/16/2005 21:30	26.2	6.6	128	20	1.6	FALSE	0.1
8/16/2005	21:45	8/16/2005 21:45	26.2	6.6	128	20	1.6	FALSE	0.1
8/16/2005	22:00	8/16/2005 22:00	26.1	6.6	128	20	1.6	FALSE	0.1
8/16/2005	22:15	8/16/2005 22:15	26.1	6.6	127	20	1.6	FALSE	0.1
8/16/2005	22:30	8/16/2005 22:30	26.1	6.6	127	20	1.6	FALSE	0.1
8/16/2005	22:45	8/16/2005 22:45	26.1	6.6	127	20	1.6	FALSE	0.1
8/16/2005	23:00	8/16/2005 23:00	26.1	6.6	126	21	1.7	FALSE	0.1

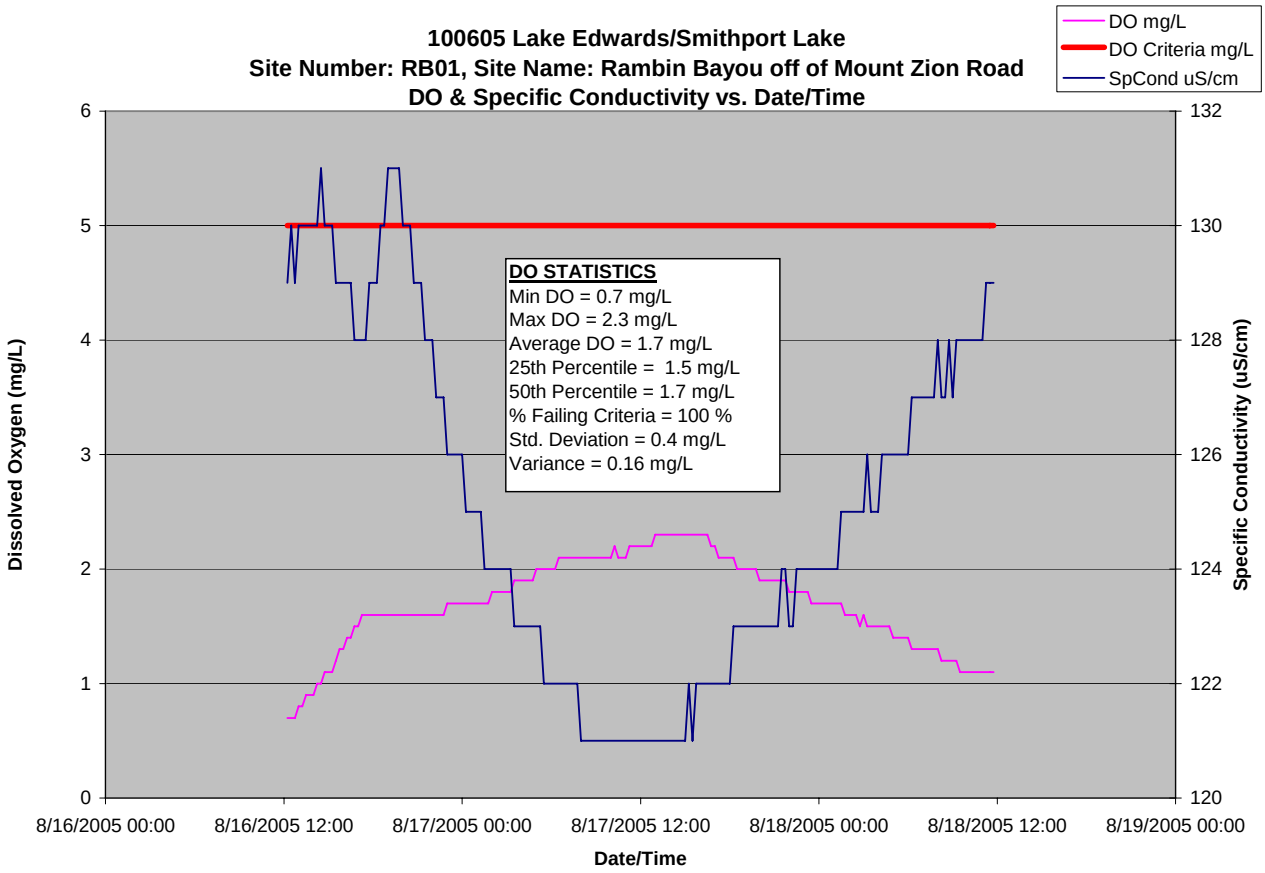
8/16/2005	23:15	8/16/2005 23:15	26	6.6	126	21	1.7	FALSE	0.1
8/16/2005	23:30	8/16/2005 23:30	26	6.6	126	21	1.7	FALSE	0.1
8/16/2005	23:45	8/16/2005 23:45	26	6.6	126	21	1.7	FALSE	0.1
8/17/2005	0:00	8/17/2005 00:00	25.9	6.6	126	21	1.7	FALSE	0.1
8/17/2005	0:15	8/17/2005 00:15	25.9	6.6	125	21	1.7	FALSE	0.1
8/17/2005	0:30	8/17/2005 00:30	25.9	6.6	125	21	1.7	FALSE	0.1
8/17/2005	0:45	8/17/2005 00:45	25.8	6.6	125	21	1.7	FALSE	0.1
8/17/2005	1:00	8/17/2005 01:00	25.8	6.6	125	21	1.7	FALSE	0.1
8/17/2005	1:15	8/17/2005 01:15	25.8	6.6	125	21	1.7	FALSE	0.1
8/17/2005	1:30	8/17/2005 01:30	25.7	6.6	124	21	1.7	FALSE	0.1
8/17/2005	1:45	8/17/2005 01:45	25.7	6.6	124	21	1.7	FALSE	0.1
8/17/2005	2:00	8/17/2005 02:00	25.7	6.6	124	22	1.8	FALSE	0.1
8/17/2005	2:15	8/17/2005 02:15	25.6	6.6	124	22	1.8	FALSE	0.1
8/17/2005	2:30	8/17/2005 02:30	25.6	6.6	124	22	1.8	FALSE	0.1
8/17/2005	2:45	8/17/2005 02:45	25.6	6.6	124	22	1.8	FALSE	0.1
8/17/2005	3:00	8/17/2005 03:00	25.5	6.6	124	22	1.8	FALSE	0.1
8/17/2005	3:15	8/17/2005 03:15	25.5	6.6	124	23	1.8	FALSE	0.1
8/17/2005	3:30	8/17/2005 03:30	25.5	6.6	123	23	1.9	FALSE	0.1
8/17/2005	3:45	8/17/2005 03:45	25.4	6.6	123	23	1.9	FALSE	0.1
8/17/2005	4:00	8/17/2005 04:00	25.4	6.6	123	23	1.9	FALSE	0.1
8/17/2005	4:15	8/17/2005 04:15	25.3	6.6	123	23	1.9	FALSE	0.1
8/17/2005	4:30	8/17/2005 04:30	25.3	6.6	123	24	1.9	FALSE	0.1
8/17/2005	4:45	8/17/2005 04:45	25.3	6.6	123	24	1.9	FALSE	0.1
8/17/2005	5:00	8/17/2005 05:00	25.2	6.6	123	24	2	FALSE	0.1
8/17/2005	5:15	8/17/2005 05:15	25.2	6.6	123	24	2	FALSE	0.1
8/17/2005	5:30	8/17/2005 05:30	25.2	6.6	122	24	2	FALSE	0.1
8/17/2005	5:45	8/17/2005 05:45	25.1	6.6	122	24	2	FALSE	0.1
8/17/2005	6:00	8/17/2005 06:00	25.1	6.6	122	25	2	FALSE	0.1
8/17/2005	6:15	8/17/2005 06:15	25.1	6.6	122	25	2	FALSE	0.1
8/17/2005	6:30	8/17/2005 06:30	25	6.6	122	25	2.1	FALSE	0.1
8/17/2005	6:45	8/17/2005 06:45	25	6.6	122	25	2.1	FALSE	0.1
8/17/2005	7:00	8/17/2005 07:00	25	6.6	122	25	2.1	FALSE	0.1
8/17/2005	7:15	8/17/2005 07:15	24.9	6.6	122	25	2.1	FALSE	0.1
8/17/2005	7:30	8/17/2005 07:30	24.9	6.6	122	25	2.1	FALSE	0.1
8/17/2005	7:45	8/17/2005 07:45	24.9	6.6	122	25	2.1	FALSE	0.1
8/17/2005	8:00	8/17/2005 08:00	24.9	6.6	121	25	2.1	FALSE	0.1
8/17/2005	8:15	8/17/2005 08:15	24.8	6.6	121	26	2.1	FALSE	0.1
8/17/2005	8:30	8/17/2005 08:30	24.8	6.6	121	26	2.1	FALSE	0.1
8/17/2005	8:45	8/17/2005 08:45	24.8	6.6	121	26	2.1	FALSE	0.1
8/17/2005	9:00	8/17/2005 09:00	24.8	6.6	121	26	2.1	FALSE	0.1
8/17/2005	9:15	8/17/2005 09:15	24.8	6.6	121	26	2.1	FALSE	0.1
8/17/2005	9:30	8/17/2005 09:30	24.8	6.6	121	26	2.1	FALSE	0.1
8/17/2005	9:45	8/17/2005 09:45	24.8	6.6	121	26	2.1	FALSE	0.1
8/17/2005	10:00	8/17/2005 10:00	24.8	6.6	121	26	2.1	FALSE	0.1
8/17/2005	10:15	8/17/2005 10:15	24.8	6.6	121	26	2.2	FALSE	0.1
8/17/2005	10:30	8/17/2005 10:30	24.9	6.6	121	26	2.1	FALSE	0.1
8/17/2005	10:45	8/17/2005 10:45	24.9	6.6	121	26	2.1	FALSE	0.1
8/17/2005	11:00	8/17/2005 11:00	24.9	6.6	121	26	2.1	FALSE	0.1
8/17/2005	11:15	8/17/2005 11:15	25	6.6	121	26	2.2	FALSE	0.1
8/17/2005	11:30	8/17/2005 11:30	25	6.6	121	27	2.2	FALSE	0.1

8/17/2005	11:45	8/17/2005 11:45	25.1	6.6	121	27	2.2	FALSE	0.1
8/17/2005	12:00	8/17/2005 12:00	25.2	6.6	121	27	2.2	FALSE	0.1
8/17/2005	12:15	8/17/2005 12:15	25.3	6.6	121	27	2.2	FALSE	0.1
8/17/2005	12:30	8/17/2005 12:30	25.3	6.6	121	27	2.2	FALSE	0.1
8/17/2005	12:45	8/17/2005 12:45	25.4	6.6	121	28	2.2	FALSE	0.1
8/17/2005	13:00	8/17/2005 13:00	25.5	6.6	121	28	2.3	FALSE	0.1
8/17/2005	13:15	8/17/2005 13:15	25.5	6.6	121	28	2.3	FALSE	0.1
8/17/2005	13:30	8/17/2005 13:30	25.6	6.6	121	28	2.3	FALSE	0.1
8/17/2005	13:45	8/17/2005 13:45	25.7	6.6	121	28	2.3	FALSE	0.1
8/17/2005	14:00	8/17/2005 14:00	25.8	6.6	121	28	2.3	FALSE	0.1
8/17/2005	14:15	8/17/2005 14:15	25.8	6.6	121	29	2.3	FALSE	0.1
8/17/2005	14:30	8/17/2005 14:30	25.9	6.6	121	29	2.3	FALSE	0.1
8/17/2005	14:45	8/17/2005 14:45	26	6.6	121	29	2.3	FALSE	0.1
8/17/2005	15:00	8/17/2005 15:00	26	6.6	121	28	2.3	FALSE	0.1
8/17/2005	15:15	8/17/2005 15:15	26	6.6	122	29	2.3	FALSE	0.1
8/17/2005	15:30	8/17/2005 15:30	26.1	6.6	121	29	2.3	FALSE	0.1
8/17/2005	15:45	8/17/2005 15:45	26.1	6.6	122	28	2.3	FALSE	0.1
8/17/2005	16:00	8/17/2005 16:00	26.2	6.6	122	29	2.3	FALSE	0.1
8/17/2005	16:15	8/17/2005 16:15	26.2	6.6	122	28	2.3	FALSE	0.1
8/17/2005	16:30	8/17/2005 16:30	26.2	6.6	122	28	2.3	FALSE	0.1
8/17/2005	16:45	8/17/2005 16:45	26.3	6.6	122	27	2.2	FALSE	0.1
8/17/2005	17:00	8/17/2005 17:00	26.3	6.6	122	27	2.2	FALSE	0.1
8/17/2005	17:15	8/17/2005 17:15	26.3	6.6	122	27	2.1	FALSE	0.1
8/17/2005	17:30	8/17/2005 17:30	26.3	6.6	122	27	2.1	FALSE	0.1
8/17/2005	17:45	8/17/2005 17:45	26.3	6.6	122	26	2.1	FALSE	0.1
8/17/2005	18:00	8/17/2005 18:00	26.3	6.6	122	26	2.1	FALSE	0.1
8/17/2005	18:15	8/17/2005 18:15	26.4	6.6	123	26	2.1	FALSE	0.1
8/17/2005	18:30	8/17/2005 18:30	26.4	6.6	123	25	2	FALSE	0.1
8/17/2005	18:45	8/17/2005 18:45	26.4	6.6	123	25	2	FALSE	0.1
8/17/2005	19:00	8/17/2005 19:00	26.4	6.6	123	25	2	FALSE	0.1
8/17/2005	19:15	8/17/2005 19:15	26.4	6.6	123	25	2	FALSE	0.1
8/17/2005	19:30	8/17/2005 19:30	26.4	6.6	123	25	2	FALSE	0.1
8/17/2005	19:45	8/17/2005 19:45	26.4	6.6	123	25	2	FALSE	0.1
8/17/2005	20:00	8/17/2005 20:00	26.4	6.6	123	24	1.9	FALSE	0.1
8/17/2005	20:15	8/17/2005 20:15	26.4	6.6	123	24	1.9	FALSE	0.1
8/17/2005	20:30	8/17/2005 20:30	26.4	6.6	123	24	1.9	FALSE	0.1
8/17/2005	20:45	8/17/2005 20:45	26.4	6.6	123	24	1.9	FALSE	0.1
8/17/2005	21:00	8/17/2005 21:00	26.5	6.6	123	24	1.9	FALSE	0.1
8/17/2005	21:15	8/17/2005 21:15	26.5	6.6	123	23	1.9	FALSE	0.1
8/17/2005	21:30	8/17/2005 21:30	26.5	6.6	124	23	1.9	FALSE	0.1
8/17/2005	21:45	8/17/2005 21:45	26.5	6.6	124	23	1.9	FALSE	0.1
8/17/2005	22:00	8/17/2005 22:00	26.5	6.6	123	23	1.8	FALSE	0.1
8/17/2005	22:15	8/17/2005 22:15	26.4	6.6	123	23	1.8	FALSE	0.1
8/17/2005	22:30	8/17/2005 22:30	26.4	6.6	124	23	1.8	FALSE	0.1
8/17/2005	22:45	8/17/2005 22:45	26.4	6.6	124	23	1.8	FALSE	0.1
8/17/2005	23:00	8/17/2005 23:00	26.4	6.6	124	22	1.8	FALSE	0.1
8/17/2005	23:15	8/17/2005 23:15	26.4	6.6	124	22	1.8	FALSE	0.1
8/17/2005	23:30	8/17/2005 23:30	26.4	6.6	124	22	1.7	FALSE	0.1
8/17/2005	23:45	8/17/2005 23:45	26.3	6.6	124	22	1.7	FALSE	0.1
8/18/2005	0:00	8/18/2005 00:00	26.3	6.6	124	21	1.7	FALSE	0.1

8/18/2005	0:15	8/18/2005 00:15	26.3	6.6	124	21	1.7	FALSE	0.1
8/18/2005	0:30	8/18/2005 00:30	26.3	6.6	124	21	1.7	FALSE	0.1
8/18/2005	0:45	8/18/2005 00:45	26.2	6.6	124	21	1.7	FALSE	0.1
8/18/2005	1:00	8/18/2005 01:00	26.2	6.6	124	21	1.7	FALSE	0.1
8/18/2005	1:15	8/18/2005 01:15	26.2	6.6	124	21	1.7	FALSE	0.1
8/18/2005	1:30	8/18/2005 01:30	26.2	6.6	125	21	1.7	FALSE	0.1
8/18/2005	1:45	8/18/2005 01:45	26.2	6.6	125	20	1.6	FALSE	0.1
8/18/2005	2:00	8/18/2005 02:00	26.2	6.6	125	20	1.6	FALSE	0.1
8/18/2005	2:15	8/18/2005 02:15	26.1	6.6	125	20	1.6	FALSE	0.1
8/18/2005	2:30	8/18/2005 02:30	26.1	6.6	125	20	1.6	FALSE	0.1
8/18/2005	2:45	8/18/2005 02:45	26.1	6.6	125	19	1.5	FALSE	0.1
8/18/2005	3:00	8/18/2005 03:00	26.1	6.6	125	19	1.6	FALSE	0.1
8/18/2005	3:15	8/18/2005 03:15	26	6.6	126	19	1.5	FALSE	0.1
8/18/2005	3:30	8/18/2005 03:30	26	6.6	125	19	1.5	FALSE	0.1
8/18/2005	3:45	8/18/2005 03:45	26	6.6	125	19	1.5	FALSE	0.1
8/18/2005	4:00	8/18/2005 04:00	26	6.6	125	18	1.5	FALSE	0.1
8/18/2005	4:15	8/18/2005 04:15	25.9	6.6	126	18	1.5	FALSE	0.1
8/18/2005	4:30	8/18/2005 04:30	25.9	6.6	126	18	1.5	FALSE	0.1
8/18/2005	4:45	8/18/2005 04:45	25.9	6.6	126	18	1.5	FALSE	0.1
8/18/2005	5:00	8/18/2005 05:00	25.9	6.6	126	18	1.4	FALSE	0.1
8/18/2005	5:15	8/18/2005 05:15	25.9	6.6	126	18	1.4	FALSE	0.1
8/18/2005	5:30	8/18/2005 05:30	25.8	6.6	126	17	1.4	FALSE	0.1
8/18/2005	5:45	8/18/2005 05:45	25.8	6.6	126	17	1.4	FALSE	0.1
8/18/2005	6:00	8/18/2005 06:00	25.8	6.6	126	17	1.4	FALSE	0.1
8/18/2005	6:15	8/18/2005 06:15	25.8	6.6	127	17	1.3	FALSE	0.1
8/18/2005	6:30	8/18/2005 06:30	25.7	6.6	127	17	1.3	FALSE	0.1
8/18/2005	6:45	8/18/2005 06:45	25.7	6.6	127	17	1.3	FALSE	0.1
8/18/2005	7:00	8/18/2005 07:00	25.7	6.6	127	16	1.3	FALSE	0.1
8/18/2005	7:15	8/18/2005 07:15	25.7	6.6	127	16	1.3	FALSE	0.1
8/18/2005	7:30	8/18/2005 07:30	25.7	6.6	127	16	1.3	FALSE	0.1
8/18/2005	7:45	8/18/2005 07:45	25.7	6.6	127	16	1.3	FALSE	0.1
8/18/2005	8:00	8/18/2005 08:00	25.6	6.6	128	16	1.3	FALSE	0.1
8/18/2005	8:15	8/18/2005 08:15	25.6	6.6	127	15	1.2	FALSE	0.1
8/18/2005	8:30	8/18/2005 08:30	25.6	6.6	127	15	1.2	FALSE	0.1
8/18/2005	8:45	8/18/2005 08:45	25.6	6.6	128	15	1.2	FALSE	0.1
8/18/2005	9:00	8/18/2005 09:00	25.6	6.6	127	15	1.2	FALSE	0.1
8/18/2005	9:15	8/18/2005 09:15	25.7	6.6	128	15	1.2	FALSE	0.1
8/18/2005	9:30	8/18/2005 09:30	25.7	6.6	128	14	1.1	FALSE	0.1
8/18/2005	9:45	8/18/2005 09:45	25.7	6.6	128	14	1.1	FALSE	0.1
8/18/2005	10:00	8/18/2005 10:00	25.7	6.6	128	14	1.1	FALSE	0.1
8/18/2005	10:15	8/18/2005 10:15	25.7	6.6	128	14	1.1	FALSE	0.1
8/18/2005	10:30	8/18/2005 10:30	25.8	6.6	128	13	1.1	FALSE	0.1
8/18/2005	10:45	8/18/2005 10:45	25.8	6.6	128	13	1.1	FALSE	0.1
8/18/2005	11:00	8/18/2005 11:00	25.8	6.6	128	13	1.1	FALSE	0.1
8/18/2005	11:15	8/18/2005 11:15	25.8	6.6	129	13	1.1	FALSE	0.1
8/18/2005	11:30	8/18/2005 11:30	25.9	6.6	129	13	1.1	FALSE	0.1
8/18/2005	11:45	8/18/2005 11:45	25.9	6.6	129	13	1.1	FALSE	0.1


100605 Lake Edwards/Smithport Lake
Site Number: RB01, Site Name: Rambin Bayou off of Mount Zion Road
DO & Temperature (deg C) vs. Date/Time
DO STATISTICS
Min DO = 0.7 mg/L
Max DO = 2.3 mg/L
Average DO = 1.7 mg/L
25th Percentile = 1.5 mg/L
50th Percentile = 1.7 mg/L
% Failing Criteria = 100 %
Std. Deviation = 0.4 mg/L
Variance = 0.16 mg/L
DO mg/L
DO Criteria mg/L
Temp øC
Dissolved Oxygen (mg/L)
Temperature (C)
Date/Time
0
1
2
3
4
24.6
24.8
25
25.2
25.4
25.6
25.8
26
26.2
26.4
26.6
8/16/2005 00:00
8/16/2005 12:00
8/17/2005 00:00
8/17/2005 12:00
8/18/2005 00:00
8/18/2005 12:00
8/19/2005 00:00


100605 Lake Edwards/Smithport Lake
Site Number: RB01, Site Name: Rambin Bayou off of Mount Zion Road
DO & pH vs. Date/Time
DO mg/L
DO Criteria mg/L
pH Units
DO STATISTICS
Min DO = 0.7 mg/L
Max DO = 2.3 mg/L
Average DO = 1.7 mg/L
25th Percentile = 1.5 mg/L
50th Percentile = 1.7 mg/L
% Failing Criteria = 100 %
Std. Deviation = 0.4 mg/L
Variance = 0.16 mg/L
Dissolved Oxygen (mg/L)
pH
Date/Time
0
1
2
3
4
5
6
6.58
6.6
6.62
6.64
6.66
6.68
6.7
6.72
8/16/2005 00:00
8/16/2005 12:00
8/17/2005 00:00
8/17/2005 12:00
8/18/2005 00:00
8/18/2005 12:00
8/19/2005 00:00



100605 Lake Edwards/Smithport Lake
Site Number: RB01
Rambin Bayou off of Mount Zion Road

	Temp deg C	pH	SpCond uS/cm	DO %	DO mg/L
Minimum	24.80	6.60	121.00	8.00	0.70
Maximum	26.50	6.70	131.00	29.00	2.30
Average	25.85	6.60	125.05	21.06	1.70
Geometric Mean	25.84	6.60		20.42	1.65
25th Percentile	25.60	6.60	122.00	18.00	1.50
30th Percentile	25.70	6.60	123.00	20.00	1.60
40th Percentile	25.80	6.60	124.00	20.00	1.60
50th Percentile	25.90	6.60	124.00	21.00	1.70
Standard Deviation	0.49	0.01	3.09	4.87	0.40
Variance	0.24	0.00	9.54	23.69	0.16

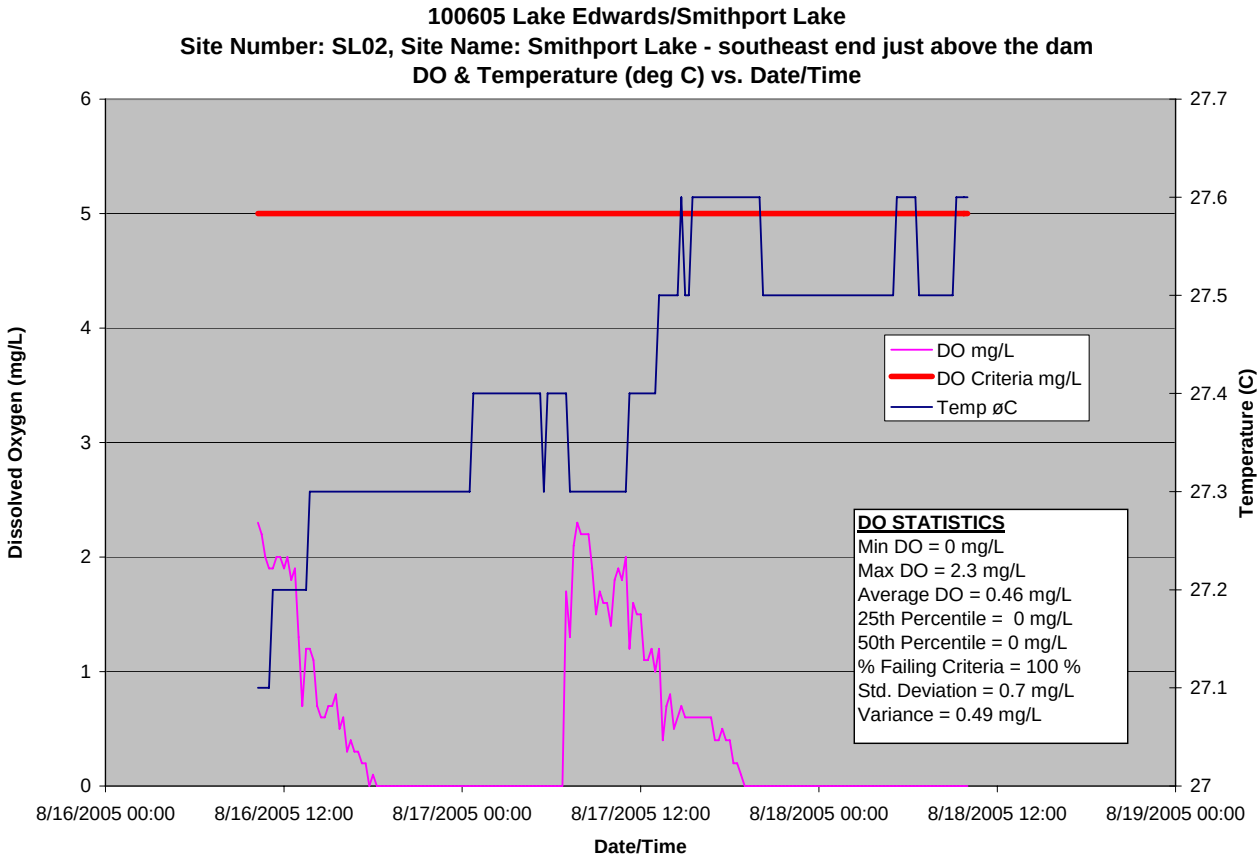
Data Row Count	191
Total Values Failing DO Criteria	191
Percent failing DO Criteria	100.00 %

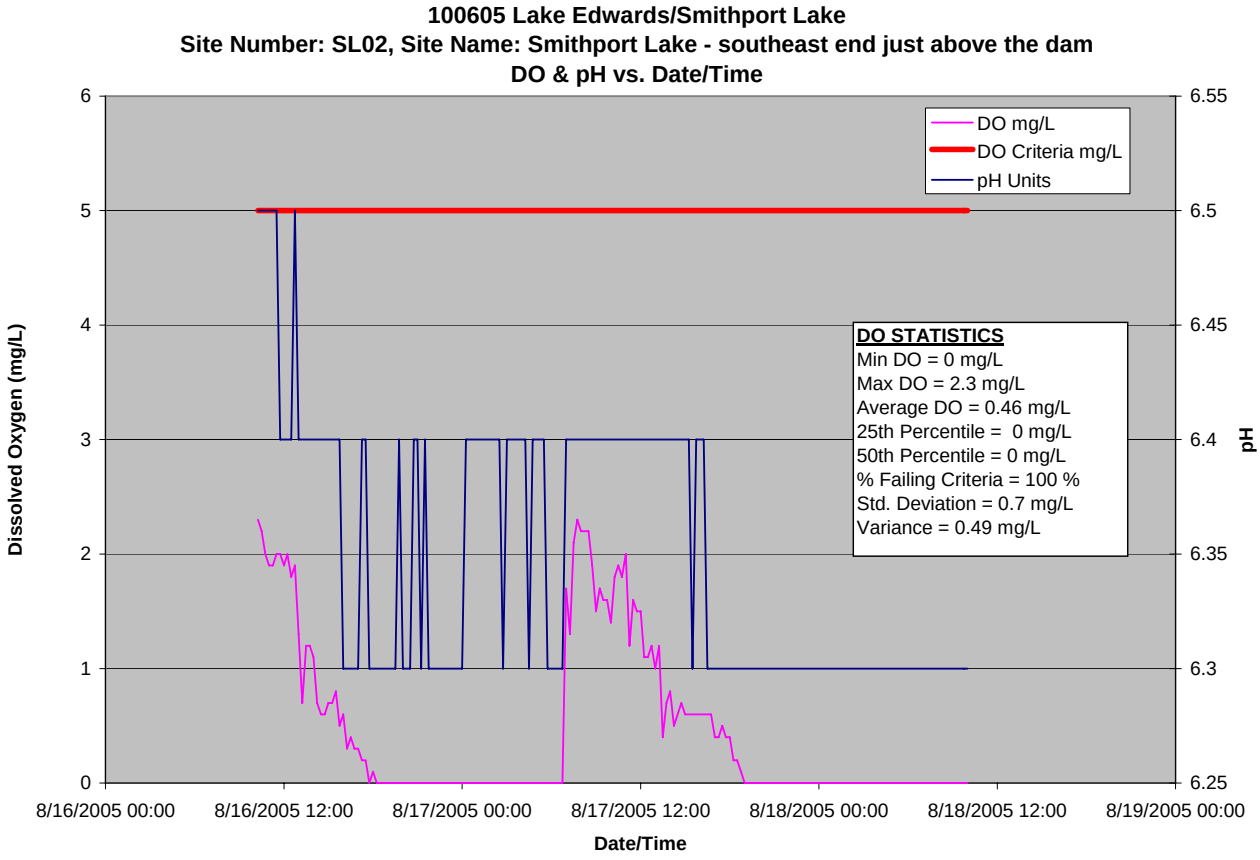
SL02 Continuous Monitoring Data for Lake Edwards/Smithport Lake Subsegment 100605								
Date	Time	Date+Time	Temp	pH	SpCond	DO%	DO	VENTED DEPTH
MMDDYY	HHMM	MMDDYYYY HHMM	øC	Units	æS/cm	Sat	mg/L	True/False
8/16/2005	10:15	8/16/2005 10:15	27.1	6.5	0.0827	29	2.3	FALSE
8/16/2005	10:30	8/16/2005 10:30	27.1	6.5	0.0828	28	2.2	FALSE
8/16/2005	10:45	8/16/2005 10:45	27.1	6.5	0.0829	26	2	FALSE
8/16/2005	11:00	8/16/2005 11:00	27.1	6.5	0.0829	24	1.9	FALSE
8/16/2005	11:15	8/16/2005 11:15	27.2	6.5	0.0824	24	1.9	FALSE
8/16/2005	11:30	8/16/2005 11:30	27.2	6.5	0.0826	25	2	FALSE
8/16/2005	11:45	8/16/2005 11:45	27.2	6.4	0.0822	25	2	FALSE
8/16/2005	12:00	8/16/2005 12:00	27.2	6.4	0.0827	24	1.9	FALSE
8/16/2005	12:15	8/16/2005 12:15	27.2	6.4	0.0826	25	2	FALSE
8/16/2005	12:30	8/16/2005 12:30	27.2	6.4	0.0822	23	1.8	FALSE
8/16/2005	12:45	8/16/2005 12:45	27.2	6.5	0.0821	24	1.9	FALSE
8/16/2005	13:00	8/16/2005 13:00	27.2	6.4	0.0822	16	1.3	FALSE
8/16/2005	13:15	8/16/2005 13:15	27.2	6.4	0.083	9	0.7	FALSE
8/16/2005	13:30	8/16/2005 13:30	27.2	6.4	0.0825	16	1.2	FALSE
8/16/2005	13:45	8/16/2005 13:45	27.3	6.4	0.0825	15	1.2	FALSE
8/16/2005	14:00	8/16/2005 14:00	27.3	6.4	0.0826	14	1.1	FALSE
8/16/2005	14:15	8/16/2005 14:15	27.3	6.4	0.0825	9	0.7	FALSE
8/16/2005	14:30	8/16/2005 14:30	27.3	6.4	0.0832	8	0.6	FALSE
8/16/2005	14:45	8/16/2005 14:45	27.3	6.4	0.0829	8	0.6	FALSE
8/16/2005	15:00	8/16/2005 15:00	27.3	6.4	0.0829	9	0.7	FALSE
8/16/2005	15:15	8/16/2005 15:15	27.3	6.4	0.0829	9	0.7	FALSE
8/16/2005	15:30	8/16/2005 15:30	27.3	6.4	0.083	10	0.8	FALSE
8/16/2005	15:45	8/16/2005 15:45	27.3	6.4	0.0836	6	0.5	FALSE
8/16/2005	16:00	8/16/2005 16:00	27.3	6.3	0.0838	7	0.6	FALSE
8/16/2005	16:15	8/16/2005 16:15	27.3	6.3	0.0839	4	0.3	FALSE
8/16/2005	16:30	8/16/2005 16:30	27.3	6.3	0.0835	5	0.4	FALSE
8/16/2005	16:45	8/16/2005 16:45	27.3	6.3	0.0839	4	0.3	FALSE
8/16/2005	17:00	8/16/2005 17:00	27.3	6.3	0.0838	4	0.3	FALSE
8/16/2005	17:15	8/16/2005 17:15	27.3	6.4	0.0836	2	0.2	FALSE
8/16/2005	17:30	8/16/2005 17:30	27.3	6.4	0.0837	3	0.2	FALSE
8/16/2005	17:45	8/16/2005 17:45	27.3	6.3	0.0836	0	0	FALSE
8/16/2005	18:00	8/16/2005 18:00	27.3	6.3	0.0835	1	0.1	FALSE
8/16/2005	18:15	8/16/2005 18:15	27.3	6.3	0.0832	0	0	FALSE
8/16/2005	18:30	8/16/2005 18:30	27.3	6.3	0.0835	0	0	FALSE
8/16/2005	18:45	8/16/2005 18:45	27.3	6.3	0.0833	0	0	FALSE
8/16/2005	19:00	8/16/2005 19:00	27.3	6.3	0.0831	0	0	FALSE
8/16/2005	19:15	8/16/2005 19:15	27.3	6.3	0.0832	0	0	FALSE
8/16/2005	19:30	8/16/2005 19:30	27.3	6.3	0.0835	0	0	FALSE
8/16/2005	19:45	8/16/2005 19:45	27.3	6.4	0.0833	0	0	FALSE
8/16/2005	20:00	8/16/2005 20:00	27.3	6.3	0.0836	0	0	FALSE
8/16/2005	20:15	8/16/2005 20:15	27.3	6.3	0.0835	0	0	FALSE
8/16/2005	20:30	8/16/2005 20:30	27.3	6.3	0.0835	0	0	FALSE
8/16/2005	20:45	8/16/2005 20:45	27.3	6.4	0.0832	0	0	FALSE
8/16/2005	21:00	8/16/2005 21:00	27.3	6.4	0.0833	0	0	FALSE
8/16/2005	21:15	8/16/2005 21:15	27.3	6.3	0.0833	0	0	FALSE
8/16/2005	21:30	8/16/2005 21:30	27.3	6.4	0.0831	0	0	FALSE

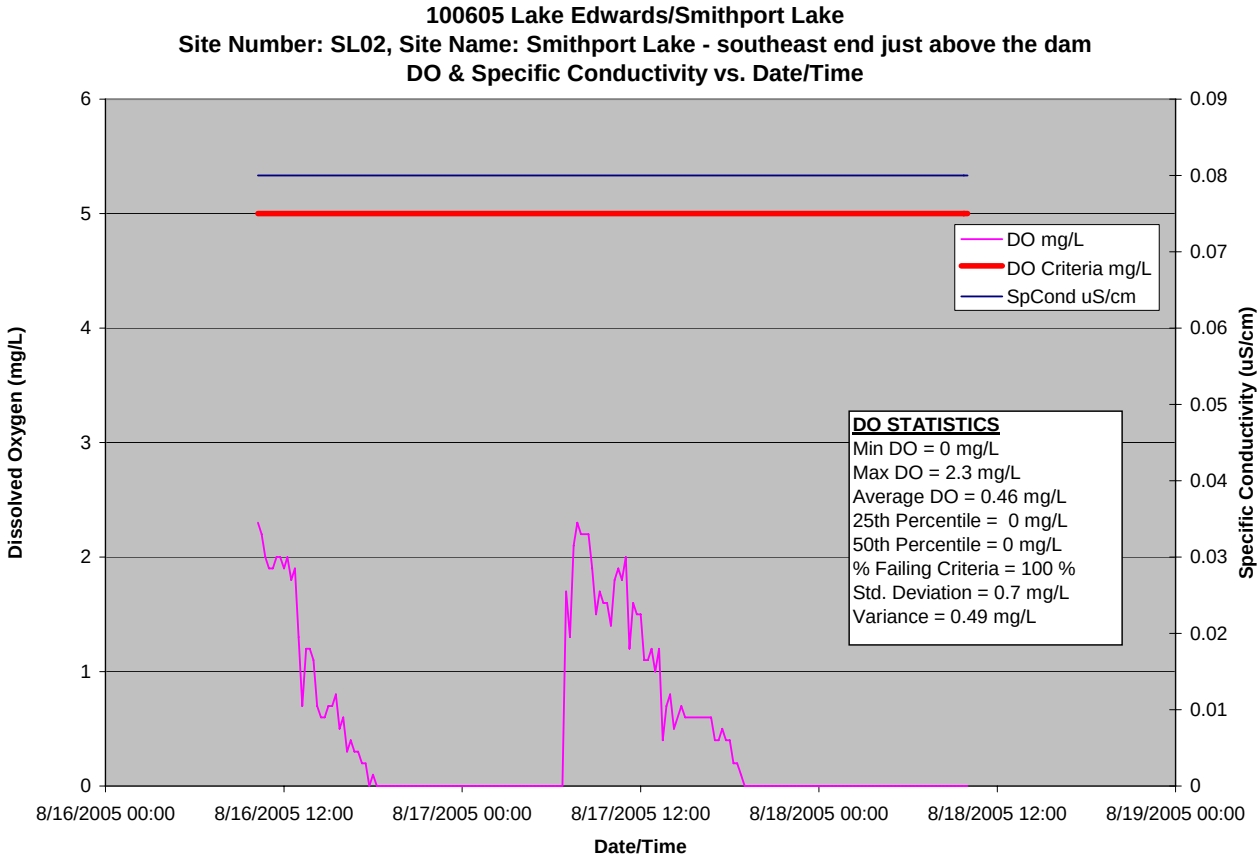
8/16/2005	21:45	8/16/2005 21:45	27.3	6.3	0.0832	0	0	FALSE
8/16/2005	22:00	8/16/2005 22:00	27.3	6.3	0.0833	0	0	FALSE
8/16/2005	22:15	8/16/2005 22:15	27.3	6.3	0.0831	0	0	FALSE
8/16/2005	22:30	8/16/2005 22:30	27.3	6.3	0.0833	0	0	FALSE
8/16/2005	22:45	8/16/2005 22:45	27.3	6.3	0.0833	0	0	FALSE
8/16/2005	23:00	8/16/2005 23:00	27.3	6.3	0.0831	0	0	FALSE
8/16/2005	23:15	8/16/2005 23:15	27.3	6.3	0.0832	0	0	FALSE
8/16/2005	23:30	8/16/2005 23:30	27.3	6.3	0.0835	0	0	FALSE
8/16/2005	23:45	8/16/2005 23:45	27.3	6.3	0.0839	0	0	FALSE
8/17/2005	0:00	8/17/2005 00:00	27.3	6.3	0.0839	0	0	FALSE
8/17/2005	0:15	8/17/2005 00:15	27.3	6.4	0.0839	0	0	FALSE
8/17/2005	0:30	8/17/2005 00:30	27.3	6.4	0.0839	0	0	FALSE
8/17/2005	0:45	8/17/2005 00:45	27.4	6.4	0.0839	0	0	FALSE
8/17/2005	1:00	8/17/2005 01:00	27.4	6.4	0.0834	0	0	FALSE
8/17/2005	1:15	8/17/2005 01:15	27.4	6.4	0.0838	0	0	FALSE
8/17/2005	1:30	8/17/2005 01:30	27.4	6.4	0.0836	0	0	FALSE
8/17/2005	1:45	8/17/2005 01:45	27.4	6.4	0.0839	0	0	FALSE
8/17/2005	2:00	8/17/2005 02:00	27.4	6.4	0.0839	0	0	FALSE
8/17/2005	2:15	8/17/2005 02:15	27.4	6.4	0.0843	0	0	FALSE
8/17/2005	2:30	8/17/2005 02:30	27.4	6.4	0.0842	0	0	FALSE
8/17/2005	2:45	8/17/2005 02:45	27.4	6.3	0.0843	0	0	FALSE
8/17/2005	3:00	8/17/2005 03:00	27.4	6.4	0.0842	0	0	FALSE
8/17/2005	3:15	8/17/2005 03:15	27.4	6.4	0.0845	0	0	FALSE
8/17/2005	3:30	8/17/2005 03:30	27.4	6.4	0.0843	0	0	FALSE
8/17/2005	3:45	8/17/2005 03:45	27.4	6.4	0.0848	0	0	FALSE
8/17/2005	4:00	8/17/2005 04:00	27.4	6.4	0.0847	0	0	FALSE
8/17/2005	4:15	8/17/2005 04:15	27.4	6.4	0.0847	0	0	FALSE
8/17/2005	4:30	8/17/2005 04:30	27.4	6.3	0.0849	0	0	FALSE
8/17/2005	4:45	8/17/2005 04:45	27.4	6.4	0.0852	0	0	FALSE
8/17/2005	5:00	8/17/2005 05:00	27.4	6.4	0.0845	0	0	FALSE
8/17/2005	5:15	8/17/2005 05:15	27.4	6.4	0.0849	0	0	FALSE
8/17/2005	5:30	8/17/2005 05:30	27.3	6.4	0.0853	0	0	FALSE
8/17/2005	5:45	8/17/2005 05:45	27.4	6.3	0.0854	0	0	FALSE
8/17/2005	6:00	8/17/2005 06:00	27.4	6.3	0.0852	0	0	FALSE
8/17/2005	6:15	8/17/2005 06:15	27.4	6.3	0.0852	0	0	FALSE
8/17/2005	6:30	8/17/2005 06:30	27.4	6.3	0.0842	0	0	FALSE
8/17/2005	6:45	8/17/2005 06:45	27.4	6.3	0.0844	1	0	FALSE
8/17/2005	7:00	8/17/2005 07:00	27.4	6.4	0.0824	22	1.7	FALSE
8/17/2005	7:15	8/17/2005 07:15	27.3	6.4	0.0835	16	1.3	FALSE
8/17/2005	7:30	8/17/2005 07:30	27.3	6.4	0.0828	27	2.1	FALSE
8/17/2005	7:45	8/17/2005 07:45	27.3	6.4	0.0822	30	2.3	FALSE
8/17/2005	8:00	8/17/2005 08:00	27.3	6.4	0.0829	27	2.2	FALSE
8/17/2005	8:15	8/17/2005 08:15	27.3	6.4	0.0823	28	2.2	FALSE
8/17/2005	8:30	8/17/2005 08:30	27.3	6.4	0.082	28	2.2	FALSE
8/17/2005	8:45	8/17/2005 08:45	27.3	6.4	0.0821	24	1.9	FALSE
8/17/2005	9:00	8/17/2005 09:00	27.3	6.4	0.0822	20	1.5	FALSE
8/17/2005	9:15	8/17/2005 09:15	27.3	6.4	0.0825	21	1.7	FALSE
8/17/2005	9:30	8/17/2005 09:30	27.3	6.4	0.0824	20	1.6	FALSE
8/17/2005	9:45	8/17/2005 09:45	27.3	6.4	0.082	20	1.6	FALSE
8/17/2005	10:00	8/17/2005 10:00	27.3	6.4	0.0822	18	1.4	FALSE

8/17/2005	10:15	8/17/2005 10:15	27.3	6.4	0.0818	23	1.8	FALSE
8/17/2005	10:30	8/17/2005 10:30	27.3	6.4	0.0819	24	1.9	FALSE
8/17/2005	10:45	8/17/2005 10:45	27.3	6.4	0.082	23	1.8	FALSE
8/17/2005	11:00	8/17/2005 11:00	27.3	6.4	0.082	26	2	FALSE
8/17/2005	11:15	8/17/2005 11:15	27.4	6.4	0.0815	16	1.2	FALSE
8/17/2005	11:30	8/17/2005 11:30	27.4	6.4	0.0818	20	1.6	FALSE
8/17/2005	11:45	8/17/2005 11:45	27.4	6.4	0.0817	18	1.5	FALSE
8/17/2005	12:00	8/17/2005 12:00	27.4	6.4	0.0814	19	1.5	FALSE
8/17/2005	12:15	8/17/2005 12:15	27.4	6.4	0.0815	13	1.1	FALSE
8/17/2005	12:30	8/17/2005 12:30	27.4	6.4	0.0812	14	1.1	FALSE
8/17/2005	12:45	8/17/2005 12:45	27.4	6.4	0.0818	15	1.2	FALSE
8/17/2005	13:00	8/17/2005 13:00	27.4	6.4	0.0817	13	1	FALSE
8/17/2005	13:15	8/17/2005 13:15	27.5	6.4	0.082	15	1.2	FALSE
8/17/2005	13:30	8/17/2005 13:30	27.5	6.4	0.082	5	0.4	FALSE
8/17/2005	13:45	8/17/2005 13:45	27.5	6.4	0.0816	9	0.7	FALSE
8/17/2005	14:00	8/17/2005 14:00	27.5	6.4	0.0815	10	0.8	FALSE
8/17/2005	14:15	8/17/2005 14:15	27.5	6.4	0.0814	6	0.5	FALSE
8/17/2005	14:30	8/17/2005 14:30	27.5	6.4	0.0816	7	0.6	FALSE
8/17/2005	14:45	8/17/2005 14:45	27.6	6.4	0.0814	9	0.7	FALSE
8/17/2005	15:00	8/17/2005 15:00	27.5	6.4	0.0815	8	0.6	FALSE
8/17/2005	15:15	8/17/2005 15:15	27.5	6.4	0.082	8	0.6	FALSE
8/17/2005	15:30	8/17/2005 15:30	27.6	6.3	0.0818	7	0.6	FALSE
8/17/2005	15:45	8/17/2005 15:45	27.6	6.4	0.0816	7	0.6	FALSE
8/17/2005	16:00	8/17/2005 16:00	27.6	6.4	0.0818	8	0.6	FALSE
8/17/2005	16:15	8/17/2005 16:15	27.6	6.4	0.0815	8	0.6	FALSE
8/17/2005	16:30	8/17/2005 16:30	27.6	6.3	0.0814	7	0.6	FALSE
8/17/2005	16:45	8/17/2005 16:45	27.6	6.3	0.0809	7	0.6	FALSE
8/17/2005	17:00	8/17/2005 17:00	27.6	6.3	0.0811	4	0.4	FALSE
8/17/2005	17:15	8/17/2005 17:15	27.6	6.3	0.0813	5	0.4	FALSE
8/17/2005	17:30	8/17/2005 17:30	27.6	6.3	0.0813	6	0.5	FALSE
8/17/2005	17:45	8/17/2005 17:45	27.6	6.3	0.081	5	0.4	FALSE
8/17/2005	18:00	8/17/2005 18:00	27.6	6.3	0.0819	5	0.4	FALSE
8/17/2005	18:15	8/17/2005 18:15	27.6	6.3	0.0818	3	0.2	FALSE
8/17/2005	18:30	8/17/2005 18:30	27.6	6.3	0.0819	2	0.2	FALSE
8/17/2005	18:45	8/17/2005 18:45	27.6	6.3	0.082	1	0.1	FALSE
8/17/2005	19:00	8/17/2005 19:00	27.6	6.3	0.0814	0	0	FALSE
8/17/2005	19:15	8/17/2005 19:15	27.6	6.3	0.0815	0	0	FALSE
8/17/2005	19:30	8/17/2005 19:30	27.6	6.3	0.0814	0	0	FALSE
8/17/2005	19:45	8/17/2005 19:45	27.6	6.3	0.0812	0	0	FALSE
8/17/2005	20:00	8/17/2005 20:00	27.6	6.3	0.0812	0	0	FALSE
8/17/2005	20:15	8/17/2005 20:15	27.5	6.3	0.0812	0	0	FALSE
8/17/2005	20:30	8/17/2005 20:30	27.5	6.3	0.0812	0	0	FALSE
8/17/2005	20:45	8/17/2005 20:45	27.5	6.3	0.0814	0	0	FALSE
8/17/2005	21:00	8/17/2005 21:00	27.5	6.3	0.0811	0	0	FALSE
8/17/2005	21:15	8/17/2005 21:15	27.5	6.3	0.0815	0	0	FALSE
8/17/2005	21:30	8/17/2005 21:30	27.5	6.3	0.0817	0	0	FALSE
8/17/2005	21:45	8/17/2005 21:45	27.5	6.3	0.0815	0	0	FALSE
8/17/2005	22:00	8/17/2005 22:00	27.5	6.3	0.0817	0	0	FALSE
8/17/2005	22:15	8/17/2005 22:15	27.5	6.3	0.0819	0	0	FALSE
8/17/2005	22:30	8/17/2005 22:30	27.5	6.3	0.0823	0	0	FALSE

8/17/2005	22:45	8/17/2005 22:45	27.5	6.3	0.0823	0	0	FALSE
8/17/2005	23:00	8/17/2005 23:00	27.5	6.3	0.0823	0	0	FALSE
8/17/2005	23:15	8/17/2005 23:15	27.5	6.3	0.0824	0	0	FALSE
8/17/2005	23:30	8/17/2005 23:30	27.5	6.3	0.0824	0	0	FALSE
8/17/2005	23:45	8/17/2005 23:45	27.5	6.3	0.0828	0	0	FALSE
8/18/2005	0:00	8/18/2005 00:00	27.5	6.3	0.0829	0	0	FALSE
8/18/2005	0:15	8/18/2005 00:15	27.5	6.3	0.0829	0	0	FALSE
8/18/2005	0:30	8/18/2005 00:30	27.5	6.3	0.0829	0	0	FALSE
8/18/2005	0:45	8/18/2005 00:45	27.5	6.3	0.0829	0	0	FALSE
8/18/2005	1:00	8/18/2005 01:00	27.5	6.3	0.0832	0	0	FALSE
8/18/2005	1:15	8/18/2005 01:15	27.5	6.3	0.0827	0	0	FALSE
8/18/2005	1:30	8/18/2005 01:30	27.5	6.3	0.0828	0	0	FALSE
8/18/2005	1:45	8/18/2005 01:45	27.5	6.3	0.0825	0	0	FALSE
8/18/2005	2:00	8/18/2005 02:00	27.5	6.3	0.0828	0	0	FALSE
8/18/2005	2:15	8/18/2005 02:15	27.5	6.3	0.0824	0	0	FALSE
8/18/2005	2:30	8/18/2005 02:30	27.5	6.3	0.0825	0	0	FALSE
8/18/2005	2:45	8/18/2005 02:45	27.5	6.3	0.0829	0	0	FALSE
8/18/2005	3:00	8/18/2005 03:00	27.5	6.3	0.0831	0	0	FALSE
8/18/2005	3:15	8/18/2005 03:15	27.5	6.3	0.0829	0	0	FALSE
8/18/2005	3:30	8/18/2005 03:30	27.5	6.3	0.0829	0	0	FALSE
8/18/2005	3:45	8/18/2005 03:45	27.5	6.3	0.0827	0	0	FALSE
8/18/2005	4:00	8/18/2005 04:00	27.5	6.3	0.0827	0	0	FALSE
8/18/2005	4:15	8/18/2005 04:15	27.5	6.3	0.0827	0	0	FALSE
8/18/2005	4:30	8/18/2005 04:30	27.5	6.3	0.0831	0	0	FALSE
8/18/2005	4:45	8/18/2005 04:45	27.5	6.3	0.0829	0	0	FALSE
8/18/2005	5:00	8/18/2005 05:00	27.5	6.3	0.0832	0	0	FALSE
8/18/2005	5:15	8/18/2005 05:15	27.6	6.3	0.0832	0	0	FALSE
8/18/2005	5:30	8/18/2005 05:30	27.6	6.3	0.0831	0	0	FALSE
8/18/2005	5:45	8/18/2005 05:45	27.6	6.3	0.0832	0	0	FALSE
8/18/2005	6:00	8/18/2005 06:00	27.6	6.3	0.0833	0	0	FALSE
8/18/2005	6:15	8/18/2005 06:15	27.6	6.3	0.0832	0	0	FALSE
8/18/2005	6:30	8/18/2005 06:30	27.6	6.3	0.0835	0	0	FALSE
8/18/2005	6:45	8/18/2005 06:45	27.5	6.3	0.0836	0	0	FALSE
8/18/2005	7:00	8/18/2005 07:00	27.5	6.3	0.0839	0	0	FALSE
8/18/2005	7:15	8/18/2005 07:15	27.5	6.3	0.0836	0	0	FALSE
8/18/2005	7:30	8/18/2005 07:30	27.5	6.3	0.084	0	0	FALSE
8/18/2005	7:45	8/18/2005 07:45	27.5	6.3	0.0841	0	0	FALSE
8/18/2005	8:00	8/18/2005 08:00	27.5	6.3	0.0841	0	0	FALSE
8/18/2005	8:15	8/18/2005 08:15	27.5	6.3	0.0843	0	0	FALSE
8/18/2005	8:30	8/18/2005 08:30	27.5	6.3	0.0841	0	0	FALSE
8/18/2005	8:45	8/18/2005 08:45	27.5	6.3	0.0845	0	0	FALSE
8/18/2005	9:00	8/18/2005 09:00	27.5	6.3	0.0837	0	0	FALSE
8/18/2005	9:15	8/18/2005 09:15	27.6	6.3	0.0839	0	0	FALSE
8/18/2005	9:30	8/18/2005 09:30	27.6	6.3	0.0838	0	0	FALSE
8/18/2005	9:45	8/18/2005 09:45	27.6	6.3	0.0829	0	0	FALSE
8/18/2005	10:00	8/18/2005 10:00	27.6	6.3	0.0826	0	0	FALSE


100605 Lake Edwards/Smithport Lake
Site Number: SL02, Site Name: Smithport Lake - southeast end just above the dam
DO & Temperature (deg C) vs. Date/Time
Dissolved Oxygen (mg/L)
Temperature (C)
Date/Time
DO mg/L
DO Criteria mg/L
Temp øC
DO STATISTICS
Min DO = 0 mg/L
Max DO = 2.3 mg/L
Average DO = 0.46 mg/L
25th Percentile = 0 mg/L
50th Percentile = 0 mg/L
% Failing Criteria = 100 %
Std. Deviation = 0.7 mg/L
Variance = 0.49 mg/L
8/16/2005 00:00
8/16/2005 12:00
8/17/2005 00:00
8/17/2005 12:00
8/18/2005 00:00
8/18/2005 12:00
8/19/2005 00:00


100605 Lake Edwards/Smithport Lake
Site Number: SL02, Site Name: Smithport Lake - southeast end just above the dam
DO & pH vs. Date/Time
DO mg/L
DO Criteria mg/L
pH Units
DO STATISTICS
Min DO = 0 mg/L
Max DO = 2.3 mg/L
Average DO = 0.46 mg/L
25th Percentile = 0 mg/L
50th Percentile = 0 mg/L
% Failing Criteria = 100 %
Std. Deviation = 0.7 mg/L
Variance = 0.49 mg/L
Dissolved Oxygen (mg/L)
pH
Date/Time
0
1
2
3
4
5
6
6.25
6.3
6.35
6.4
6.45
6.5
6.55
8/16/2005 00:00
8/16/2005 12:00
8/17/2005 00:00
8/17/2005 12:00
8/18/2005 00:00
8/18/2005 12:00
8/19/2005 00:00



100605 Lake Edwards/Smithport Lake
Site Number: SL02
Smithport Lake - southeast end just above the dam

	Temp deg C	pH	SpCond uS/cm	DO %	DO mg/L
Minimum	27.10	6.30	0.08	0.00	0.00
Maximum	27.60	6.50	0.08	30.00	2.30
Average	27.41	6.35	0.08	5.80	0.46
Geometric Mean	27.41	6.35	0.08		
25th Percentile	27.30	6.30	0.08	0.00	0.00
30th Percentile	27.30	6.30	0.08	0.00	0.00
40th Percentile	27.40	6.30	0.08	0.00	0.00
50th Percentile	27.40	6.30	0.08	0.00	0.00
Standard Deviation	0.13	0.06	0.00	8.87	0.70
Variance	0.02	0.00	0.00	78.59	0.49

Data Row Count	192
Total Values Failing DO Criteria	192
Percent failing DO Criteria	100.00 %

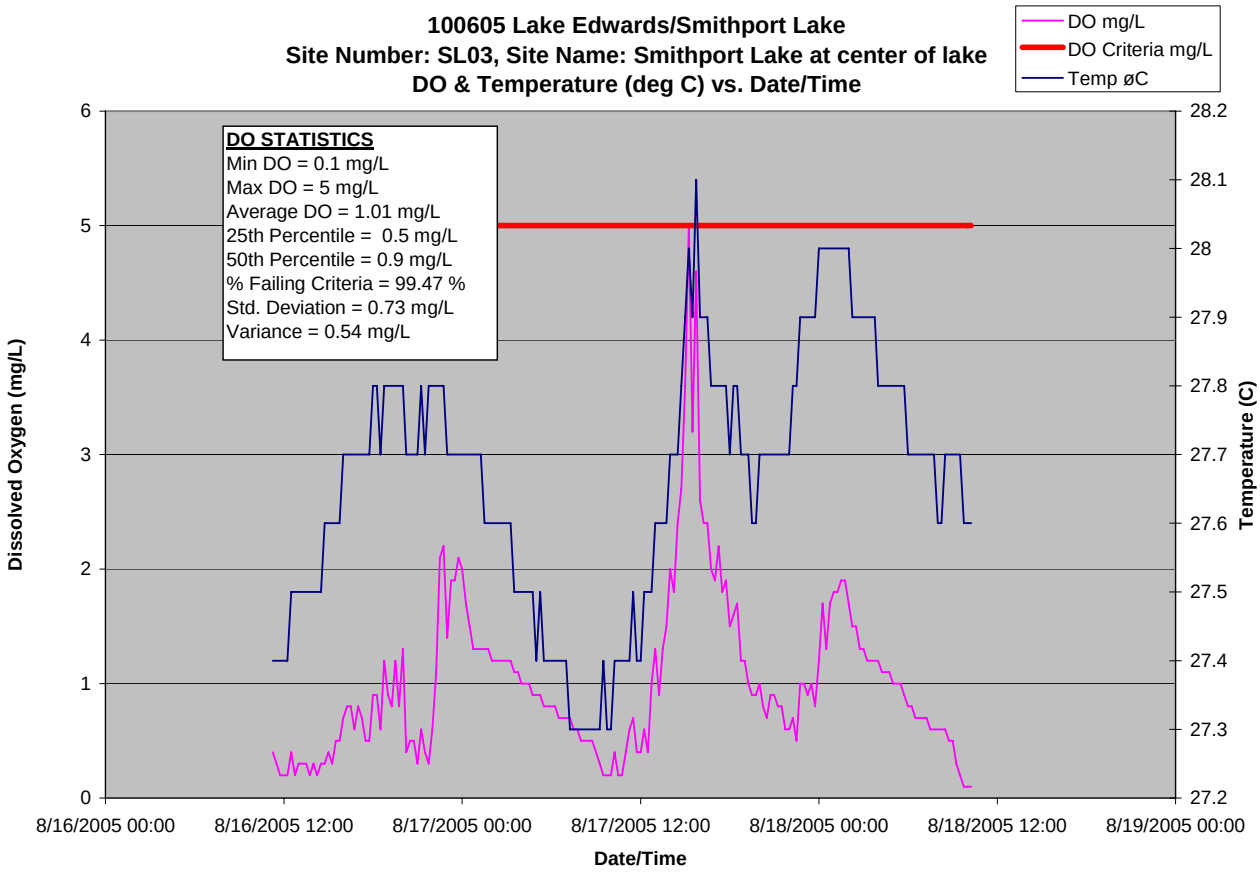
SL03 Continuous Monitoring Data for lake Edwards/Smithport lake Subsegment 100605

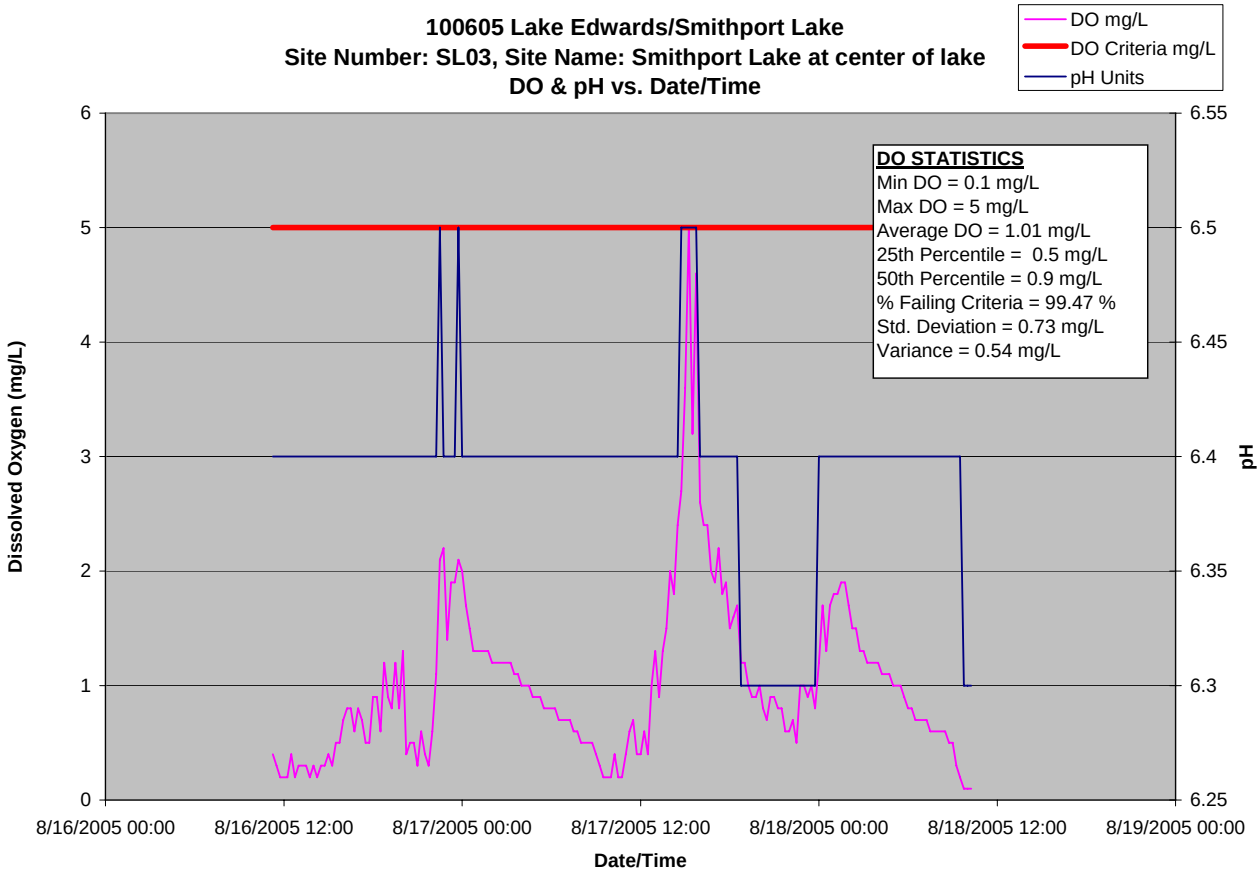
Date	Time	Date+Time	Temp	pH	SpCond	DO%	DO	VENTED DEPTH	SALINITY
MMDDYY	HHMM	MMDDYYYY HHMM	øC	Units	æS/cm	Sat	mg/L	True/False	ppt
8/16/2005	11:15	8/16/2005 11:15	27.4	6.4	126.7	5	0.4	FALSE	0.1
8/16/2005	11:30	8/16/2005 11:30	27.4	6.4	126.9	3	0.3	FALSE	0.1
8/16/2005	11:45	8/16/2005 11:45	27.4	6.4	126.8	2	0.2	FALSE	0.1
8/16/2005	12:00	8/16/2005 12:00	27.4	6.4	127	2	0.2	FALSE	0.1
8/16/2005	12:15	8/16/2005 12:15	27.4	6.4	127.1	3	0.2	FALSE	0.1
8/16/2005	12:30	8/16/2005 12:30	27.5	6.4	126.9	5	0.4	FALSE	0.1
8/16/2005	12:45	8/16/2005 12:45	27.5	6.4	127	3	0.2	FALSE	0.1
8/16/2005	13:00	8/16/2005 13:00	27.5	6.4	127	3	0.3	FALSE	0.1
8/16/2005	13:15	8/16/2005 13:15	27.5	6.4	126.7	4	0.3	FALSE	0.1
8/16/2005	13:30	8/16/2005 13:30	27.5	6.4	126.6	4	0.3	FALSE	0.1
8/16/2005	13:45	8/16/2005 13:45	27.5	6.4	127	3	0.2	FALSE	0.1
8/16/2005	14:00	8/16/2005 14:00	27.5	6.4	126.8	3	0.3	FALSE	0.1
8/16/2005	14:15	8/16/2005 14:15	27.5	6.4	127.2	3	0.2	FALSE	0.1
8/16/2005	14:30	8/16/2005 14:30	27.5	6.4	127.1	4	0.3	FALSE	0.1
8/16/2005	14:45	8/16/2005 14:45	27.6	6.4	127.1	4	0.3	FALSE	0.1
8/16/2005	15:00	8/16/2005 15:00	27.6	6.4	126.6	5	0.4	FALSE	0.1
8/16/2005	15:15	8/16/2005 15:15	27.6	6.4	126.7	3	0.3	FALSE	0.1
8/16/2005	15:30	8/16/2005 15:30	27.6	6.4	126.8	7	0.5	FALSE	0.1
8/16/2005	15:45	8/16/2005 15:45	27.6	6.4	126.8	6	0.5	FALSE	0.1
8/16/2005	16:00	8/16/2005 16:00	27.7	6.4	126.7	8	0.7	FALSE	0.1
8/16/2005	16:15	8/16/2005 16:15	27.7	6.4	126.3	11	0.8	FALSE	0.1
8/16/2005	16:30	8/16/2005 16:30	27.7	6.4	126.6	10	0.8	FALSE	0.1
8/16/2005	16:45	8/16/2005 16:45	27.7	6.4	126.6	7	0.6	FALSE	0.1
8/16/2005	17:00	8/16/2005 17:00	27.7	6.4	126.6	10	0.8	FALSE	0.1
8/16/2005	17:15	8/16/2005 17:15	27.7	6.4	126.7	9	0.7	FALSE	0.1
8/16/2005	17:30	8/16/2005 17:30	27.7	6.4	126.7	6	0.5	FALSE	0.1
8/16/2005	17:45	8/16/2005 17:45	27.7	6.4	126.6	6	0.5	FALSE	0.1
8/16/2005	18:00	8/16/2005 18:00	27.8	6.4	126.7	12	0.9	FALSE	0.1
8/16/2005	18:15	8/16/2005 18:15	27.8	6.4	126.3	11	0.9	FALSE	0.1
8/16/2005	18:30	8/16/2005 18:30	27.7	6.4	126.2	7	0.6	FALSE	0.1
8/16/2005	18:45	8/16/2005 18:45	27.8	6.4	126.6	15	1.2	FALSE	0.1
8/16/2005	19:00	8/16/2005 19:00	27.8	6.4	126.3	11	0.9	FALSE	0.1
8/16/2005	19:15	8/16/2005 19:15	27.8	6.4	126.5	11	0.8	FALSE	0.1
8/16/2005	19:30	8/16/2005 19:30	27.8	6.4	126.5	15	1.2	FALSE	0.1
8/16/2005	19:45	8/16/2005 19:45	27.8	6.4	126.5	11	0.8	FALSE	0.1
8/16/2005	20:00	8/16/2005 20:00	27.8	6.4	126.1	17	1.3	FALSE	0.1
8/16/2005	20:15	8/16/2005 20:15	27.7	6.4	126.4	5	0.4	FALSE	0.1
8/16/2005	20:30	8/16/2005 20:30	27.7	6.4	126.1	6	0.5	FALSE	0.1
8/16/2005	20:45	8/16/2005 20:45	27.7	6.4	126.4	6	0.5	FALSE	0.1
8/16/2005	21:00	8/16/2005 21:00	27.7	6.4	126.3	4	0.3	FALSE	0.1
8/16/2005	21:15	8/16/2005 21:15	27.8	6.4	126.2	8	0.6	FALSE	0.1
8/16/2005	21:30	8/16/2005 21:30	27.7	6.4	126.1	5	0.4	FALSE	0.1
8/16/2005	21:45	8/16/2005 21:45	27.8	6.4	126.2	3	0.3	FALSE	0.1
8/16/2005	22:00	8/16/2005 22:00	27.8	6.4	126	7	0.6	FALSE	0.1

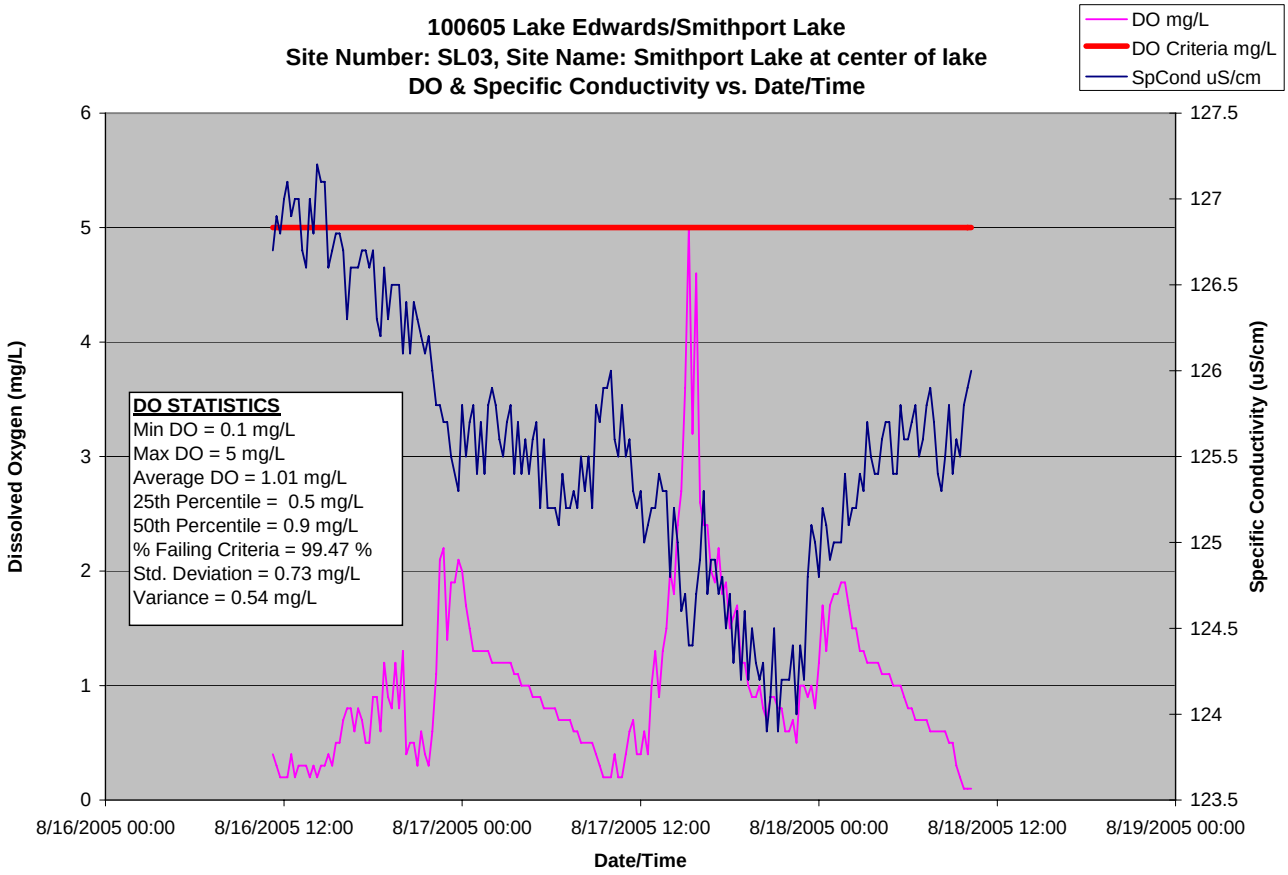
8/16/2005	22:15	8/16/2005 22:15	27.8	6.4	125.8	14	1.1	FALSE	0.1
8/16/2005	22:30	8/16/2005 22:30	27.8	6.5	125.8	27	2.1	FALSE	0.1
8/16/2005	22:45	8/16/2005 22:45	27.8	6.4	125.7	28	2.2	FALSE	0.1
8/16/2005	23:00	8/16/2005 23:00	27.7	6.4	125.7	18	1.4	FALSE	0.1
8/16/2005	23:15	8/16/2005 23:15	27.7	6.4	125.5	24	1.9	FALSE	0.1
8/16/2005	23:30	8/16/2005 23:30	27.7	6.4	125.4	24	1.9	FALSE	0.1
8/16/2005	23:45	8/16/2005 23:45	27.7	6.5	125.3	26	2.1	FALSE	0.1
8/17/2005	0:00	8/17/2005 00:00	27.7	6.4	125.8	25	2	FALSE	0.1
8/17/2005	0:15	8/17/2005 00:15	27.7	6.4	125.5	22	1.7	FALSE	0.1
8/17/2005	0:30	8/17/2005 00:30	27.7	6.4	125.7	20	1.5	FALSE	0.1
8/17/2005	0:45	8/17/2005 00:45	27.7	6.4	125.8	17	1.3	FALSE	0.1
8/17/2005	1:00	8/17/2005 01:00	27.7	6.4	125.4	17	1.3	FALSE	0.1
8/17/2005	1:15	8/17/2005 01:15	27.7	6.4	125.7	16	1.3	FALSE	0.1
8/17/2005	1:30	8/17/2005 01:30	27.6	6.4	125.4	16	1.3	FALSE	0.1
8/17/2005	1:45	8/17/2005 01:45	27.6	6.4	125.8	16	1.3	FALSE	0.1
8/17/2005	2:00	8/17/2005 02:00	27.6	6.4	125.9	16	1.2	FALSE	0.1
8/17/2005	2:15	8/17/2005 02:15	27.6	6.4	125.8	16	1.2	FALSE	0.1
8/17/2005	2:30	8/17/2005 02:30	27.6	6.4	125.6	15	1.2	FALSE	0.1
8/17/2005	2:45	8/17/2005 02:45	27.6	6.4	125.5	15	1.2	FALSE	0.1
8/17/2005	3:00	8/17/2005 03:00	27.6	6.4	125.7	16	1.2	FALSE	0.1
8/17/2005	3:15	8/17/2005 03:15	27.6	6.4	125.8	15	1.2	FALSE	0.1
8/17/2005	3:30	8/17/2005 03:30	27.5	6.4	125.4	14	1.1	FALSE	0.1
8/17/2005	3:45	8/17/2005 03:45	27.5	6.4	125.7	14	1.1	FALSE	0.1
8/17/2005	4:00	8/17/2005 04:00	27.5	6.4	125.4	13	1	FALSE	0.1
8/17/2005	4:15	8/17/2005 04:15	27.5	6.4	125.6	12	1	FALSE	0.1
8/17/2005	4:30	8/17/2005 04:30	27.5	6.4	125.4	12	1	FALSE	0.1
8/17/2005	4:45	8/17/2005 04:45	27.5	6.4	125.6	12	0.9	FALSE	0.1
8/17/2005	5:00	8/17/2005 05:00	27.4	6.4	125.7	11	0.9	FALSE	0.1
8/17/2005	5:15	8/17/2005 05:15	27.5	6.4	125.2	11	0.9	FALSE	0.1
8/17/2005	5:30	8/17/2005 05:30	27.4	6.4	125.6	11	0.8	FALSE	0.1
8/17/2005	5:45	8/17/2005 05:45	27.4	6.4	125.2	10	0.8	FALSE	0.1
8/17/2005	6:00	8/17/2005 06:00	27.4	6.4	125.2	10	0.8	FALSE	0.1
8/17/2005	6:15	8/17/2005 06:15	27.4	6.4	125.2	10	0.8	FALSE	0.1
8/17/2005	6:30	8/17/2005 06:30	27.4	6.4	125.1	9	0.7	FALSE	0.1
8/17/2005	6:45	8/17/2005 06:45	27.4	6.4	125.4	9	0.7	FALSE	0.1
8/17/2005	7:00	8/17/2005 07:00	27.4	6.4	125.2	8	0.7	FALSE	0.1
8/17/2005	7:15	8/17/2005 07:15	27.3	6.4	125.2	9	0.7	FALSE	0.1
8/17/2005	7:30	8/17/2005 07:30	27.3	6.4	125.3	7	0.6	FALSE	0.1
8/17/2005	7:45	8/17/2005 07:45	27.3	6.4	125.2	7	0.6	FALSE	0.1
8/17/2005	8:00	8/17/2005 08:00	27.3	6.4	125.5	6	0.5	FALSE	0.1
8/17/2005	8:15	8/17/2005 08:15	27.3	6.4	125.3	6	0.5	FALSE	0.1
8/17/2005	8:30	8/17/2005 08:30	27.3	6.4	125.5	6	0.5	FALSE	0.1
8/17/2005	8:45	8/17/2005 08:45	27.3	6.4	125.2	6	0.5	FALSE	0.1
8/17/2005	9:00	8/17/2005 09:00	27.3	6.4	125.8	5	0.4	FALSE	0.1
8/17/2005	9:15	8/17/2005 09:15	27.3	6.4	125.7	4	0.3	FALSE	0.1
8/17/2005	9:30	8/17/2005 09:30	27.4	6.4	125.9	3	0.2	FALSE	0.1
8/17/2005	9:45	8/17/2005 09:45	27.3	6.4	125.9	3	0.2	FALSE	0.1
8/17/2005	10:00	8/17/2005 10:00	27.3	6.4	126	2	0.2	FALSE	0.1
8/17/2005	10:15	8/17/2005 10:15	27.4	6.4	125.6	5	0.4	FALSE	0.1
8/17/2005	10:30	8/17/2005 10:30	27.4	6.4	125.5	3	0.2	FALSE	0.1

8/17/2005	10:45	8/17/2005	10:45	27.4	6.4	125.8	3	0.2	FALSE	0.1
8/17/2005	11:00	8/17/2005	11:00	27.4	6.4	125.5	5	0.4	FALSE	0.1
8/17/2005	11:15	8/17/2005	11:15	27.4	6.4	125.6	8	0.6	FALSE	0.1
8/17/2005	11:30	8/17/2005	11:30	27.5	6.4	125.3	8	0.7	FALSE	0.1
8/17/2005	11:45	8/17/2005	11:45	27.4	6.4	125.2	5	0.4	FALSE	0.1
8/17/2005	12:00	8/17/2005	12:00	27.4	6.4	125.3	5	0.4	FALSE	0.1
8/17/2005	12:15	8/17/2005	12:15	27.5	6.4	125	7	0.6	FALSE	0.1
8/17/2005	12:30	8/17/2005	12:30	27.5	6.4	125.1	4	0.4	FALSE	0.1
8/17/2005	12:45	8/17/2005	12:45	27.5	6.4	125.2	13	1	FALSE	0.1
8/17/2005	13:00	8/17/2005	13:00	27.6	6.4	125.2	17	1.3	FALSE	0.1
8/17/2005	13:15	8/17/2005	13:15	27.6	6.4	125.4	11	0.9	FALSE	0.1
8/17/2005	13:30	8/17/2005	13:30	27.6	6.4	125.3	17	1.3	FALSE	0.1
8/17/2005	13:45	8/17/2005	13:45	27.6	6.4	125.3	19	1.5	FALSE	0.1
8/17/2005	14:00	8/17/2005	14:00	27.7	6.4	124.8	25	2	FALSE	0.1
8/17/2005	14:15	8/17/2005	14:15	27.7	6.4	125.2	23	1.8	FALSE	0.1
8/17/2005	14:30	8/17/2005	14:30	27.7	6.4	125	30	2.4	FALSE	0.1
8/17/2005	14:45	8/17/2005	14:45	27.8	6.5	124.6	35	2.7	FALSE	0.1
8/17/2005	15:00	8/17/2005	15:00	27.9	6.5	124.7	46	3.6	FALSE	0.1
8/17/2005	15:15	8/17/2005	15:15	28	6.5	124.4	64	5	FALSE	0.1
8/17/2005	15:30	8/17/2005	15:30	27.9	6.5	124.4	41	3.2	FALSE	0.1
8/17/2005	15:45	8/17/2005	15:45	28.1	6.5	124.7	59	4.6	FALSE	0.1
8/17/2005	16:00	8/17/2005	16:00	27.9	6.4	124.9	34	2.6	FALSE	0.1
8/17/2005	16:15	8/17/2005	16:15	27.9	6.4	125.3	31	2.4	FALSE	0.1
8/17/2005	16:30	8/17/2005	16:30	27.9	6.4	124.7	31	2.4	FALSE	0.1
8/17/2005	16:45	8/17/2005	16:45	27.8	6.4	124.9	25	2	FALSE	0.1
8/17/2005	17:00	8/17/2005	17:00	27.8	6.4	124.9	24	1.9	FALSE	0.1
8/17/2005	17:15	8/17/2005	17:15	27.8	6.4	124.7	28	2.2	FALSE	0.1
8/17/2005	17:30	8/17/2005	17:30	27.8	6.4	124.8	23	1.8	FALSE	0.1
8/17/2005	17:45	8/17/2005	17:45	27.8	6.4	124.5	24	1.9	FALSE	0.1
8/17/2005	18:00	8/17/2005	18:00	27.7	6.4	124.7	18	1.5	FALSE	0.1
8/17/2005	18:15	8/17/2005	18:15	27.8	6.4	124.3	21	1.6	FALSE	0.1
8/17/2005	18:30	8/17/2005	18:30	27.8	6.4	124.6	21	1.7	FALSE	0.1
8/17/2005	18:45	8/17/2005	18:45	27.7	6.3	124.2	15	1.2	FALSE	0.1
8/17/2005	19:00	8/17/2005	19:00	27.7	6.3	124.6	15	1.2	FALSE	0.1
8/17/2005	19:15	8/17/2005	19:15	27.7	6.3	124.2	13	1	FALSE	0.1
8/17/2005	19:30	8/17/2005	19:30	27.6	6.3	124.5	12	0.9	FALSE	0.1
8/17/2005	19:45	8/17/2005	19:45	27.6	6.3	124.3	11	0.9	FALSE	0.1
8/17/2005	20:00	8/17/2005	20:00	27.7	6.3	124.2	13	1	FALSE	0.1
8/17/2005	20:15	8/17/2005	20:15	27.7	6.3	124.3	10	0.8	FALSE	0.1
8/17/2005	20:30	8/17/2005	20:30	27.7	6.3	123.9	9	0.7	FALSE	0.1
8/17/2005	20:45	8/17/2005	20:45	27.7	6.3	124.1	11	0.9	FALSE	0.1
8/17/2005	21:00	8/17/2005	21:00	27.7	6.3	124.5	12	0.9	FALSE	0.1
8/17/2005	21:15	8/17/2005	21:15	27.7	6.3	123.9	10	0.8	FALSE	0.1
8/17/2005	21:30	8/17/2005	21:30	27.7	6.3	124.2	11	0.8	FALSE	0.1
8/17/2005	21:45	8/17/2005	21:45	27.7	6.3	124.2	7	0.6	FALSE	0.1
8/17/2005	22:00	8/17/2005	22:00	27.7	6.3	124.2	8	0.6	FALSE	0.1
8/17/2005	22:15	8/17/2005	22:15	27.8	6.3	124.4	9	0.7	FALSE	0.1
8/17/2005	22:30	8/17/2005	22:30	27.8	6.3	124	6	0.5	FALSE	0.1
8/17/2005	22:45	8/17/2005	22:45	27.9	6.3	124.4	12	1	FALSE	0.1
8/17/2005	23:00	8/17/2005	23:00	27.9	6.3	124.2	12	1	FALSE	0.1

8/17/2005	23:15	8/17/2005 23:15	27.9	6.3	124.8	11	0.9	FALSE	0.1
8/17/2005	23:30	8/17/2005 23:30	27.9	6.3	125.1	13	1	FALSE	0.1
8/17/2005	23:45	8/17/2005 23:45	27.9	6.3	125	10	0.8	FALSE	0.1
8/18/2005	0:00	8/18/2005 00:00	28	6.4	124.8	15	1.2	FALSE	0.1
8/18/2005	0:15	8/18/2005 00:15	28	6.4	125.2	22	1.7	FALSE	0.1
8/18/2005	0:30	8/18/2005 00:30	28	6.4	125.1	17	1.3	FALSE	0.1
8/18/2005	0:45	8/18/2005 00:45	28	6.4	124.9	22	1.7	FALSE	0.1
8/18/2005	1:00	8/18/2005 01:00	28	6.4	125	23	1.8	FALSE	0.1
8/18/2005	1:15	8/18/2005 01:15	28	6.4	125	23	1.8	FALSE	0.1
8/18/2005	1:30	8/18/2005 01:30	28	6.4	125	24	1.9	FALSE	0.1
8/18/2005	1:45	8/18/2005 01:45	28	6.4	125.4	24	1.9	FALSE	0.1
8/18/2005	2:00	8/18/2005 02:00	28	6.4	125.1	22	1.7	FALSE	0.1
8/18/2005	2:15	8/18/2005 02:15	27.9	6.4	125.2	19	1.5	FALSE	0.1
8/18/2005	2:30	8/18/2005 02:30	27.9	6.4	125.2	19	1.5	FALSE	0.1
8/18/2005	2:45	8/18/2005 02:45	27.9	6.4	125.4	16	1.3	FALSE	0.1
8/18/2005	3:00	8/18/2005 03:00	27.9	6.4	125.3	16	1.3	FALSE	0.1
8/18/2005	3:15	8/18/2005 03:15	27.9	6.4	125.7	16	1.2	FALSE	0.1
8/18/2005	3:30	8/18/2005 03:30	27.9	6.4	125.5	15	1.2	FALSE	0.1
8/18/2005	3:45	8/18/2005 03:45	27.9	6.4	125.4	15	1.2	FALSE	0.1
8/18/2005	4:00	8/18/2005 04:00	27.8	6.4	125.4	15	1.2	FALSE	0.1
8/18/2005	4:15	8/18/2005 04:15	27.8	6.4	125.6	15	1.1	FALSE	0.1
8/18/2005	4:30	8/18/2005 04:30	27.8	6.4	125.7	14	1.1	FALSE	0.1
8/18/2005	4:45	8/18/2005 04:45	27.8	6.4	125.7	14	1.1	FALSE	0.1
8/18/2005	5:00	8/18/2005 05:00	27.8	6.4	125.4	13	1	FALSE	0.1
8/18/2005	5:15	8/18/2005 05:15	27.8	6.4	125.4	13	1	FALSE	0.1
8/18/2005	5:30	8/18/2005 05:30	27.8	6.4	125.8	12	1	FALSE	0.1
8/18/2005	5:45	8/18/2005 05:45	27.8	6.4	125.6	12	0.9	FALSE	0.1
8/18/2005	6:00	8/18/2005 06:00	27.7	6.4	125.6	11	0.8	FALSE	0.1
8/18/2005	6:15	8/18/2005 06:15	27.7	6.4	125.7	10	0.8	FALSE	0.1
8/18/2005	6:30	8/18/2005 06:30	27.7	6.4	125.8	9	0.7	FALSE	0.1
8/18/2005	6:45	8/18/2005 06:45	27.7	6.4	125.5	9	0.7	FALSE	0.1
8/18/2005	7:00	8/18/2005 07:00	27.7	6.4	125.6	9	0.7	FALSE	0.1
8/18/2005	7:15	8/18/2005 07:15	27.7	6.4	125.8	9	0.7	FALSE	0.1
8/18/2005	7:30	8/18/2005 07:30	27.7	6.4	125.9	8	0.6	FALSE	0.1
8/18/2005	7:45	8/18/2005 07:45	27.7	6.4	125.7	8	0.6	FALSE	0.1
8/18/2005	8:00	8/18/2005 08:00	27.6	6.4	125.4	8	0.6	FALSE	0.1
8/18/2005	8:15	8/18/2005 08:15	27.6	6.4	125.3	8	0.6	FALSE	0.1
8/18/2005	8:30	8/18/2005 08:30	27.7	6.4	125.5	8	0.6	FALSE	0.1
8/18/2005	8:45	8/18/2005 08:45	27.7	6.4	125.8	7	0.5	FALSE	0.1
8/18/2005	9:00	8/18/2005 09:00	27.7	6.4	125.4	6	0.5	FALSE	0.1
8/18/2005	9:15	8/18/2005 09:15	27.7	6.4	125.6	4	0.3	FALSE	0.1
8/18/2005	9:30	8/18/2005 09:30	27.7	6.4	125.5	3	0.2	FALSE	0.1
8/18/2005	9:45	8/18/2005 09:45	27.6	6.3	125.8	1	0.1	FALSE	0.1
8/18/2005	10:00	8/18/2005 10:00	27.6	6.3	125.9	2	0.1	FALSE	0.1
8/18/2005	10:15	8/18/2005 10:15	27.6	6.3	126	2	0.1	FALSE	0.1


100605 Lake Edwards/Smithport Lake
Site Number: SL03, Site Name: Smithport Lake at center of lake
DO & Temperature (deg C) vs. Date/Time
DO mg/L
DO Criteria mg/L
Temp øC
DO STATISTICS
Min DO = 0.1 mg/L
Max DO = 5 mg/L
Average DO = 1.01 mg/L
25th Percentile = 0.5 mg/L
50th Percentile = 0.9 mg/L
% Failing Criteria = 99.47 %
Std. Deviation = 0.73 mg/L
Variance = 0.54 mg/L
Dissolved Oxygen (mg/L)
Temperature (C)
Date/Time
0
1
2
3
4
5
6
27.2
27.3
27.4
27.5
27.6
27.7
27.8
27.9
28
28.1
28.2
8/16/2005 00:00
8/16/2005 12:00
8/17/2005 00:00
8/17/2005 12:00
8/18/2005 00:00
8/18/2005 12:00
8/19/2005 00:00


100605 Lake Edwards/Smithport Lake
Site Number: SL03, Site Name: Smithport Lake at center of lake
DO & pH vs. Date/Time
DO mg/L
DO Criteria mg/L
pH Units
DO STATISTICS
Min DO = 0.1 mg/L
Max DO = 5 mg/L
Average DO = 1.01 mg/L
25th Percentile = 0.5 mg/L
50th Percentile = 0.9 mg/L
% Failing Criteria = 99.47 %
Std. Deviation = 0.73 mg/L
Variance = 0.54 mg/L
Dissolved Oxygen (mg/L)
pH
Date/Time
0
1
2
3
4
5
6
6.25
6.3
6.35
6.4
6.45
6.5
6.55
8/16/2005 00:00
8/16/2005 12:00
8/17/2005 00:00
8/17/2005 12:00
8/18/2005 00:00
8/18/2005 12:00
8/19/2005 00:00



100605 Lake Edwards/Smithport Lake

Site Number: SL03

Site Name: Smithport Lake at center of lake

	Temp deg C	pH	SpCond uS/cm	DO %	DO mg/L
Minimum	27.30	6.30	123.90	1.00	0.10
Maximum	28.10	6.50	127.20	64.00	5.00
Average	27.66	6.39	125.55	12.84	1.01
Geometric Mean	27.66	6.39		10.07	0.79
25th Percentile	27.50	6.40	125.10	6.00	0.50
30th Percentile	27.60	6.40	125.20	7.00	0.60
40th Percentile	27.62	6.40	125.40	9.00	0.70
50th Percentile	27.70	6.40	125.50	11.00	0.90
Standard Deviation	0.19	0.04	0.76	9.39	0.73
Variance	0.03	0.00	0.58	88.25	0.54

Data Row Count	189
Total Values Failing DO Criteria	188
Percent failing DO Criteria	99.47 %

Appendix F5 – BOD Calculations

Lake Edwards and Smithport Lake Subsegment 100605 BOD Summary By Site

Site #	CBOD	CBOD Decay Rate	NBOD	NBOD Decay Rate
SL02	14.2987	0.0919	2.7249	0.0619
SL03	15.9522	0.0963	2.5951	0.0531
SL04	8.7270	0.0669	1.3324	0.0296
CLK01	8.7616	0.0818	1.3785	0.0743
CLK02	13.3435	0.0915	1.4052	0.1035
RB01	9.2442	0.0451	1.6870	0.0726
CB01	17.7216	0.0652	3.3848	0.1287
NBB02	9.0016	0.0302	0.7083	0.0875
NBB03a	6.2784	0.0841	1.8781	0.2113
NBB03b	52.0000	0.2319	0.0000	0.0050
NBB03c	43.2231	0.0266	0.0000	0.0050

Lake Edwards and Smithport Lake Subsegment 100605 BOD Summary By Reach

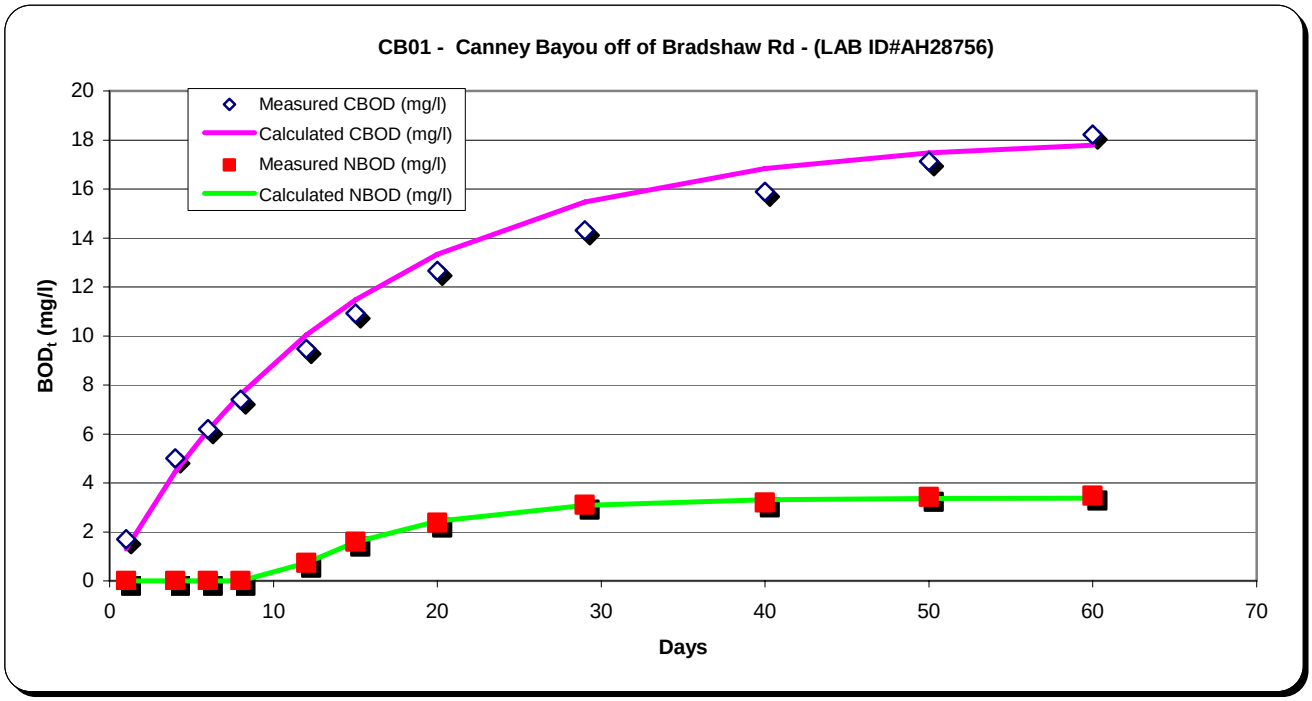
Reach #	Calculation	CBOD1	CBOD Decay Rate	NBOD	NBOD Decay Rate
1	avg(NBB03C, NBB02)	26.1124	0.0284	0.3542	0.0462
2	NBB02	9.0016	0.0302	0.7083	0.0875
3	CLK02	13.3435	0.0915	1.4052	0.1035
4	avg(CLK02, CLK01)	11.0526	0.0866	1.3918	0.0889
5	avg(CLK01, SL04)	8.7443	0.0743	1.3554	0.0520
6	avg(SL04, SL03)	12.3396	0.0816	1.9637	0.0414
7	avg(SL03, SL02)	15.1255	0.0941	2.6600	0.0575

Lake Edwards and Smithport Lake Subsegment 100605
Ratio Calcs for CBOD and NBOD to be used in background

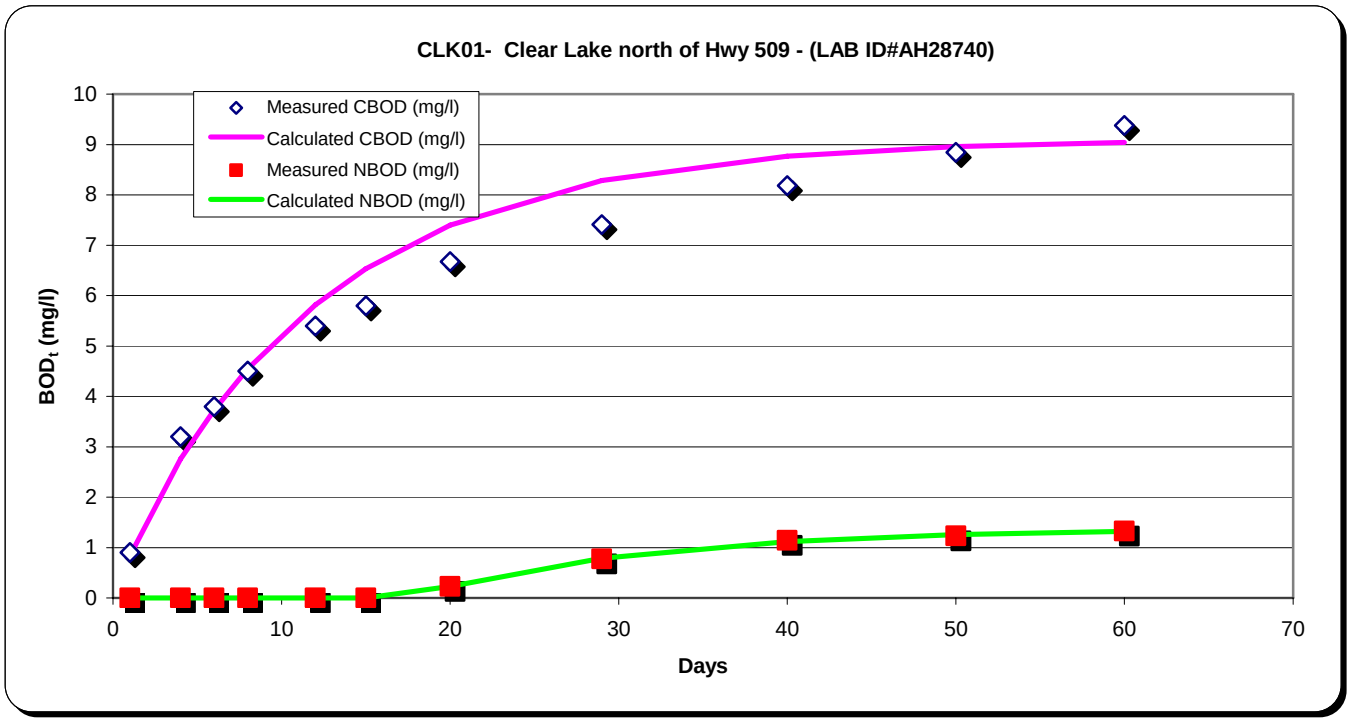
Site	CBOD1	CBOD2	NBOD	UBOD	Ratio CBOD to TOTAL	Ratio NBOD to TOTAL	Background CBOD	Background NBOD
RB01	6.4780765	3.5610633	1.6869859	11.7261256	0.856134421	0.143865579	**5.036924176**	**0.846409157**
NBB03a	3.8709245	3.8012662	1.8781431	9.55033374	0.803342676	0.196657324	**4.726332746**	**1.157000587**

Kisatchie Bayou	CBOD	NBOD
	1.54	4.2
	1.51	4.23
	1.68	4.49
Average	**1.5766667**	**4.3066667**
UBOD	**5.8833333**	

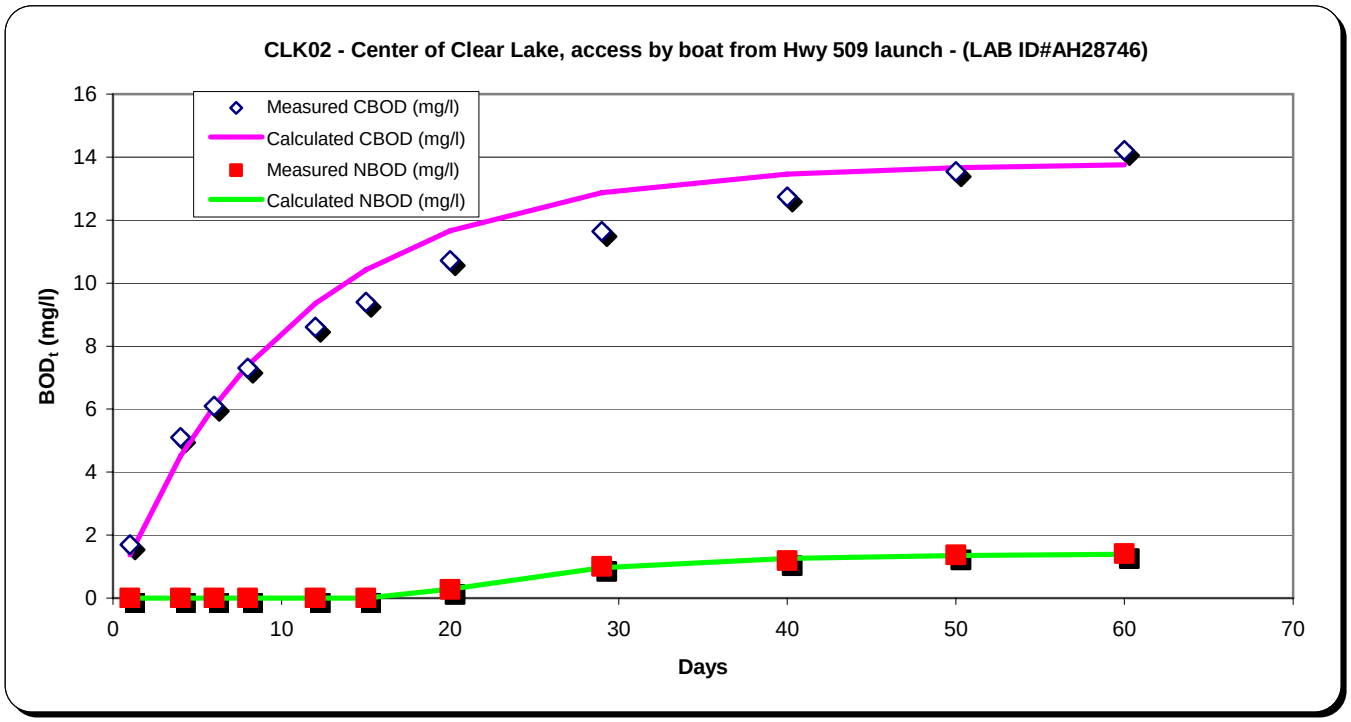
	NBOD	CBOD
UBOD (mg/l)	3.384762	17.72163
k rate (1/day)	0.12875	0.0651563
Lag time (days)	10.111111	0



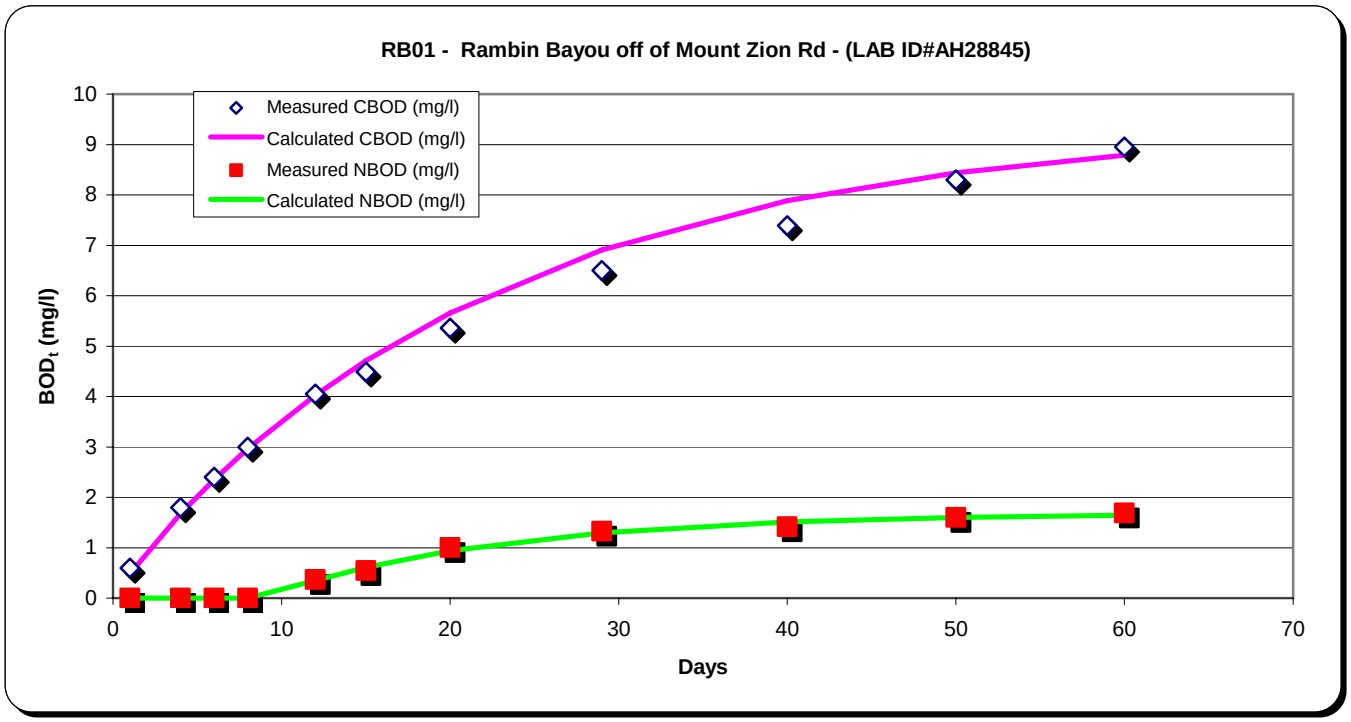
	NBOD	CBOD
UBOD (mg/l)	1.3784757	8.7616367
k rate (1/day)	0.0743229	0.0817708
Lag time (days)	17.59317	0



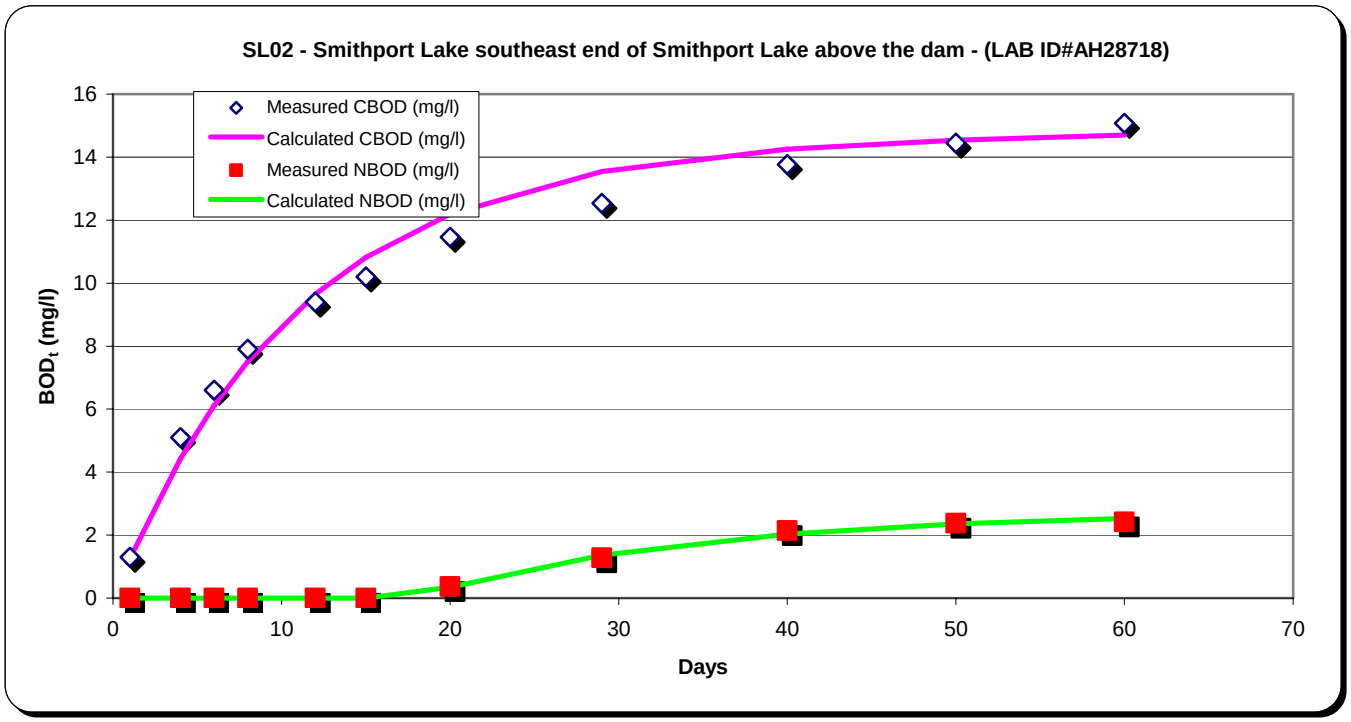
	NBOD	CBOD
UBOD (mg/l)	1.4052222	13.343541
k rate (1/day)	0.1035417	0.0915104
Lag time (days)	17.840279	0



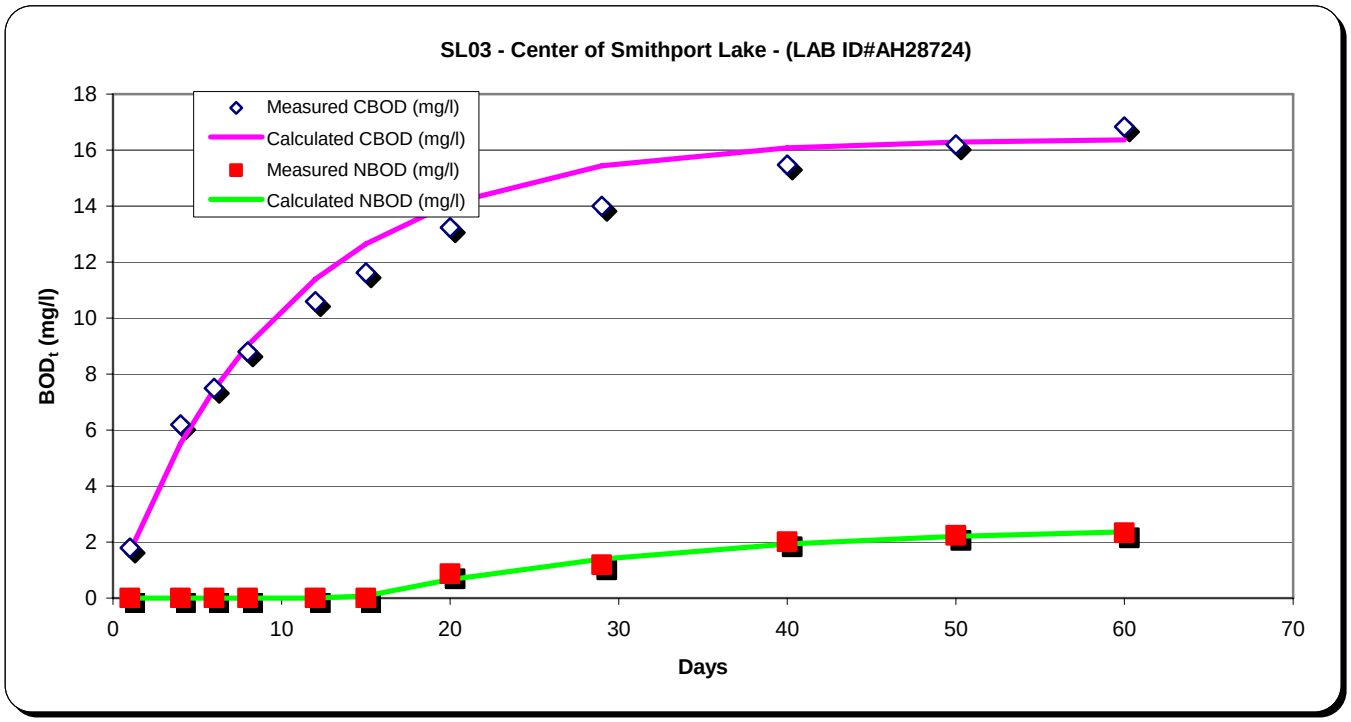
	NBOD	CBOD
UBOD (mg/l)	1.6869859	9.2441769
k rate (1/day)	0.0726042	0.0451042
Lag time (days)	8.7986107	0



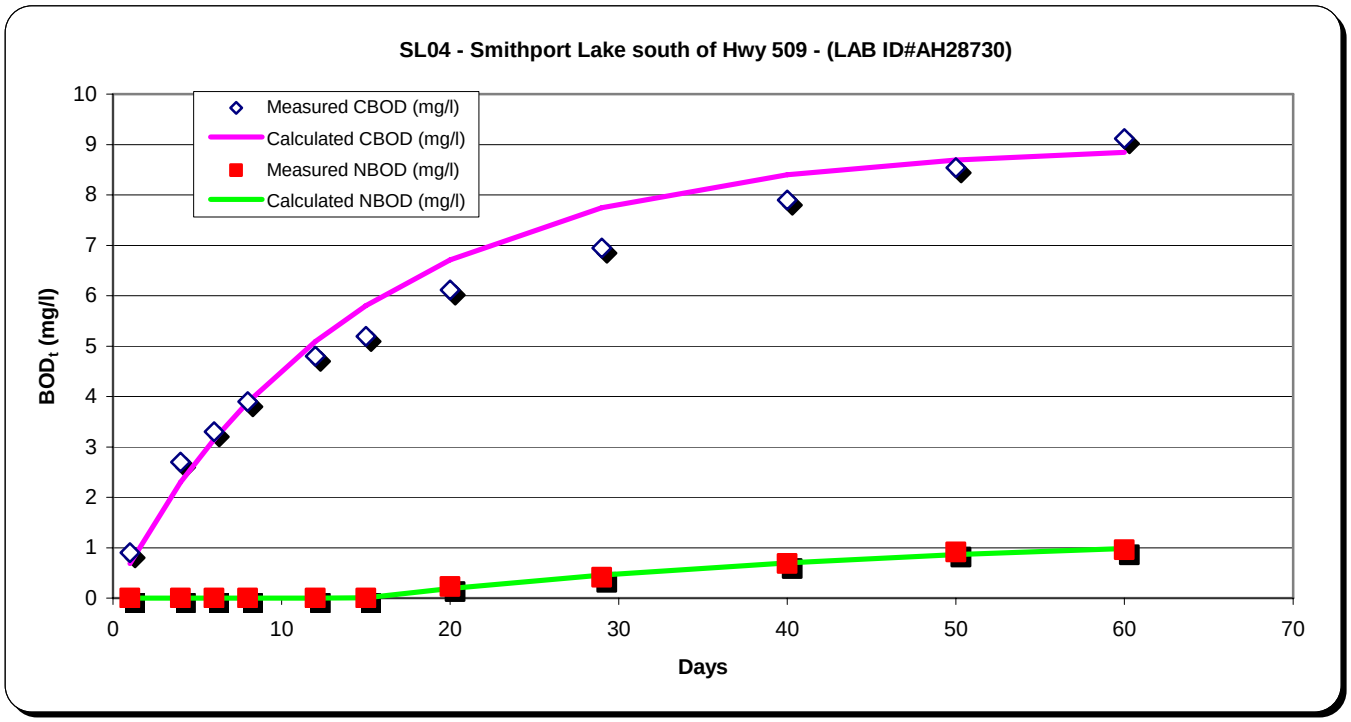
	NBOD	CBOD
UBOD (mg/l)	2.7248626	14.298698
k rate (1/day)	0.0619097	0.0918924
Lag time (days)	17.81192	0



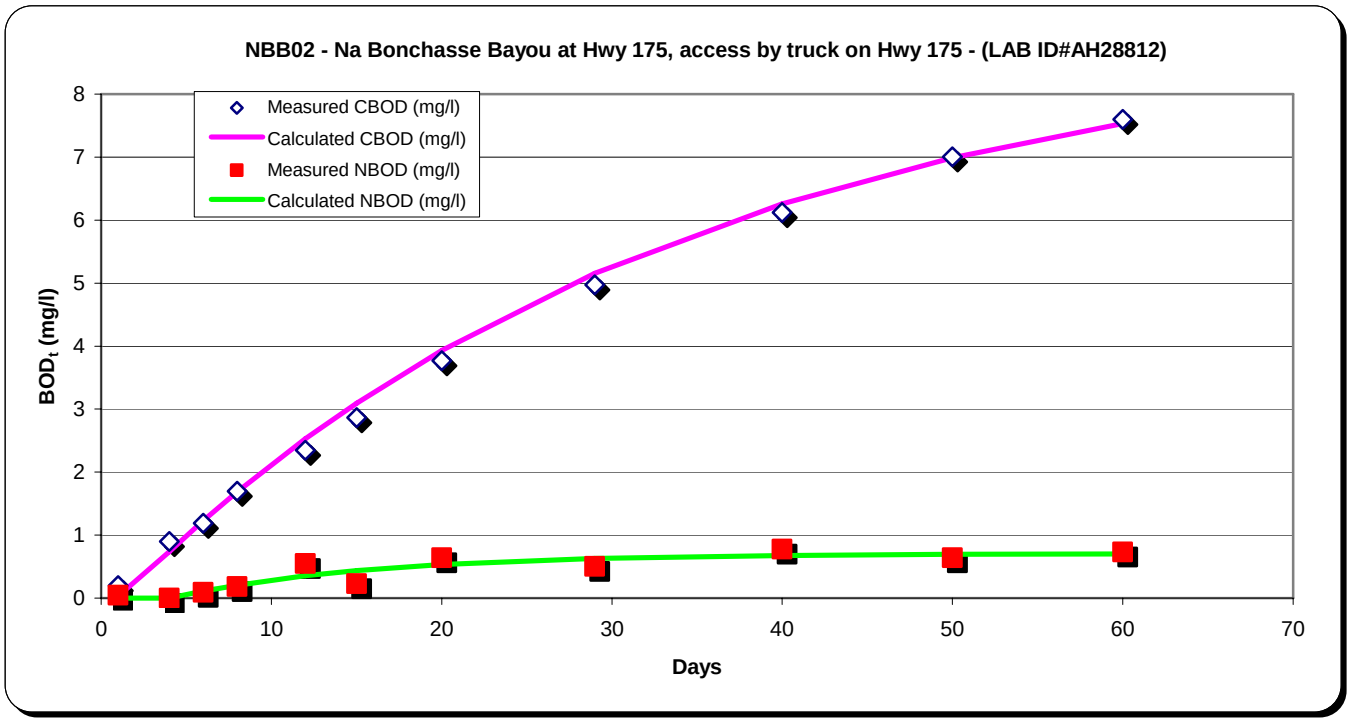
	NBOD	CBOD
UBOD (mg/l)	2.5950618	15.952229
k rate (1/day)	0.053125	0.0962847
Lag time (days)	14.4375	0



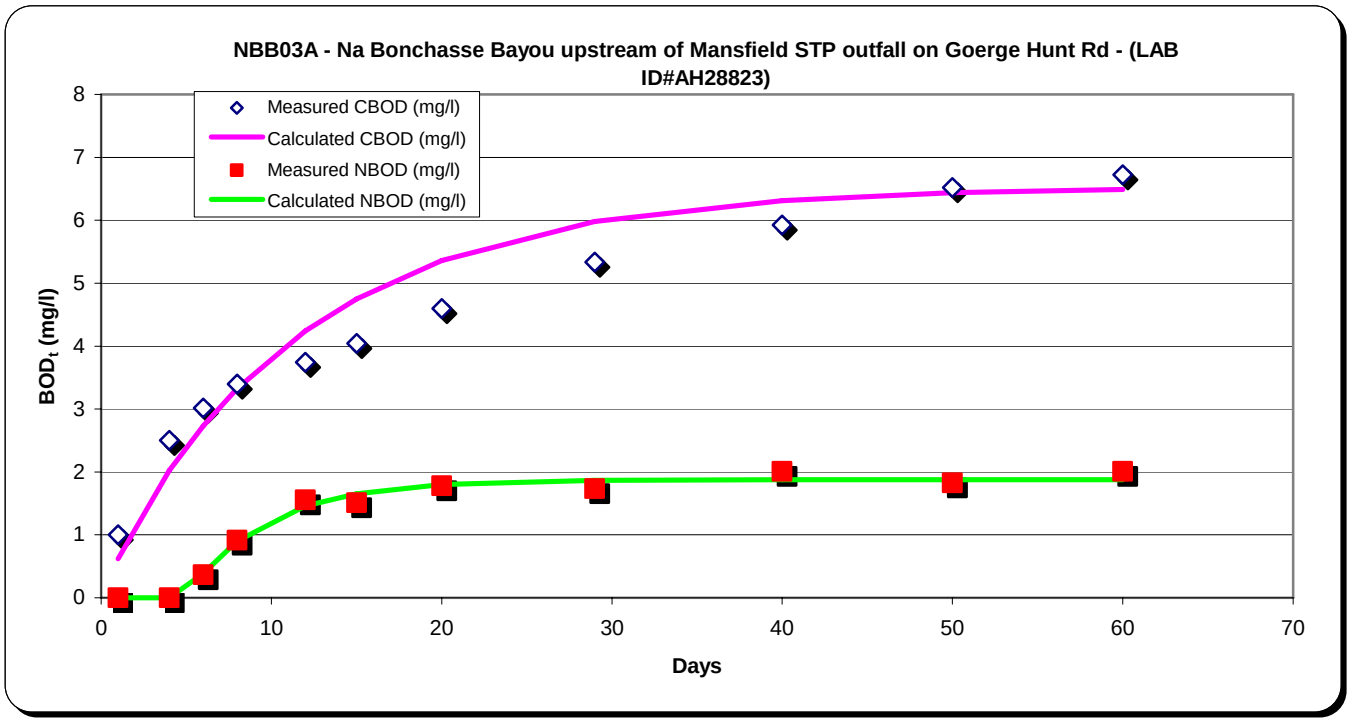
	NBOD	CBOD
UBOD (mg/l)	1.3323613	8.7270088
k rate (1/day)	0.0296354	0.066875
Lag time (days)	14.875	0



	NBOD	CBOD
UBOD (mg/l)	0.7083499	9.0016413
k rate (1/day)	0.0875	0.0302083
Lag time (days)	4.0833335	1.4137731



	NBOD	CBOD
UBOD (mg/l)	1.8781431	6.2784166
k rate (1/day)	0.21125	0.0840625
Lag time (days)	4.9097219	0



Appendix G– Historical and Ambient Data

Appendix G1 – Ambient Data

Critical Temperature and DO Determinations:

SITE NUMBER: 0281

SITE DESCRIPTION: Clear Lake north of Mansfield, Louisiana

	Summer Season	Winter Season
90th Percentile Temperature(°C):	30.36	17.78
90 % DO Sat (mg/L):	6.76	8.56
Months:	May To Oct	Nov To Apr

Date	Water Temp. (°C)	DO (mg/L)
7/20/2005	29.80	7.90
3/10/2003	14.10	9.50
5/12/1998	24.52	9.34
3/10/1998	9.85	8.81
1/13/1998	14.06	8.46
11/18/1997	10.33	10.54
9/9/1997	27.74	4.93
7/15/1997	30.79	5.64
5/21/1997	23.79	5.30
5/13/1997	23.09	7.62
3/11/1997	19.22	4.93
1/6/1997	13.43	4.80
11/18/1996	15.27	4.94
9/10/1996	28.30	5.61
7/9/1996	30.07	3.38
5/14/1996	25.35	5.32
3/12/1996	13.15	7.62
1/8/1996	5.65	6.81
11/14/1995	14.02	5.97
9/12/1995	27.12	7.88
7/11/1995	30.36	3.54
5/9/1995	22.73	4.91
3/13/1995	15.22	7.14
1/10/1995	10.70	4.77

Date	Water Temp. (°C)	DO (mg/L)
11/15/1994	17.33	2.96
9/13/1994	25.99	3.37
7/12/1994	26.29	1.51
5/10/1994	21.13	2.45
3/15/1994	16.76	6.82
1/11/1994	9.36	7.85
11/15/1993	15.70	6.87
9/13/1993	26.02	1.02
7/12/1993	29.09	2.84
5/10/1993	23.83	5.79
3/9/1993	16.70	7.10
1/11/1993	6.71	6.50
11/16/1992	12.77	4.80
9/14/1992	24.80	2.00
7/13/1992	32.12	2.50
5/11/1992	19.81	4.40
3/10/1992	18.12	3.10
1/7/1992	10.15	5.20
11/19/1991	17.70	2.10
9/9/1991	25.92	
7/15/1991	27.02	0.49
5/14/1991	26.74	4.00
3/11/1991	17.26	8.20
1/15/1991	9.10	6.60
11/13/1990	17.40	7.40
9/10/1990	27.80	2.00
7/9/1990	30.60	4.80
5/14/1990	23.40	4.00
3/13/1990	20.10	5.70
1/9/1990	10.90	6.50

Critical Temperature and DO Determinations:

SITE NUMBER: 1208

SITE DESCRIPTION: Smithport Lake at spillway, west of Abington, Louisiana

	Summer Season	***Winter Season***
90th Percentile Temperature(°C):	28.89	18.63
90 % DO Sat (mg/L):	6.94	8.41
Months:	May To Oct	Nov To Apr

Date	***Water Temp. (°C)***	***DO (mg/L)***
9/27/2005	26.48	1.88
8/23/2005	28.68	0.97
8/9/2005	27.72	2.23
7/19/2005	28.46	0.39
7/5/2005	28.79	4.14
6/21/2005	26.51	1.78
6/7/2005	26.46	2.42
5/24/2005	24.82	0.31
5/10/2005	21.84	3.88
4/26/2005	20.35	3.04
4/12/2005	18.88	0.53
3/22/2005	14.79	4.62
11/16/2004	15.51	1.04
9/14/2004	25.30	1.32
8/24/2004	26.82	4.13
7/27/2004	27.54	4.48
6/29/2004	25.62	0.00
5/5/2004	20.38	1.26
4/7/2004	17.72	1.80
3/9/2004	16.79	2.34
2/3/2004	8.89	4.39
1/13/2004	7.81	3.44
12/3/2002	11.16	9.50
11/6/2002	12.58	6.82

Date	***Water Temp. (°C)***	***DO (mg/L)***
9/10/2002	27.40	5.38
8/6/2002	30.25	3.51
7/9/2002	29.28	3.90
6/4/2002	26.11	4.78
5/7/2002	24.09	1.07
4/2/2002	18.03	2.28
3/5/2002	9.44	6.45
2/5/2002	10.69	3.10
1/7/2002	5.68	5.14

Appendix G2 – Land Use

Land Use Summary

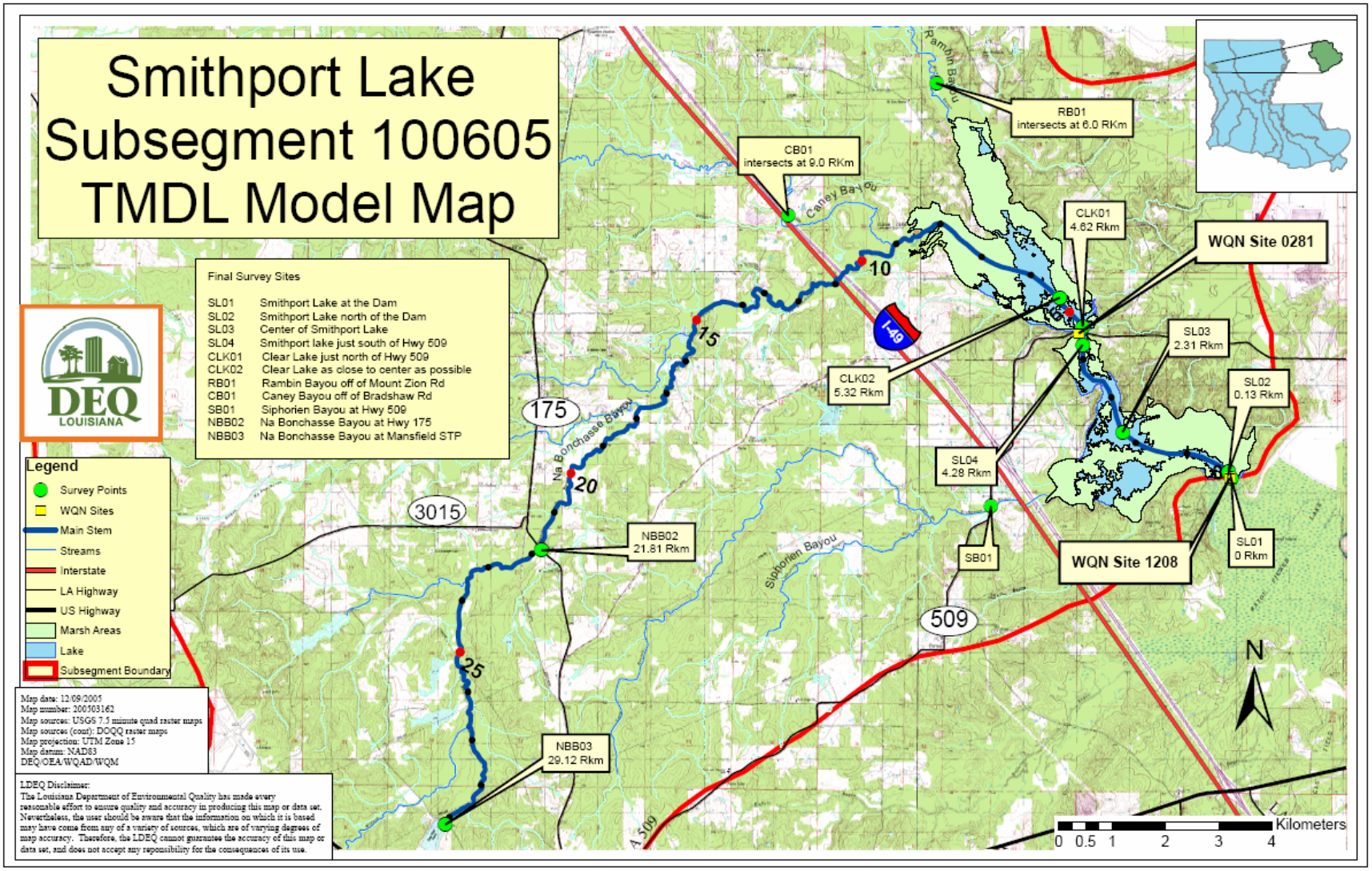
Subsegment 100605

Data Source Name: LA-GAP June 2000

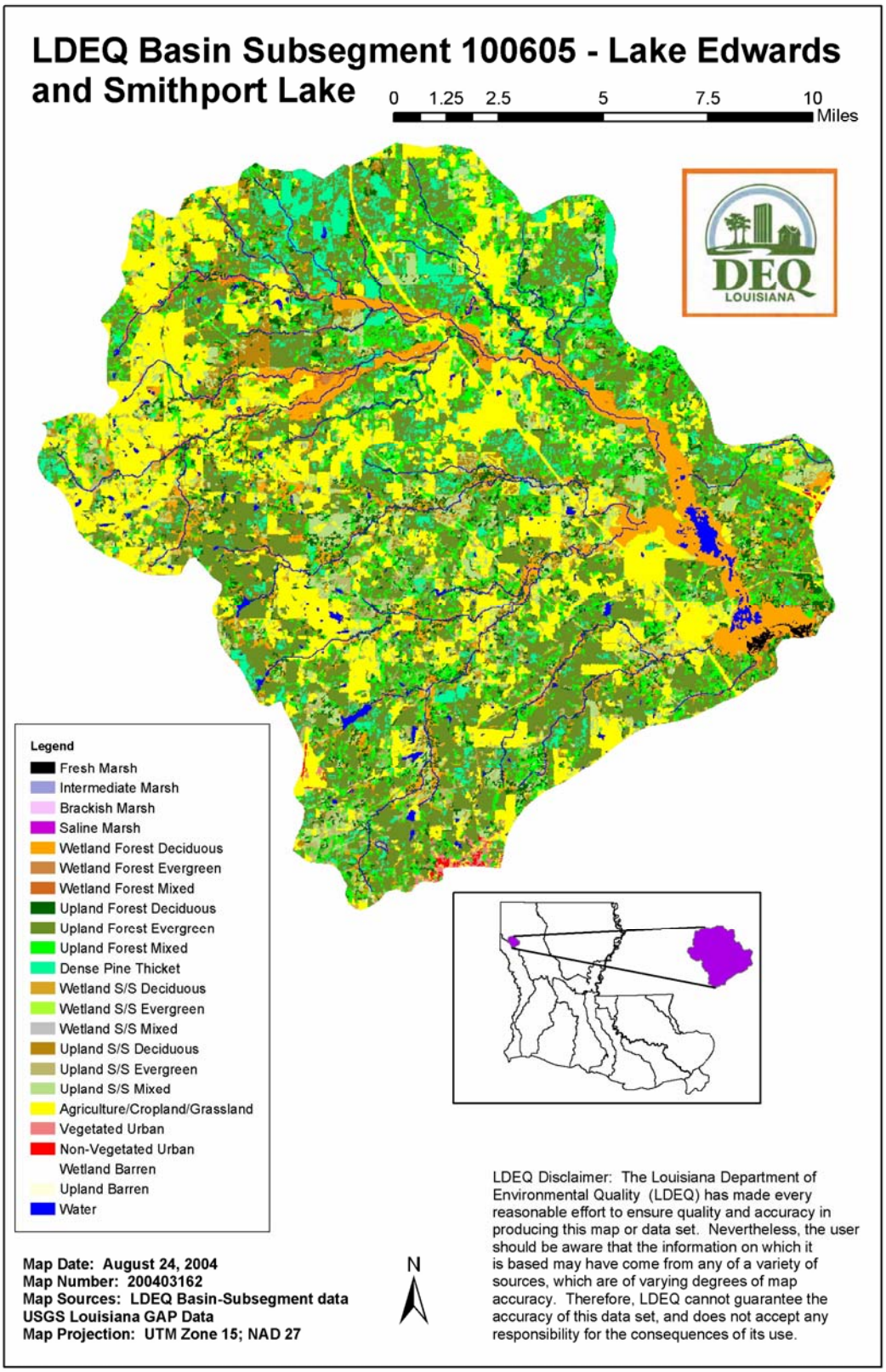
Grid Name	Area (Acres)	% Land Use
Upland Forest Evergreen	34782.50	26.52
Agriculture/Cropland/Grassland	30330.83	23.13
Upland Forest Mixed	15126.61	11.53
Wetland Forest Deciduous	11756.66	8.96
Upland S/S Mixed	10152.53	7.74
Upland Forest Deciduous	8154.09	6.22
Dense Pine Thicket	7367.93	5.62
Upland S/S Evergreen	4458.12	3.40
Water	3726.22	2.84
Upland S/S Deciduous	2249.97	1.72
Wetland Forest Mixed	2186.81	1.67
Vegetated Urban	348.49	0.27
Fresh Marsh	185.70	0.14
Non-Vegetated Urban	166.80	0.13
Wetland S/S Deciduous	89.62	0.07
Upland Barren	40.03	0.03
Wetland Forest Evergreen	29.58	0.02

Appendix H – Maps and Diagrams

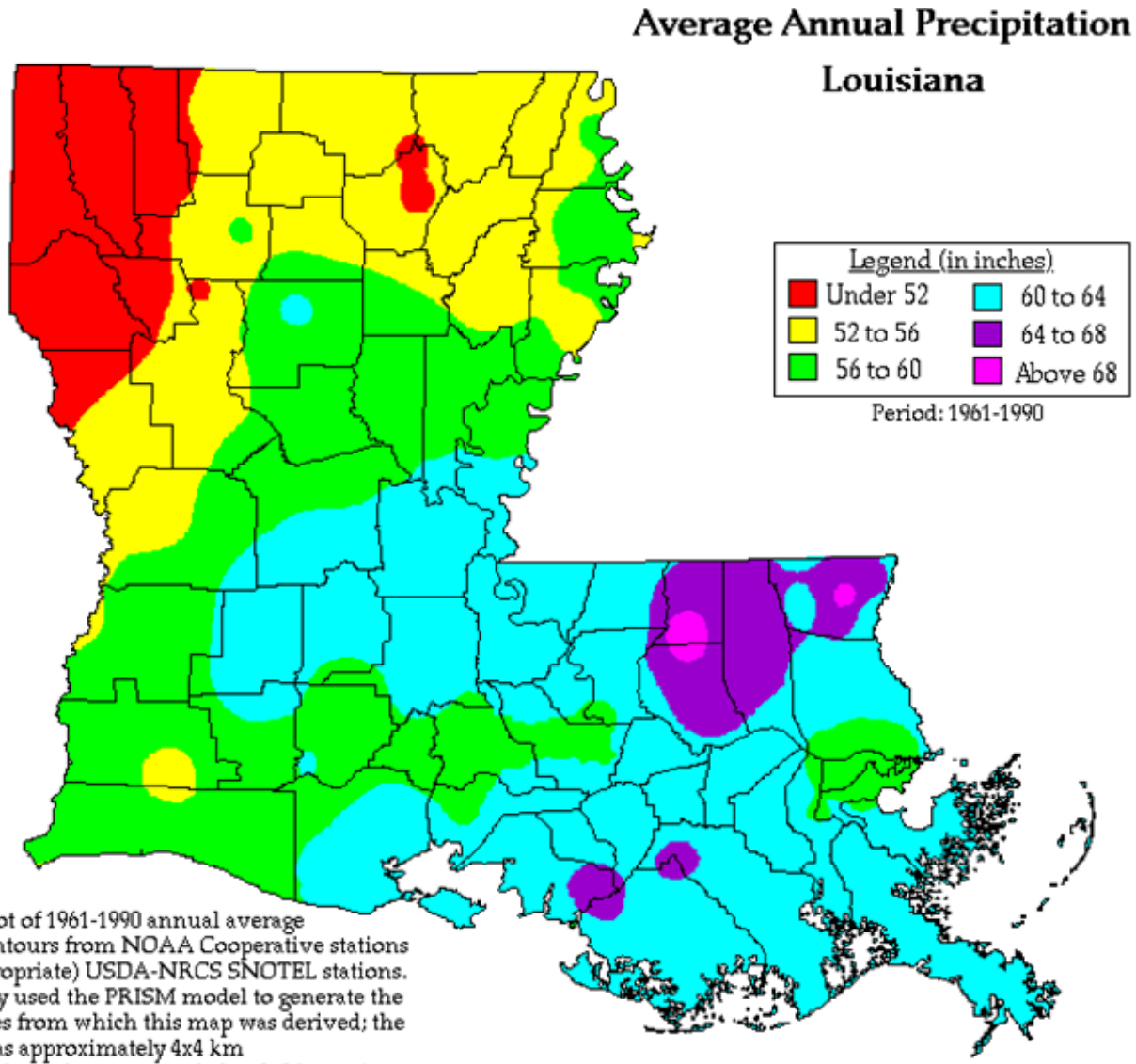
Appendix H1- Overview map


Smithport Lake
Subsegment 100605
TMDL Model Map
Final Survey Sites
SL01 Smithport Lake at the Dam
SL02 Smithport Lake north of the Dam
SL03 Center of Smithport Lake
SL04 Smithport lake just south of Hwy 509
CLK01 Clear Lake just north of Hwy 509
CLK02 Clear Lake as close to center as possible
RB01 Rambin Bayou off of Mount Zion Rd
CB01 Caney Bayou off of Bradshaw Rd
SB01 Siphorien Bayou at Hwy 509
NBB02 Na Bonchasse Bayou at Hwy 175
NBB03 Na Bonchasse Bayou at Mansfield STP
DEQ
LOUISIANA
Legend
Survey Points
WQN Sites
Main Stem
Streams
Interstate
LA Highway
US Highway
Marsh Areas
Lake
Subsegment Boundary
Map date: 12/09/2005
Map number: 200503162
Map sources: USGS 7.5 minute quad raster maps
Map sources (cont): DOQQ raster maps
Map projection: UTM Zone 15
Map datum: NAD83
DEQ/OEA/WQAD/WQM
LDEQ Disclaimer:
The Louisiana Department of Environmental Quality has made every reasonable effort to ensure quality and accuracy in producing this map or data set. Nevertheless, the user should be aware that the information on which it is based may have come from any of a variety of sources, which are of varying degrees of map accuracy. Therefore, the LDEQ cannot guarantee the accuracy of this map or data set, and does not accept any reponsibility for the consequences of its use.
RB01
intersects at 6.0 RKm
CB01
intersects at 9.0 RKm
Caney Bayou
Rambin Bayou
CLK01
4.62 Rkm
WQN Site 0281
SL03
2.31 Rkm
SL02
0.13 Rkm
CLK02
5.32 Rkm
SL04
4.28 Rkm
SB01
WQN Site 1208
SL01
0 Rkm
NBB02
21.81 Rkm
NBB03
29.12 Rkm
Na Bonchasse Bayou
Siphorien Bayou
I-49
175
3015
509
10
15
20
25
N
Kilometers
0 0.5 1 2 3 4

Appendix H2 – Land Use Map


LDEQ Basin Subsegment 100605 - Lake Edwards and Smithport Lake
0 1.25 2.5 5 7.5 10 Miles
DEQ
LOUISIANA
Legend
Fresh Marsh
Intermediate Marsh
Brackish Marsh
Saline Marsh
Wetland Forest Deciduous
Wetland Forest Evergreen
Wetland Forest Mixed
Upland Forest Deciduous
Upland Forest Evergreen
Upland Forest Mixed
Dense Pine Thicket
Wetland S/S Deciduous
Wetland S/S Evergreen
Wetland S/S Mixed
Upland S/S Deciduous
Upland S/S Evergreen
Upland S/S Mixed
Agriculture/Cropland/Grassland
Vegetated Urban
Non-Vegetated Urban
Wetland Barren
Upland Barren
Water
LDEQ Disclaimer: The Louisiana Department of Environmental Quality (LDEQ) has made every reasonable effort to ensure quality and accuracy in producing this map or data set. Nevertheless, the user should be aware that the information on which it is based may have come from any of a variety of sources, which are of varying degrees of map accuracy. Therefore, LDEQ cannot guarantee the accuracy of this data set, and does not accept any responsibility for the consequences of its use.
Map Date: August 24, 2004
Map Number: 200403162
Map Sources: LDEQ Basin-Subsegment data
USGS Louisiana GAP Data
Map Projection: UTM Zone 15; NAD 27
N

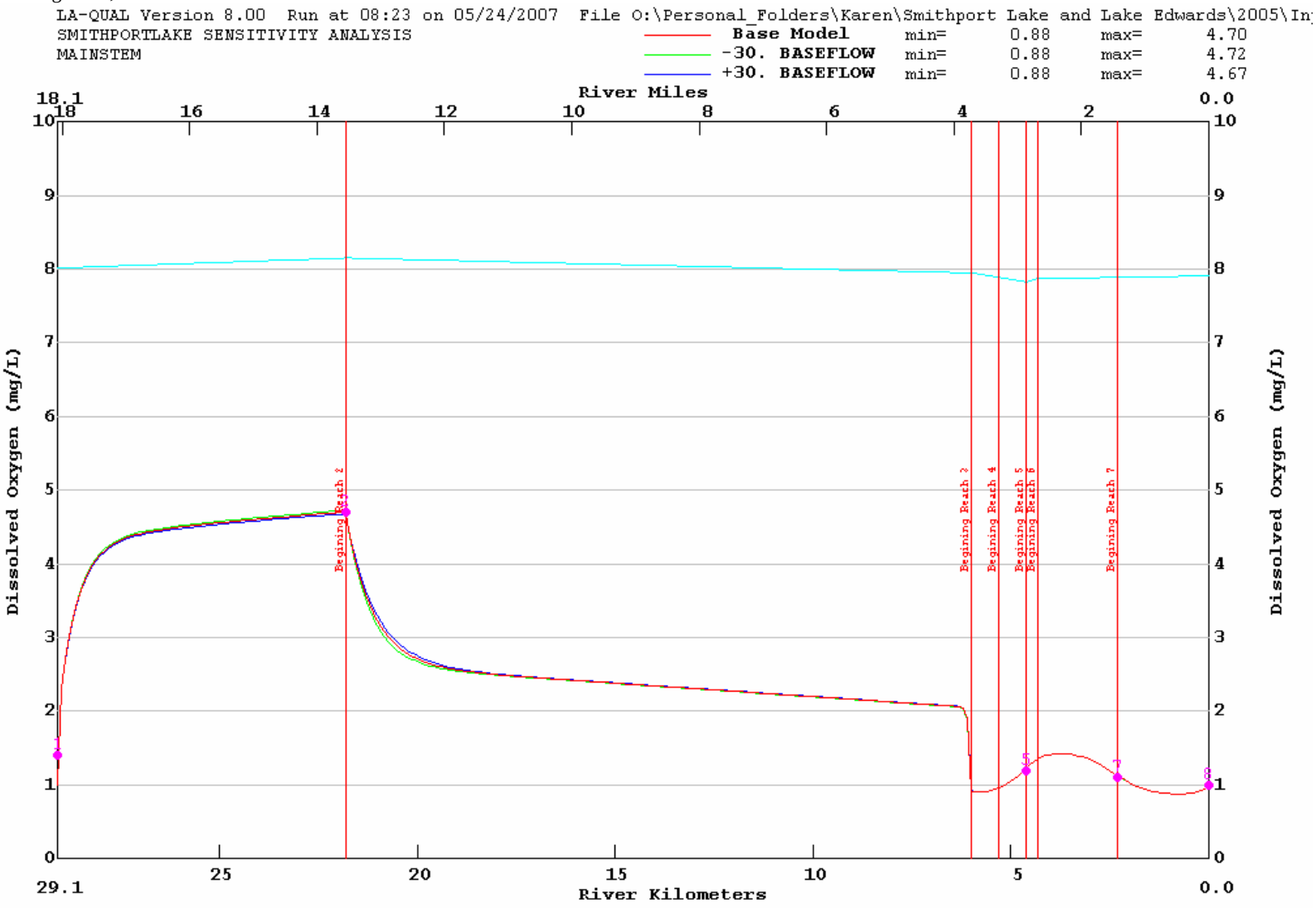
Appendix H3 – La Precipitation Map

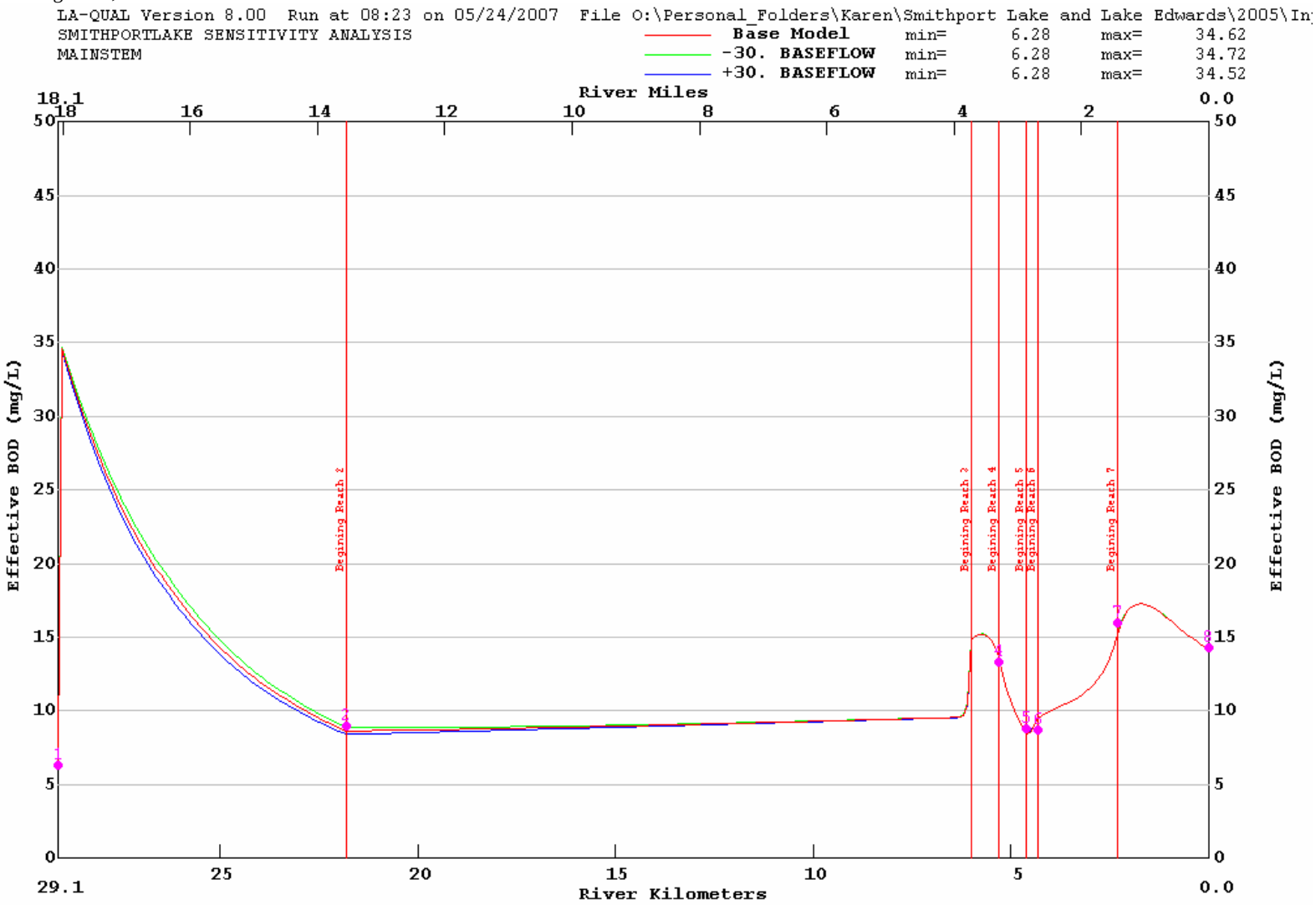


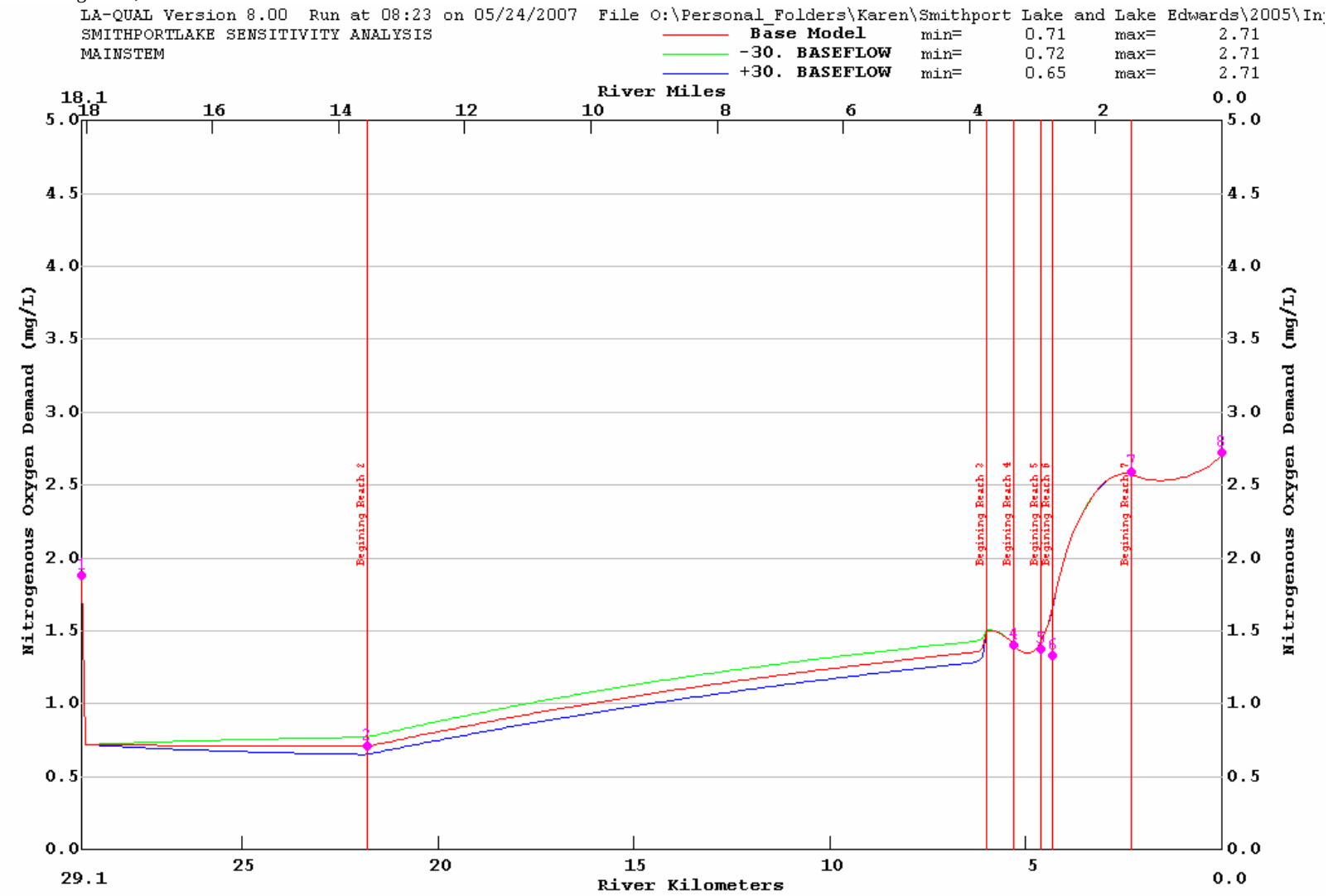
This map is a plot of 1961-1990 annual average precipitation contours from NOAA Cooperative stations and (where appropriate) USDA-NRCS SNOTEL stations. Christopher Daly used the PRISM model to generate the gridded estimates from which this map was derived; the modeled grid was approximately 4x4 km latitude/longitude, and was resampled to 2x2 km using a Gaussian filter. Mapping was performed by Jenny Weisburg. Funding was provided by USDA-NRCS National Water and Climate Center.

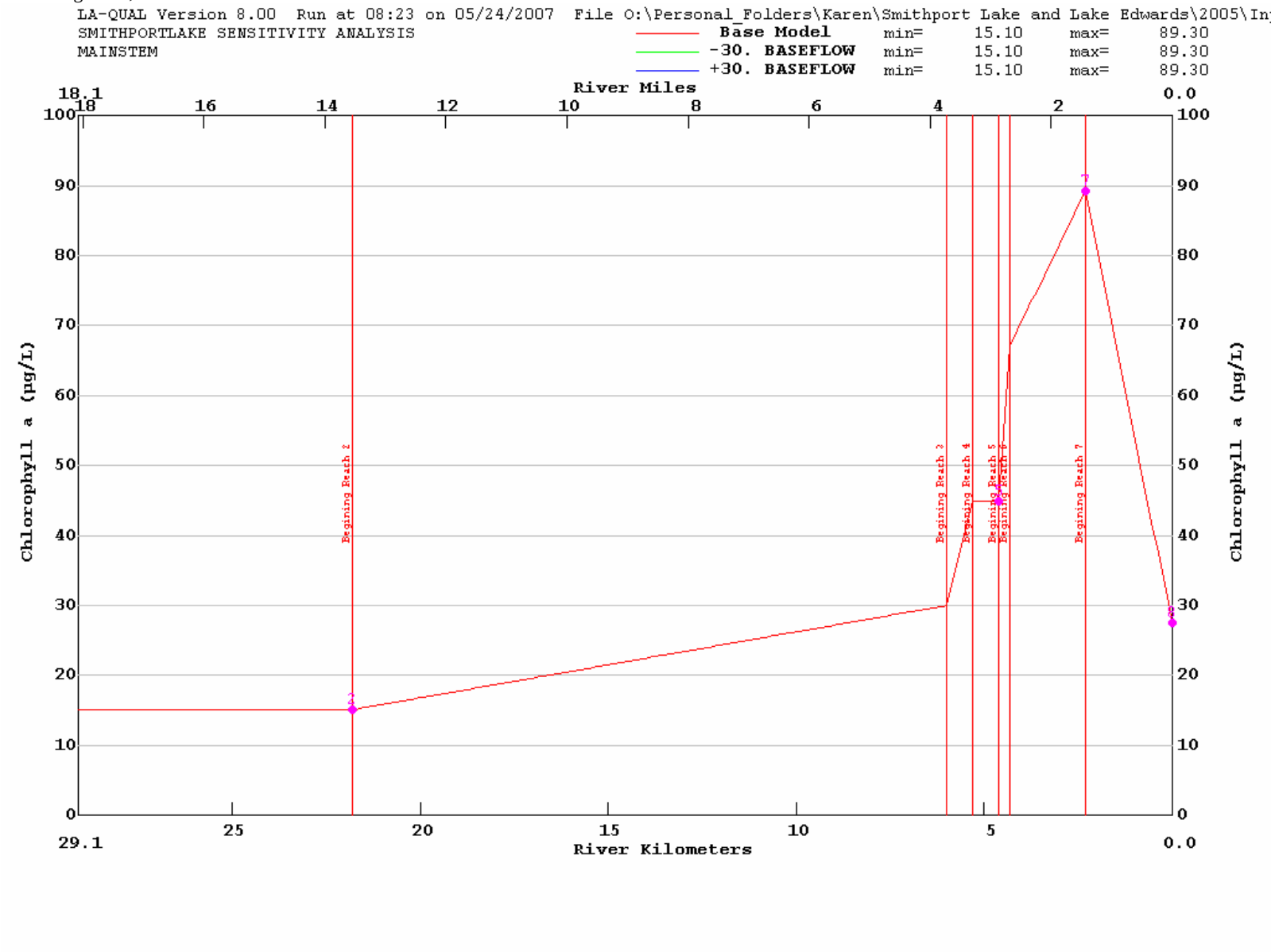
Appendix I – Sensitivity Analysis

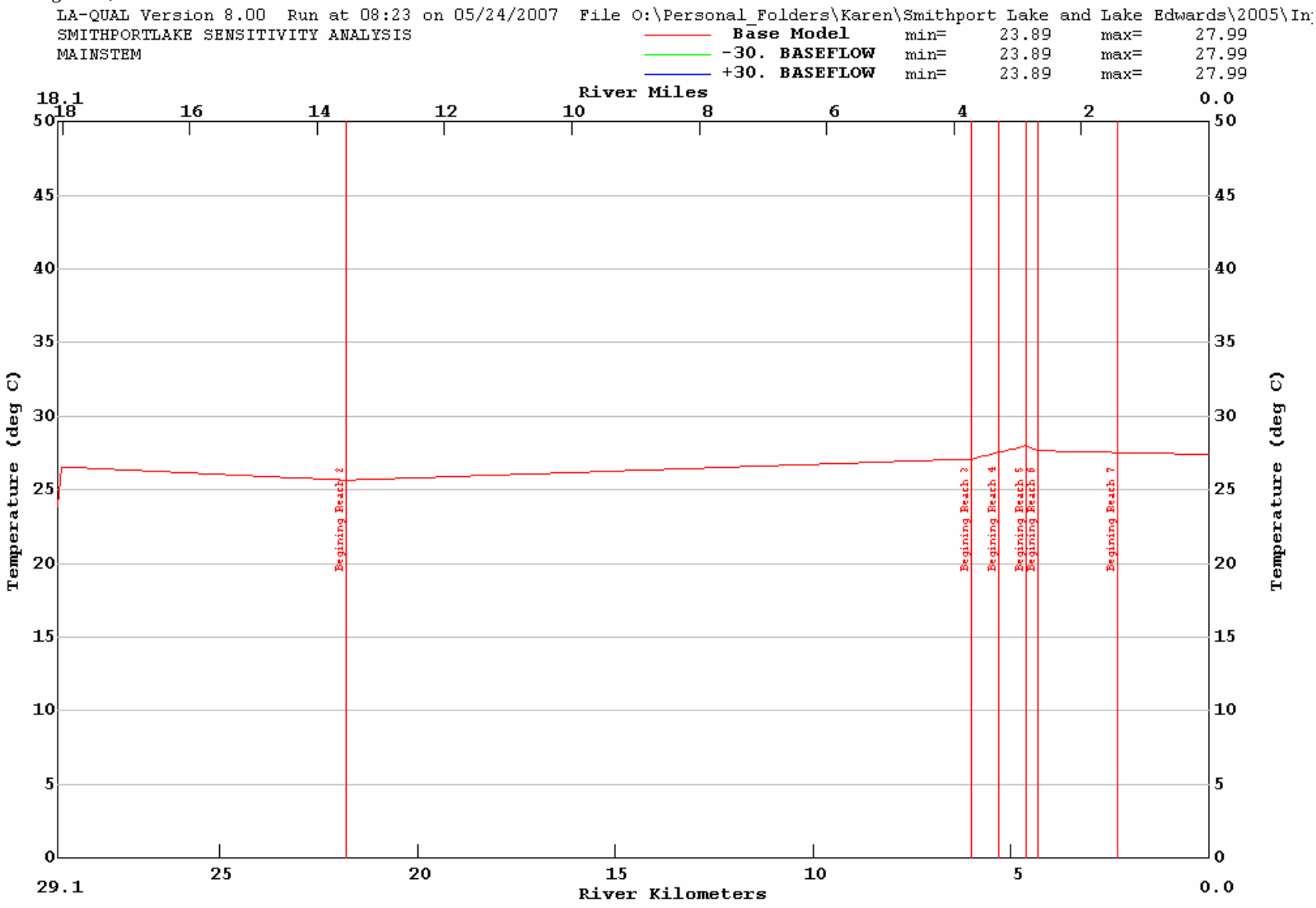
Appendix I1 – Sensitivity Output Graphs

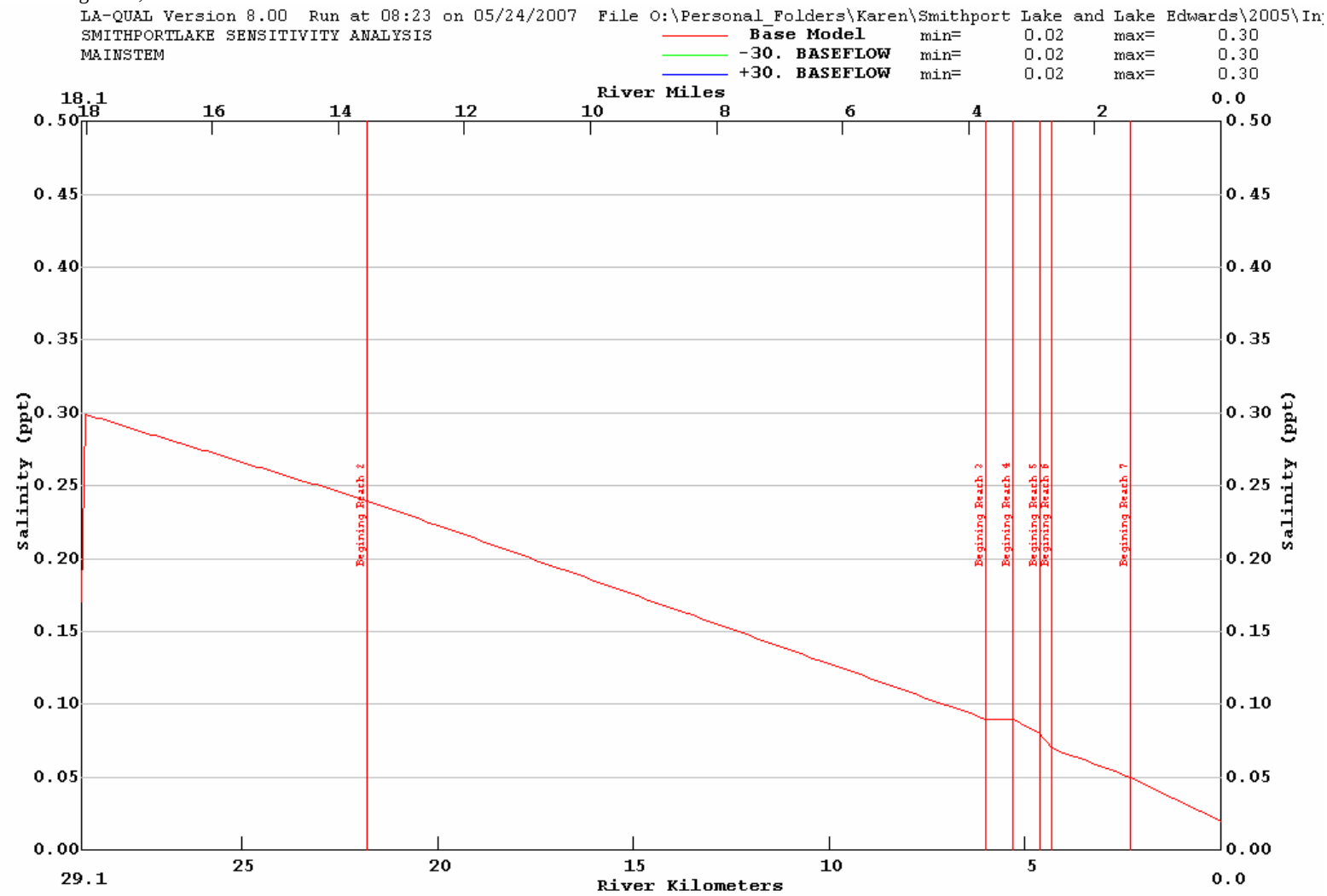

LA-QUAL Version 8.00 Run at 08:23 on 05/24/2007 File O:\Personal_Folders\Karen\Smithport Lake and Lake Edwards\2005\In
SMITHPORTLAKE SENSITIVITY ANALYSIS
MAINSTEM
Base Model min= 0.88 max= 4.70
-30. BASEFLOW min= 0.88 max= 4.72
+30. BASEFLOW min= 0.88 max= 4.67
River Miles
18.1
18
16
14
12
10
8
6
4
2
0.0
Dissolved Oxygen (mg/L)
Beginning Reach 2
Beginning Reach 3
Beginning Reach 4
Beginning Reach 5
Beginning Reach 6
Beginning Reach 7
29.1
25
20
15
10
5
0.0
River Kilometers

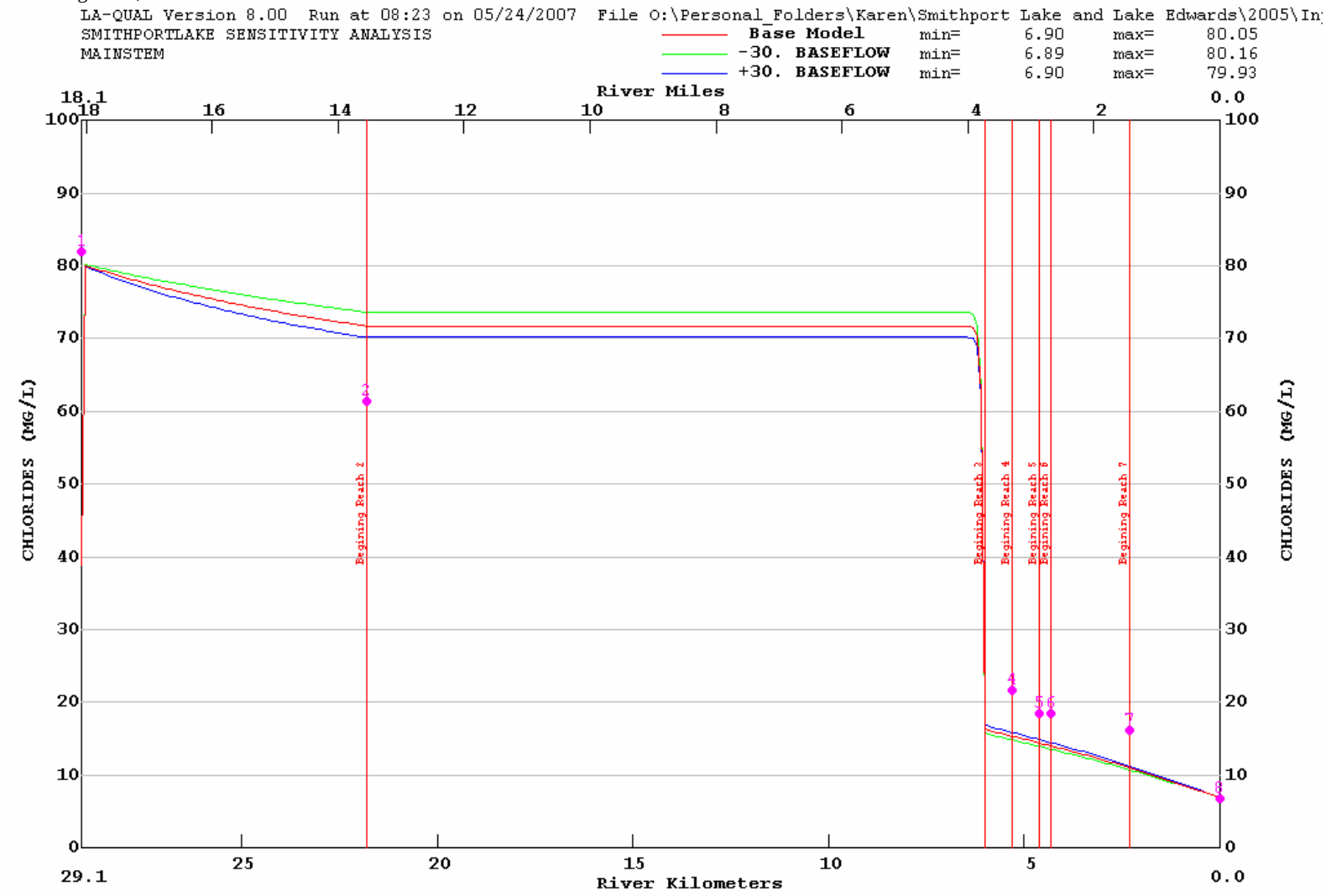

LA-QUAL Version 8.00 Run at 08:23 on 05/24/2007 File O:\Personal_Folders\Karen\Smithport Lake and Lake Edwards\2005\In
SMITHPORTLAKE SENSITIVITY ANALYSIS
MAINSTEM
Base Model min= 6.28 max= 34.62
-30. BASEFLOW min= 6.28 max= 34.72
+30. BASEFLOW min= 6.28 max= 34.52
River Miles
18.1
18
16
14
12
10
8
6
4
2
0.0
Effective BOD (mg/L)
50
45
40
35
30
25
20
15
10
5
0
Begining Reach 2
Begining Reach 3
Begining Reach 4
Begining Reach 5
Begining Reach 6
Begining Reach 7
29.1
25
20
15
10
5
0.0
River Kilometers

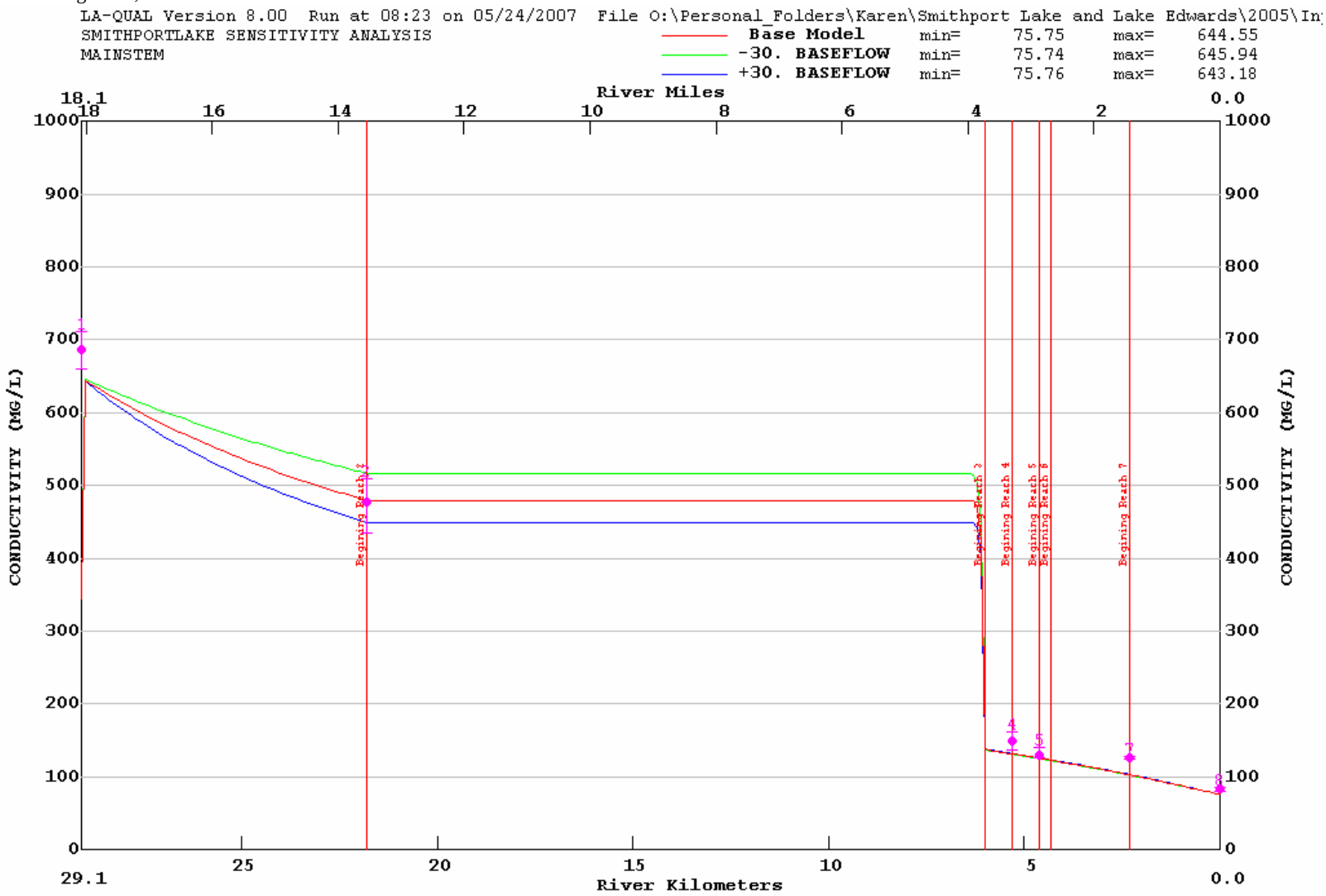

LA-QUAL Version 8.00 Run at 08:23 on 05/24/2007 File O:\Personal_Folders\Karen\Smithport Lake and Lake Edwards\2005\In
SMITHPORTLAKE SENSITIVITY ANALYSIS
MAINSTEM
Base Model min= 0.71 max= 2.71
-30. BASEFLOW min= 0.72 max= 2.71
+30. BASEFLOW min= 0.65 max= 2.71
River Miles
18.1
18
16
14
12
10
8
6
4
2
0.0
Nitrogenous Oxygen Demand (mg/L)
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
Begining Reach 2
Begining Reach 3
Begining Reach 4
Begining Reach 5
Begining Reach 6
Begining Reach 7
29.1
25
20
15
10
5
0.0
River Kilometers

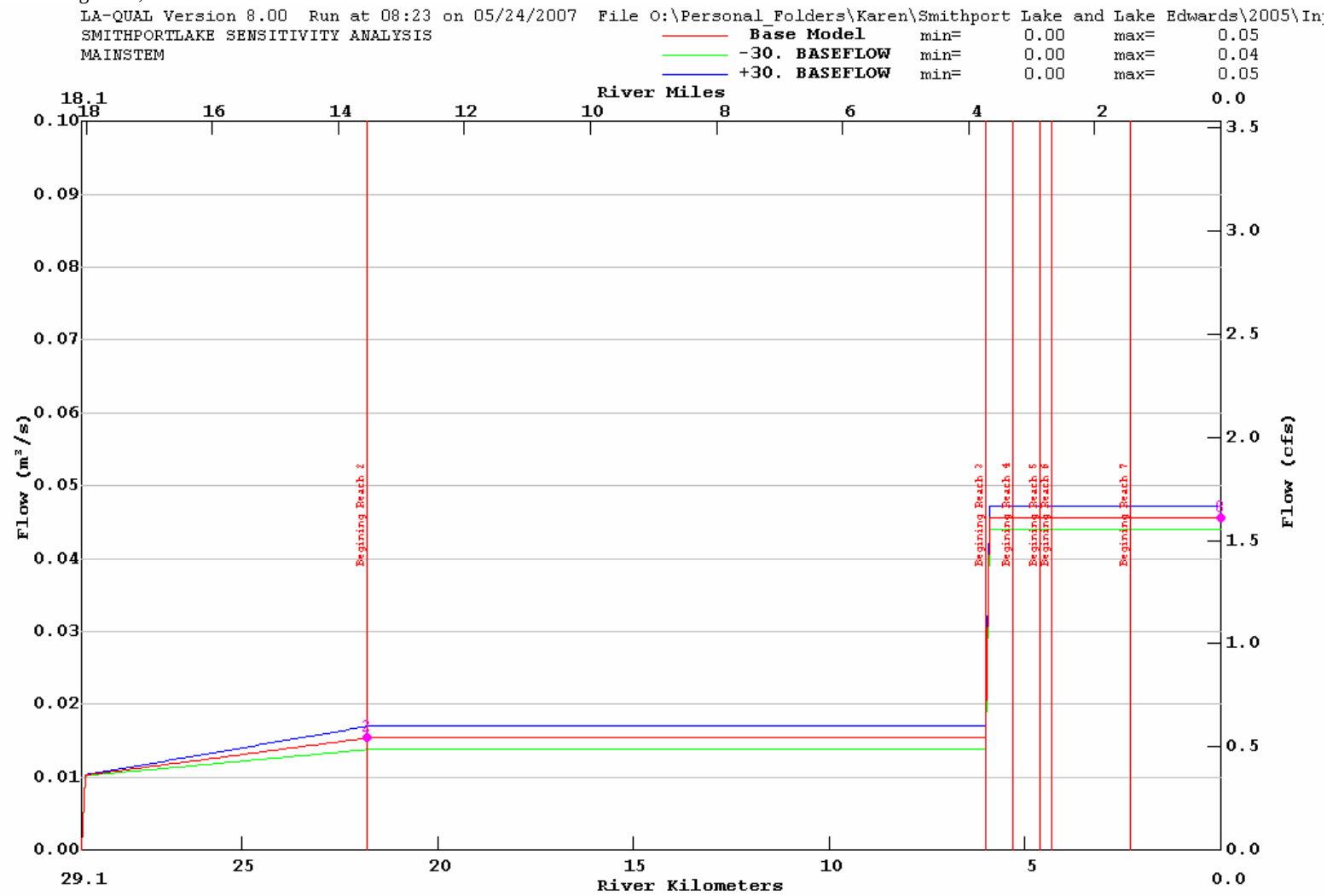

LA-QUAL Version 8.00 Run at 08:23 on 05/24/2007 File O:\Personal_Folders\Karen\Smithport Lake and Lake Edwards\2005\In
SMITHPORTLAKE SENSITIVITY ANALYSIS
MAINSTEM
Base Model min= 15.10 max= 89.30
-30. BASEFLOW min= 15.10 max= 89.30
+30. BASEFLOW min= 15.10 max= 89.30
River Miles
18.1
18
16
14
12
10
8
6
4
2
0.0
Chlorophyll a (µg/L)
100
90
80
70
60
50
40
30
20
10
0
Begining Reach 2
Begining Reach 3
Begining Reach 4
Begining Reach 5
Begining Reach 6
Begining Reach 7
29.1
25
20
15
10
5
0.0
River Kilometers

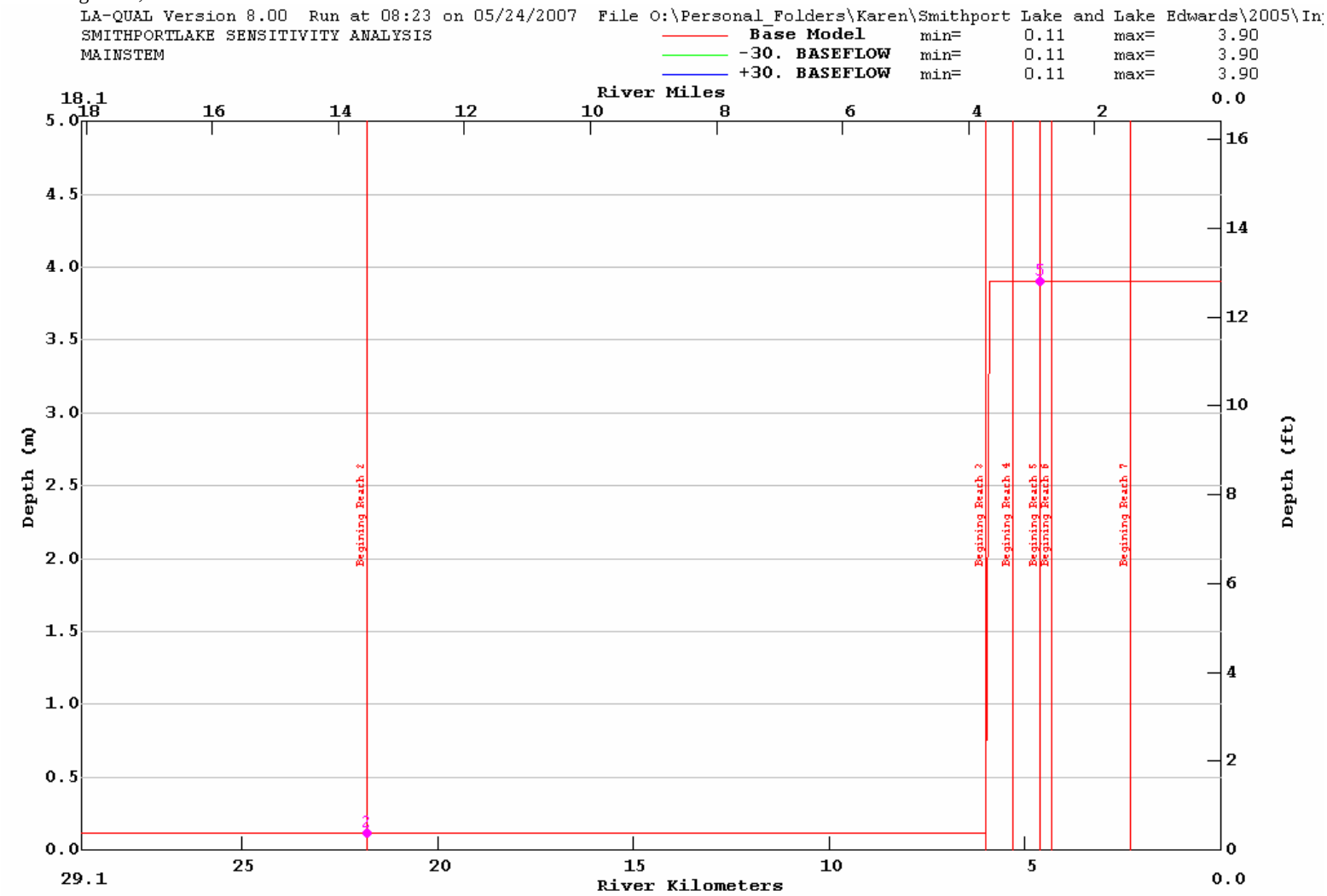

LA-QUAL Version 8.00 Run at 08:23 on 05/24/2007 File O:\Personal_Folders\Karen\Smithport Lake and Lake Edwards\2005\In
SMITHPORTLAKE SENSITIVITY ANALYSIS
MAINSTEM
Base Model min= 23.89 max= 27.99
-30. BASEFLOW min= 23.89 max= 27.99
+30. BASEFLOW min= 23.89 max= 27.99
River Miles
18.1
18
16
14
12
10
8
6
4
2
0.0
Temperature (deg C)
50
45
40
35
30
25
20
15
10
5
0
Begining Reach 2
Begining Reach 3
Begining Reach 4
Begining Reach 5
Begining Reach 6
Begining Reach 7
29.1
25
20
15
10
5
0.0
River Kilometers

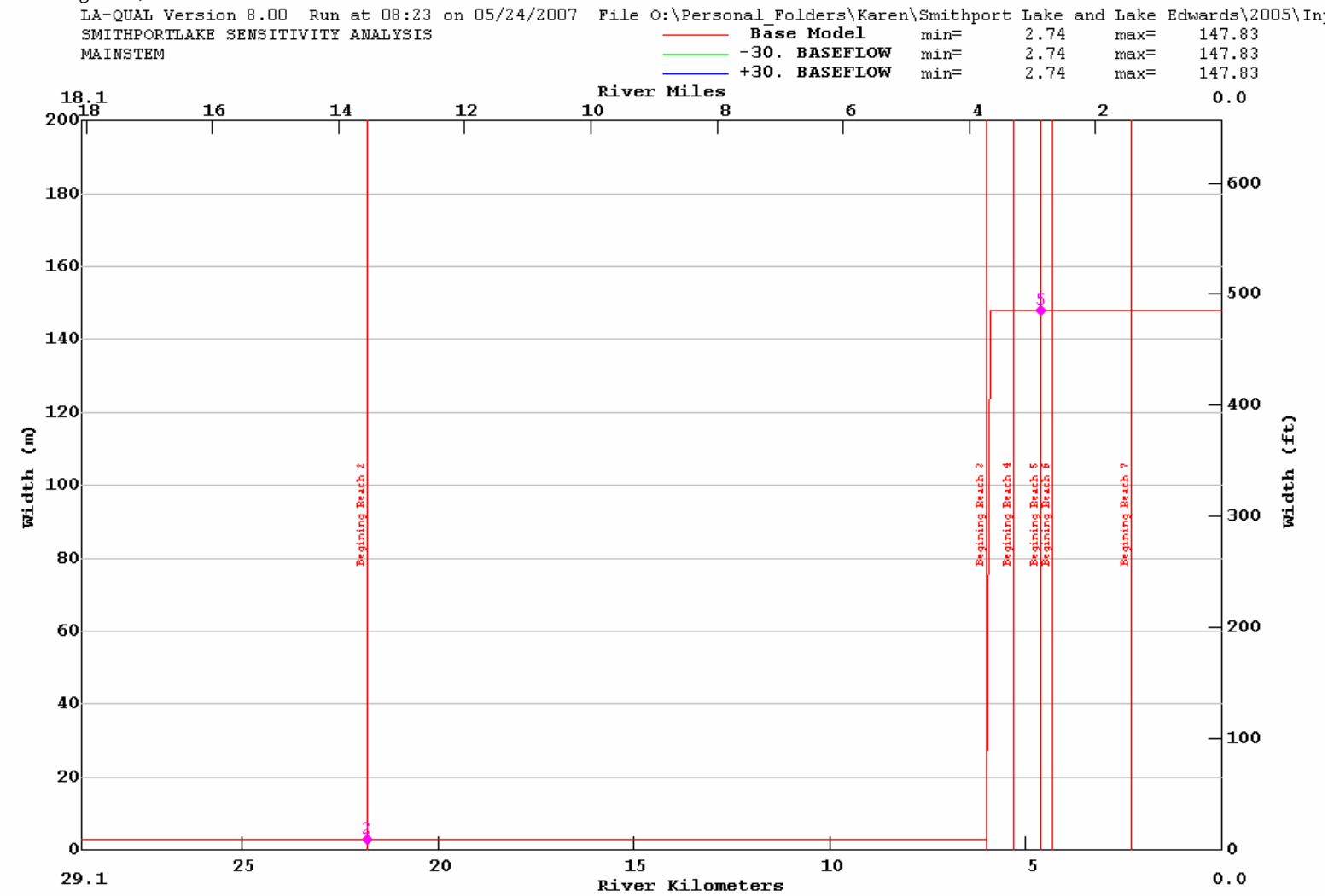

LA-QUAL Version 8.00 Run at 08:23 on 05/24/2007 File O:\Personal_Folders\Karen\Smithport Lake and Lake Edwards\2005\In
SMITHPORTLAKE SENSITIVITY ANALYSIS
MAINSTEM
Base Model min= 0.02 max= 0.30
-30. BASEFLOW min= 0.02 max= 0.30
+30. BASEFLOW min= 0.02 max= 0.30
River Miles
18.1
18
16
14
12
10
8
6
4
2
0.0
Salinity (ppt)
0.50
0.45
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
Begining Reach 2
Begining Reach 3
Begining Reach 4
Begining Reach 5
Begining Reach 6
Begining Reach 7
29.1
25
20
15
10
5
0.0
River Kilometers

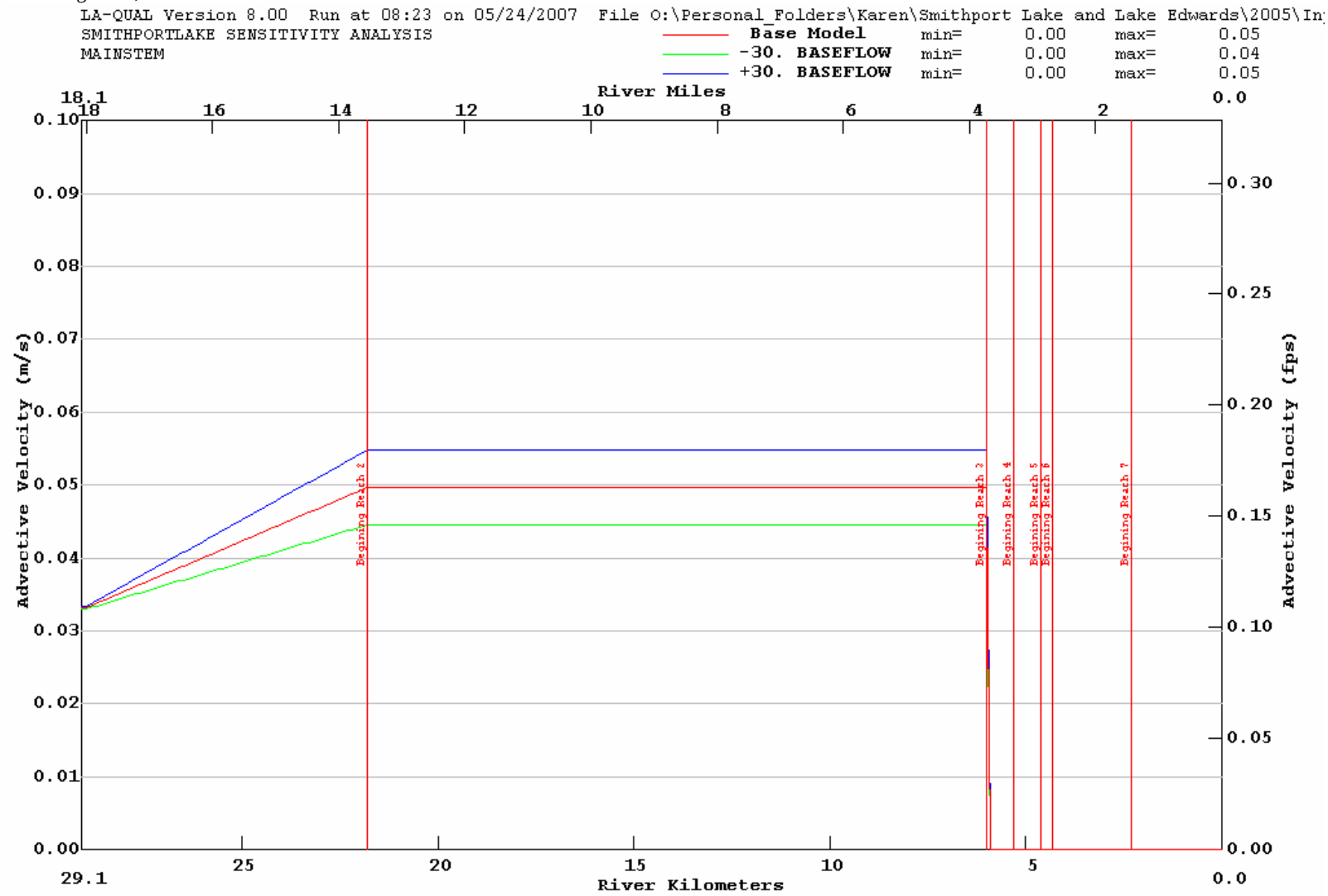

LA-QUAL Version 8.00 Run at 08:23 on 05/24/2007 File O:\Personal_Folders\Karen\Smithport Lake and Lake Edwards\2005\In
SMITHPORTLAKE SENSITIVITY ANALYSIS
MAINSTEM
Base Model min= 6.90 max= 80.05
-30. BASEFLOW min= 6.89 max= 80.16
+30. BASEFLOW min= 6.90 max= 79.93
River Miles
18.1
18
16
14
12
10
8
6
4
2
0.0
CHLORIDES (MG/L)
100
90
80
70
60
50
40
30
20
10
0
Begining Reach 2
Begining Reach 3
Begining Reach 4
Begining Reach 5
Begining Reach 6
Begining Reach 7
29.1
25
20
15
10
5
0.0
River Kilometers

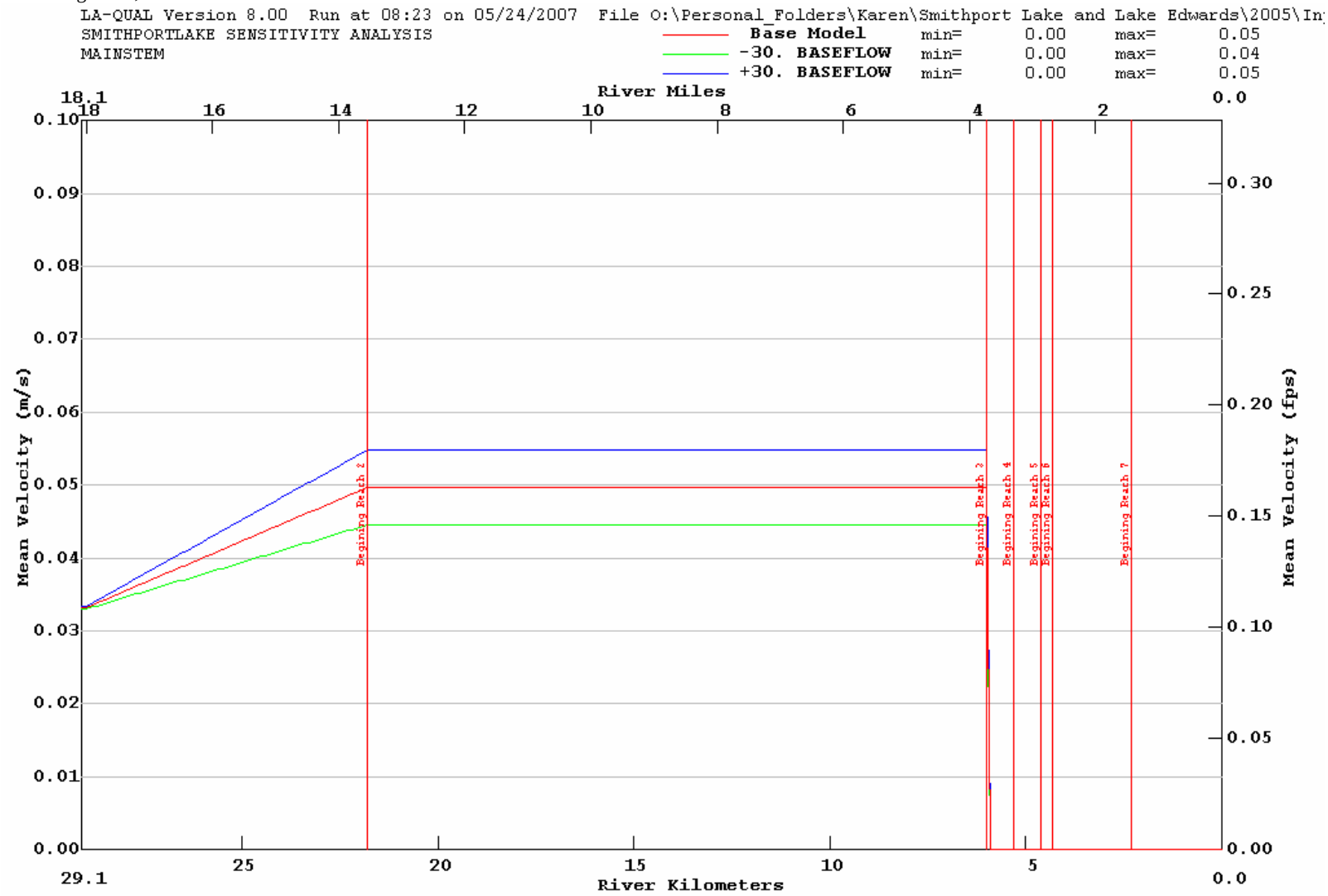

LA-QUAL Version 8.00 Run at 08:23 on 05/24/2007 File O:\Personal_Folders\Karen\Smithport Lake and Lake Edwards\2005\In
SMITHPORTLAKE SENSITIVITY ANALYSIS
MAINSTEM
Base Model min= 75.75 max= 644.55
-30. BASEFLOW min= 75.74 max= 645.94
+30. BASEFLOW min= 75.76 max= 643.18
River Miles
18.1
18
16
14
12
10
8
6
4
2
0.0
CONDUCTIVITY (MG/L)
1000
900
800
700
600
500
400
300
200
100
0
29.1
25
20
15
10
5
0.0
River Kilometers

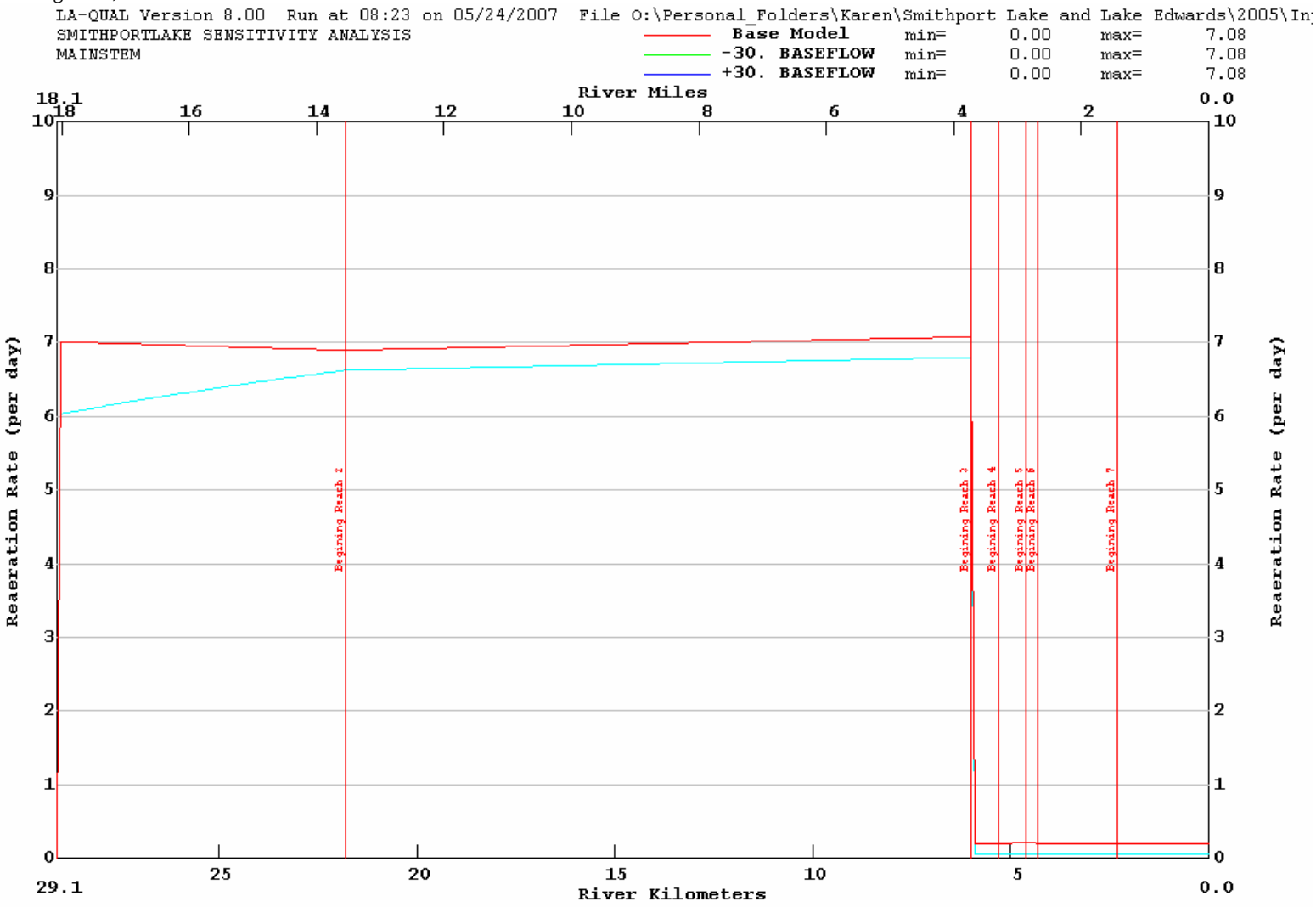

LA-QUAL Version 8.00 Run at 08:23 on 05/24/2007 File O:\Personal_Folders\Karen\Smithport Lake and Lake Edwards\2005\In
SMITHPORTLAKE SENSITIVITY ANALYSIS
MAINSTEM
Base Model min= 0.00 max= 0.05
-30. BASEFLOW min= 0.00 max= 0.04
+30. BASEFLOW min= 0.00 max= 0.05
River Miles
18.1
18
16
14
12
10
8
6
4
2
0.0
Flow (m³/s)
0.10
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0.00
Flow (cfs)
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
Begining Reach 2
Begining Reach 3
Begining Reach 4
Begining Reach 5
Begining Reach 6
Begining Reach 7
29.1
25
20
15
10
5
0.0
River Kilometers

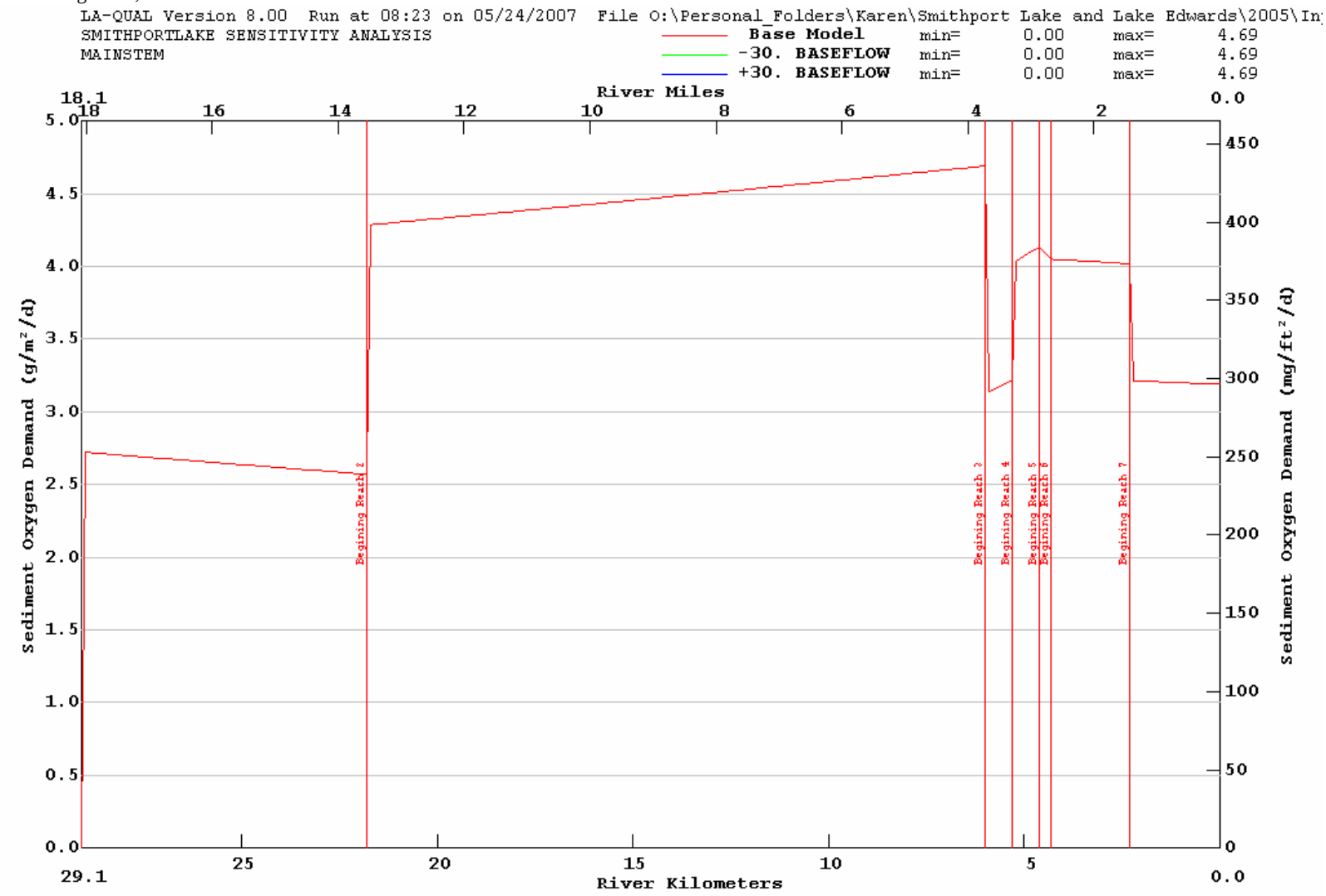

LA-QUAL Version 8.00 Run at 08:23 on 05/24/2007 File O:\Personal_Folders\Karen\Smithport Lake and Lake Edwards\2005\In
SMITHPORTLAKE SENSITIVITY ANALYSIS
MAINSTEM
Base Model min= 0.11 max= 3.90
-30. BASEFLOW min= 0.11 max= 3.90
+30. BASEFLOW min= 0.11 max= 3.90
River Miles
18.1
18
16
14
12
10
8
6
4
2
0.0
Depth (m)
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
Depth (ft)
16
14
12
10
8
6
4
2
0
29.1
25
20
15
10
5
0.0
River Kilometers
Begining Reach 2
Begining Reach 3
Begining Reach 4
Begining Reach 5
Begining Reach 6
Begining Reach 7


LA-QUAL Version 8.00 Run at 08:23 on 05/24/2007 File O:\Personal_Folders\Karen\Smithport Lake and Lake Edwards\2005\In
SMITHPORTLAKE SENSITIVITY ANALYSIS
MAINSTEM
Base Model min= 2.74 max= 147.83
-30. BASEFLOW min= 2.74 max= 147.83
+30. BASEFLOW min= 2.74 max= 147.83
River Miles
18.1
18
16
14
12
10
8
6
4
2
0.0
Width (m)
Width (ft)
Begining Reach 2
Begining Reach 3
Begining Reach 4
Begining Reach 5
Begining Reach 6
Begining Reach 7
29.1
25
20
15
10
5
0.0
River Kilometers


LA-QUAL Version 8.00 Run at 08:23 on 05/24/2007 File O:\Personal_Folders\Karen\Smithport Lake and Lake Edwards\2005\In
SMITHPORTLAKE SENSITIVITY ANALYSIS
MAINSTEM
Base Model min= 0.00 max= 0.05
-30. BASEFLOW min= 0.00 max= 0.05
+30. BASEFLOW min= 0.00 max= 0.04
River Miles
18.1
18
16
14
12
10
8
6
4
2
0.0
Advective Velocity (m/s)
0.10
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0.00
Advective Velocity (fps)
0.30
0.25
0.20
0.15
0.10
0.05
0.00
Begining Reach 2
Begining Reach 3
Begining Reach 4
Begining Reach 5
Begining Reach 6
Begining Reach 7
29.1
25
20
15
10
5
0.0
River Kilometers


LA-QUAL Version 8.00 Run at 08:23 on 05/24/2007 File O:\Personal_Folders\Karen\Smithport Lake and Lake Edwards\2005\In
SMITHPORTLAKE SENSITIVITY ANALYSIS
MAINSTEM
Base Model min= 0.00 max= 0.05
-30. BASEFLOW min= 0.00 max= 0.05
+30. BASEFLOW min= 0.00 max= 0.05
River Miles
18.1
18
16
14
12
10
8
6
4
2
0.0
Mean Velocity (m/s)
0.10
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0.00
Mean Velocity (fps)
0.30
0.25
0.20
0.15
0.10
0.05
0.00
Begining Reach 2
Begining Reach 3
Begining Reach 4
Begining Reach 5
Begining Reach 6
Begining Reach 7
29.1
25
20
15
10
5
0.0
River Kilometers


LA-QUAL Version 8.00 Run at 08:23 on 05/24/2007 File O:\Personal_Folders\Karen\Smithport Lake and Lake Edwards\2005\In
SMITHPORTLAKE SENSITIVITY ANALYSIS
MAINSTEM
Base Model min= 0.00 max= 7.08
-30. BASEFLOW min= 0.00 max= 7.08
+30. BASEFLOW min= 0.00 max= 7.08
River Miles
18.1
18
16
14
12
10
8
6
4
2
0.0
Reaeration Rate (per day)
Beginning Reach 2
Beginning Reach 3
Beginning Reach 4
Beginning Reach 5
Beginning Reach 6
Beginning Reach 7
29.1
25
20
15
10
5
0.0
River Kilometers


LA-QUAL Version 8.00 Run at 08:23 on 05/24/2007 File O:\Personal_Folders\Karen\Smithport Lake and Lake Edwards\2005\In
SMITHPORTLAKE SENSITIVITY ANALYSIS
MAINSTEM
Base Model min= 0.00 max= 4.69
-30. BASEFLOW min= 0.00 max= 4.69
+30. BASEFLOW min= 0.00 max= 4.69
River Miles
18.1
18
16
14
12
10
8
6
4
2
0.0
Sediment Oxygen Demand (g/m²/d)
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
Sediment Oxygen Demand (mg/ft²/d)
450
400
350
300
250
200
150
100
50
0
Begining Reach 2
Begining Reach 3
Begining Reach 4
Begining Reach 5
Begining Reach 6
Begining Reach 7
29.1
25
20
15
10
5
0.0
River Kilometers

Appendix I2 – Sensitivity Output Data Set

SENSITIVITY ANALYSIS SUMMARY

MAINSTEM
SMITHPORTLAKE SENSITIVITY ANALYSIS

Plot 1 Base Model Minimum DO = 0.88

Parameter	%Param Chg	Min D.O.	%D.O. Chg	%Param Chg	Min D.O.	%D.O. Chg
Stream Baseflow	30.	0.88	0.0	-30.	0.88	0.0
Initial Chorophyll a	30.	0.88	0.0	-30.	0.88	0.0
Stream Velocity	30.	0.72	-17.6	-30.	0.99	13.0
Initial Temperature	2.	0.73	-17.1	-2.	1.00	13.7
CBOD Aerobic Decay Rate	30.	0.72	-17.6	-30.	1.00	13.7
CBOD Settling Rate	30.	0.98	11.4	-30.	0.70	-20.4
NBOD Decay Rate	30.	0.88	-0.3	-30.	0.88	0.3
NBOD Settling Rate	30.	0.88	0.1	-30.	0.88	-0.2
Benthal Demand	30.	0.36	-59.1	-30.	1.00	13.7
Stream Dispersion	30.	0.88	0.0	-30.	0.88	0.0
Stream Reaeration	30.	1.00	13.7	-30.	0.00	-100.0
Headwater Flow	30.	0.88	0.0	-30.	0.88	0.0
Headwater DO	30.	0.88	0.0	-30.	0.88	0.0
Headwater CBOD	30.	0.88	0.0	-30.	0.88	0.0
Headwater NBOD	30.	0.88	0.0	-30.	0.88	0.0
Stream Depth	30.	0.85	-2.8	-30.	0.90	1.9
Wasteload Flow	30.	0.88	0.0	-30.	0.88	0.0
Wasteload Temperature	2.	0.88	0.0	-2.	0.88	0.0
Wasteload DO	30.	0.88	0.0	-30.	0.88	0.0
Wasteload CBOD	30.	0.88	0.0	-30.	0.88	0.0
Wasteload NBOD	30.	0.88	0.0	-30.	0.88	0.0
Lower Boundary Temperature	2.	0.88	0.0	-2.	0.88	0.0
Lower Boundary DO	30.	0.89	1.6	-30.	0.72	-17.6
Lower Boundary CBOD	30.	0.85	-3.8	-30.	0.90	2.5
Lower Boundary NBOD	30.	0.88	-0.1	-30.	0.88	0.1

Lake Edwards/Smithport Lake 100605 Sensitivity Analysis Input Data Set

```
CNTROL01     SMITHPORT LAKE WATERSHED MODEL
CNTROL02     SMITHPORTLAKE SENSITIVITY ANALYSIS
CNTROL04 YES METRIC UNITS
ENDATA01
MODOPT01  NO TEMPERATURE
MODOPT02  NO SALINITY
MODOPT03 YES CONSERVATIVE MATERIAL  I = CHLORIDES                  IN MG/L
MODOPT04 YES CONSERVATIVE MATERIAL II = CONDUCTIVITY               IN MG/L
MODOPT05 YES DISSOLVED OXYGEN
MODOPT06 YES BOD1 BIOCHEMICAL OXYGEN DEMAND
MODOPT07  NO BOD2 BIOCHEMICAL OXYGEN DEMAND
MODOPT08 YES NBOD OXYGEN DEMAND
MODOPT10  NO PHOSPHORUS
MODOPT11  NO CHLOROPHYLL A
MODOPT12  NO MACROPHYTES
MODOPT13  NO COLIFORM
ENDATA02
PROGRAM  KL MINIMUM                        =     0.7
PROGRAM  INHIBITION CONTROL VALUE          =     3.
PROGRAM  K2 MAXIMUM                        =     25.0
PROGRAM  HYDRAULIC CALCULATION METHOD      =     2.
PROGRAM  SETTLING RATE UNITS               =     2.
PROGRAM  ALGAE OXYGEN PROD                 =     0.
PROGRAM  EFFECTIVE BOD DUE TO ALGAE        =     0.10
ENDATA03
!Temperature Correction Constants
!--------1---------2---------3---------4---------5---------6---------7---------8
!23456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
!        ******** ********
ENDATA04
ENDATA05
ENDATA06
ENDATA07
!Reach Identification Data
!--------1---------2---------3---------4---------5---------6---------7---------8
!23456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
!         ***  -- ******************************----------**********----------
!          R#  ID   SITE NAME                          RKM        RKM    LENGTH
REACH ID    1  SL   NBB03C TO NBB02                   29.1       21.8      0.1
```

```
REACH ID    2  SL   NBB02 TO RB01                      21.8        6.0      0.1
REACH ID    3  SL   RB01 TO CLK02                       6.0        5.3      0.1
REACH ID    4  SL   CLK02 TO CLK01                     5.3        4.6      0.1
REACH ID    5  SL   CLK01 TO SL04                      4.6        4.3      0.1
REACH ID    6  SL   SL04 TO SL03                       4.3        2.3      0.1
REACH ID    7  SL   SL03 TO SL01                       2.3        0.0      0.1
ENDATA08
!Advective Hydraulic Coefficients
!--------1---------2---------3---------4---------5---------6---------7---------8
!234567890123456789012345678901234567890123456789012345678901234567890123456789 0
!         ***  -------*******-------*******-------*******-------*******
!                a      b       c     d      e        f
!               WIDTH  WIDTH   WIDTH DEPTH  DEPTH   DEPTH
!          R#   COEFF   EXP    CONST COEFF   EXP    CONST SLOPE MANNING
HYDR-1      1   0.00   0.10    2.743  0.00   0.10   0.113
HYDR-1      2   0.00   0.10    2.743  0.00   0.10   0.113
HYDR-1      3   0.00   0.10  147.828  0.00   0.10   3.901
HYDR-1      4   0.00   0.10  147.828  0.00   0.10   3.901
HYDR-1      5   0.00   0.10  147.828  0.00   0.10   3.901
HYDR-1      6   0.00   0.10  147.828  0.00   0.10   3.901
HYDR-1      7   0.00   0.10  147.828  0.00   0.10   3.901
ENDATA09
!Dispersive Hydraulic Coefficients
!--------1---------2---------3---------4---------5---------6---------7---------8
!234567890123456789012345678901234567890123456789012345678901234567890123456789 0
!         ***  -----*********----------*********----------
!              TIDAL
!          R#  RANGE    a          b         c         d
HYDR-2      1   0.0   1.00        0.0       0.0       0.0
HYDR-2      2   0.0   1.00        0.0       0.0       0.0
HYDR-2      3   0.0   1.00        0.0       0.0       0.0
HYDR-2      4   0.0   1.00        0.0       0.0       0.0
HYDR-2      5   0.0   1.00        0.0       0.0       0.0
HYDR-2      6   0.0   1.00        0.0       0.0       0.0
HYDR-2      7   0.0   1.00        0.0       0.0       0.0
ENDATA10
!Initial Conditions
!--------1---------2---------3---------4---------5---------6---------7---------8
!234567890123456789012345678901234567890123456789012345678901234567890123456789 0
!         ***  --------********--------********--------********--------********
!          R#    TEMP  SALINITY   DO     NH3 N  NIT NIT  PHOS   CHL A   MACROPHYTES
```

```
INITIAL     1    26.58  0.30     3.05                           15.1
INITIAL     2    25.66  0.24     4.70                           15.1
INITIAL     3    27.10  0.09     1.10                           30.0
INITIAL     4    27.55  0.09     1.15                           44.9
INITIAL     5    27.99  0.08     1.20                           44.9
INITIAL     6    27.66  0.07     1.10                           67.1
INITIAL     7    27.54  0.05     1.05                           89.3
ENDATA11
!Reaeration, Sediment Oxygen Demand and BOD Coefficients
!--------1---------2---------3---------4---------5---------6---------7---------8---------9
!234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
!         ***  -----******----- ******-------*******-------*******-------*******-------***
!               REA    KL                     BOD 1  BOD 1               BOD 2    BOD 2
!          R#   EQ    MIN              SOD    DECAY  SETT                DECAY    SETT
COEF-1      1  11.00                   1.80   0.0284  0.50
COEF-1      2  11.00                   3.00   0.0302  0.50
COEF-1      3  11.00                   2.00   0.0915  0.50
COEF-1      4  11.00                   2.50   0.0866  0.50
COEF-1      5  11.00                   2.50   0.0743  0.50
COEF-1      6  11.00                   2.50   0.0816  0.50
COEF-1      7  11.00                   2.00   0.0941  0.50
ENDATA12
!Nitrogen and Phosphorus Coefficients
!--------1---------2---------3---------4---------5---------6---------7---------8
!234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
!         ***  -------*******-------*******-------*******-------
!              NBOD     NBOD
!          R#  DECAY    SETT
COEF-2      1  0.0462   0.10
COEF-2      2  0.0875   0.10
COEF-2      3  0.1035   0.10
COEF-2      4  0.0889   0.10
COEF-2      5  0.0520   0.10
COEF-2      6  0.0414   0.10
COEF-2      7  0.0575   0.10
ENDATA13
ENDATA14
!Coliform and Nonconservative Cofficients
!--------1---------2---------3---------4---------5---------6---------7---------8
!234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
!         ***  -------*******-------*******
```

```
ENDATA15
!Incremental Data for Flow, Temperature, Salinity, and Conservatives
!--------1---------2---------3---------4---------5---------6---------7---------8
!23456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
!         ***  ---------********---------********---------********
!          R#   OUTFLOW   INFLOW  TEMP     SALINITY CHLORIDE  COND
INCR-1      1    0.0000   0.0052  26.580             55.00  148.00
INCR-1      2    0.0000   0.0000  25.660              0.00    0.00
INCR-1      3    0.0000   0.0000  27.100              0.00    0.00
INCR-1      4    0.0000   0.0000  27.550              0.00    0.00
INCR-1      5    0.0000   0.0000  27.990              0.00    0.00
INCR-1      6    0.0000   0.0000  27.660              0.00    0.00
INCR-1      7    0.0000   0.0000  27.540              0.00    0.00
ENDATA16
!Incremental Data for DO, BOD, and Nitrogen
!--------1---------2---------3---------4---------5---------6---------7---------8
!23456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
!         ***  ---------********---------********---------********
!          R#      DO     BOD 1     NBOD    NH3 N   NIT NIT    BOD 2
INCR-2      1     2.00
INCR-2      2     2.00
INCR-2      3     2.00
INCR-2      4     2.00
INCR-2      5     2.00
INCR-2      6     2.00
INCR-2      7     2.00
ENDATA17
!Incremental Data for Phosphorus, Chlorophyll, Coliform and Nonconservatives
!--------1---------2---------3---------4---------5---------6---------7---------8
!23456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
!         ***  ---------********---------********
!          R#   PHOSPH    CHL A   COLIFORM NONCONSERVATIVE
INCR-3      1
INCR-3      2
INCR-3      3
INCR-3      4
INCR-3      5
INCR-3      6
INCR-3      7
ENDATA18
!Nonpoint Source Data
```

```
!--------1---------2---------3---------4---------5---------6---------7---------8
!234567890123456789012345678901234567890123456789012345678901234567890123456789 0
!         ***  ---------********---------********---------********
!          R#     BOD 1    NBOD   COLIFORM NONCONS    DO      BOD 2
NONPOINT    1     1.50     0.59
NONPOINT    2    20.00     2.00
NONPOINT    3  3500.00    90.00
NONPOINT    4  1200.00    30.00
NONPOINT    5    50.00     1.00
NONPOINT    6  2300.00   425.00
NONPOINT    7  9500.00   400.00
ENDATA19
!Headwater Data for Flow, Temperature, Salinity, and Conservatives
!--------1---------2---------3---------4---------5---------6---------7---------8
!234567890123456789012345678901234567890123456789012345678901234567890123456789 0
!        ****  -------------------- *** --------********--------********--------
!         E#    NAME                       FLOW    TEMP  SALIN   CHLORIDE   COND
HDWTR-1     1  HEADWATER - NBB03A         0.0001  23.89  0.17    38.8     344.4
ENDATA20
!Headwater Data for DO, BOD, and Nitrogen
!--------1---------2---------3---------4---------5---------6---------7---------8
!234567890123456789012345678901234567890123456789012345678901234567890123456789 0
!        ****  ---------********---------********---------********
!          E#      DO      BOD 1    NBOD    NH3 N    NIT NIT  BOD 2
HDWTR-2     1      1.00   6.2784   1.8781
ENDATA21
!Headwater Data for Phosphorus, Chlorophyll, Coliform, and Nonconservatives
!--------1---------2---------3---------4---------5---------6---------7---------8
!234567890123456789012345678901234567890123456789012345678901234567890123456789 0
!        ****  ---------********---------********
!          E#  PHOSPHOR   CHL A   COLIFORM  NONCONSERVATIVE
HDWTR-3     1              28.5
ENDATA22
ENDATA23
!Wasteload Data for Flow, Temperature, Salinity, and Conservatives
!--------1---------2---------3---------4---------5---------6---------7---------8
!234567890123456789012345678901234567890123456789012345678901234567890123456789 0
!        ****  --------------------********---------********---------********
!          E#     NAME               FLOW      TEMP   SALINITY CHLORIDE  COND
WSTLD-1     1   MANSFIELD STP         0.0101    28.28     0.43  106.0    836.3
WSTLD-1   232   RAMBIN BAYOU          0.0302    24.85     0.50   11.3    116.8
```

```
ENDATA24
!Wasteload Data for DO, BOD, and Nitrogen
!--------1---------2---------3---------4---------5---------6---------7---------8
!234567890123456789012345678901234567890123456789012345678901234567890123456789 0
!        ****  ---------********-----********---------*****---------********
!          E#       DO    BOD 1         NBOD    NH3 N          NIT NIT  BOD 2
WSTLD-2     1      2.49   52.000        0.000
WSTLD-2   232      2.13    9.244        1.687
ENDATA25
!Wasteload Data for Phosphorus, Chlorophyll, Coliform, and Nonconservatives
!--------1---------2---------3---------4---------5---------6---------7---------8
!234567890123456789012345678901234567890123456789012345678901234567890123456789 0
!        ****  ---------********---------********
!          E#  PHOSPHOR  CHL A    COLIFORM NONCONSERVATIVE
WSTLD-3     1
WSTLD-3   232
ENDATA26
LOWER BC TEMPERATURE                        =  27.41
LOWER BC SALINITY                           =   0.02
LOWER BC CONSERVATIVE MATERIAL I            =   6.8
LOWER BC CONSERVATIVE MATERIAL II           =  75.1
LOWER BC DISSOLVED OXYGEN                   =   1.00
LOWER BC BOD1 BIOCHEMICAL OXYGEN DEMAND     =  14.299
LOWER BC CHLOROPHYLL A                      =  27.6
LOWER BC NBOD                               =   2.725
ENDATA27
!Dam Data
!--------1---------2---------3---------4---------5---------6---------7---------8
!234567890123456789012345678901234567890123456789012345678901234567890123456789 0
!        ****  ******************** ** ******** ******** ********
ENDATA28
SENSITIV BASEFLOW   30    -30
SENSITIV CHLOR A    30    -30
SENSITIV VELOCITY   30    -30
SENSITIV TEMPERAT    2     -2
SENSITIV BOD DECA   30    -30
SENSITIV BOD SETT   30    -30
SENSITIV NBOD DEC   30    -30
SENSITIV NBOD SET   30    -30
SENSITIV BENTHAL    30    -30
SENSITIV DISPERSI   30    -30
```

```
SENSITIV REAERATI   30    -30
SENSITIV HDW FLOW   30    -30
SENSITIV HDW DO     30    -30
SENSITIV HDW BOD    30    -30
SENSITIV HDW NBOD   30    -30
SENSITIV DEPTH      30    -30
SENSITIV WSL FLOW   30    -30
SENSITIV WSL TEMP    2     -2
SENSITIV WSL DO     30    -30
SENSITIV WSL BOD    30    -30
SENSITIV WSL NBOD   30    -30
SENSITIV LBC TEMP    2     -2
SENSITIV LBC DO     30    -30
SENSITIV LBC BOD    30    -30
SENSITIV LBC NBOD   30    -30
ENDATA29
!--------1---------2---------3---------4---------5---------6---------7---------8
!23456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
!        ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** **
NUMBER OF PLOTS = 1
NUMBER OF REACHES IN PLOT 1 =  07                        INCREMENT = 0.1
PLOT RCH  1  2  3  4  5  6  7
ENDATA30
OVERLAY 1 SLKovl.txt                      :MAINSTEM
ENDATA31
```

Lake Edwards/Smithport Lake 100605 Sensitivity Analysis Output Dataset

```
LA-QUAL Version 8.00
Louisiana Department of Environmental Quality

Input file is O:\Personal_Folders\Karen\Smithport Lake and Lake Edwards\2005\Input Files\SLKCalbsensi.txt
Output produced at 08:23 on 05/24/2007

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

CARD TYPE       CONTROL TITLES

TITLE01         SMITHPORT LAKE WATERSHED MODEL
TITLE02         SMITHPORTLAKE SENSITIVITY ANALYSIS
CNTROL04  YES   METRIC UNITS
ENDATA01

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

CARD TYPE       MODEL OPTION

MODOPT01   NO   TEMPERATURE
MODOPT02   NO   SALINITY
MODOPT03  YES   CONSERVATIVE MATERIAL  I = CHLORIDES                 IN MG/L
MODOPT04  YES   CONSERVATIVE MATERIAL II = CONDUCTIVITY               IN MG/L
MODOPT05  YES   DISSOLVED OXYGEN
MODOPT06  YES   BOD1 BIOCHEMICAL OXYGEN DEMAND
MODOPT07   NO   BOD2 BIOCHEMICAL OXYGEN DEMAND
MODOPT08  YES   NBOD OXYGEN DEMAND
MODOPT10   NO   PHOSPHORUS
MODOPT11   NO   CHLOROPHYLL A
MODOPT12   NO   MACROPHYTES
MODOPT13   NO   COLIFORM
ENDATA02

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

CARD TYPE       DESCRIPTION OF CONSTANT                       VALUE

PROGRAM         KL MINIMUM                        =         0.70000 meters/day
PROGRAM         INHIBITION CONTROL VALUE          =         3.00000 (inhibit all rates but SOD)
PROGRAM         K2 MAXIMUM                        =        25.00000 per day
PROGRAM         HYDRAULIC CALCULATION METHOD      =         2.00000 (widths and depths)
PROGRAM         SETTLING RATE UNITS               =         2.00000 (values entered as per day)
PROGRAM         ALGAE OXYGEN PROD                 =         0.00000 mg O/ug chl a/day
PROGRAM         EFFECTIVE BOD DUE TO ALGAE        =         0.10000 mg/L BOD per ug/L chl a
ENDATA03

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

 CARD TYPE     RATE CODE     THETA VALUE

ENDATA04

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

CARD TYPE       DESCRIPTION OF CONSTANT                       VALUE
```

```
ENDATA05

$$$ DATA TYPE 6 (ALGAE CONSTANTS) $$$

CARD TYPE       DESCRIPTION OF CONSTANT                        VALUE

ENDATA06

$$$ DATA TYPE 7 (MACROPHYTE CONSTANTS) $$$

CARD TYPE       DESCRIPTION OF CONSTANT                        VALUE

ENDATA07

$$$ DATA TYPE 8 (REACH IDENTIFICATION DATA) $$$
                                                      BEGIN         END     ELEM    REACH     ELEMS   BEGIN    END
CARD TYPE  REACH  ID  NAME                            REACH       REACH   LENGTH   LENGTH    PER RCH   ELEM   ELEM
                                                         km          km       km       km               NUM    NUM

REACH ID      1   SL    NBB03C TO NBB02               29.10  TO   21.80   0.1000     7.30      73        1     73
REACH ID      2   SL    NBB02 TO RB01                 21.80  TO    6.00   0.1000    15.80     158       74    231
REACH ID      3   SL    RB01 TO CLK02                  6.00  TO    5.30   0.1000     0.70       7      232    238
REACH ID      4   SL    CLK02 TO CLK01                 5.30  TO    4.60   0.1000     0.70       7      239    245
REACH ID      5   SL    CLK01 TO SL04                  4.60  TO    4.30   0.1000     0.30       3      246    248
REACH ID      6   SL    SL04 TO SL03                   4.30  TO    2.30   0.1000     2.00      20      249    268
REACH ID      7   SL    SL03 TO SL01                   2.30  TO    0.00   0.1000     2.30      23      269    291
ENDATA08

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

CARD TYPE  REACH  ID       WIDTH       WIDTH       WIDTH       DEPTH       DEPTH       DEPTH      SLOPE    MANNINGS
                            "A"         "B"         "C"         "D"         "E"         "F"                  "N"

HYDR-1        1   SL       0.000       0.100       2.743       0.000       0.100       0.113     0.00000   0.000
HYDR-1        2   SL       0.000       0.100       2.743       0.000       0.100       0.113     0.00000   0.000
HYDR-1        3   SL       0.000       0.100     147.828       0.000       0.100       3.901     0.00000   0.000
HYDR-1        4   SL       0.000       0.100     147.828       0.000       0.100       3.901     0.00000   0.000
HYDR-1        5   SL       0.000       0.100     147.828       0.000       0.100       3.901     0.00000   0.000
HYDR-1        6   SL       0.000       0.100     147.828       0.000       0.100       3.901     0.00000   0.000
HYDR-1        7   SL       0.000       0.100     147.828       0.000       0.100       3.901     0.00000   0.000
ENDATA09

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

CARD TYPE  REACH  ID     TIDAL     DISPERSION     DISPERSION     DISPERSION     DISPERSION
                         RANGE        "A"            "B"            "C"            "D"

HYDR          1   SL      0.00        1.000          0.000          0.000          0.000
HYDR          2   SL      0.00        1.000          0.000          0.000          0.000
HYDR          3   SL      0.00        1.000          0.000          0.000          0.000
HYDR          4   SL      0.00        1.000          0.000          0.000          0.000
HYDR          5   SL      0.00        1.000          0.000          0.000          0.000
HYDR          6   SL      0.00        1.000          0.000          0.000          0.000
HYDR          7   SL      0.00        1.000          0.000          0.000          0.000
ENDATA10

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

CARD TYPE	REACH	ID	TEMP	SALIN	DO	NH3	NO3+2	PHOS	CHL A	MACRO
INITIAL	1	SL	26.58	0.30	3.05	0.00	0.00	0.00	15.10	0.00
INITIAL	2	SL	25.66	0.24	4.70	0.00	0.00	0.00	15.10	0.00
INITIAL	3	SL	27.10	0.09	1.10	0.00	0.00	0.00	30.00	0.00
INITIAL	4	SL	27.55	0.09	1.15	0.00	0.00	0.00	44.90	0.00
INITIAL	5	SL	27.99	0.08	1.20	0.00	0.00	0.00	44.90	0.00
INITIAL	6	SL	27.66	0.07	1.10	0.00	0.00	0.00	67.10	0.00
INITIAL	7	SL	27.54	0.05	1.05	0.00	0.00	0.00	89.30	0.00

ENDATA11

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

CARD TYPE	RCH NUM	RCH ID	K2 OPT	K2 "A"	K2 "B"	K2 "C"	BKGRND SOD g/m²/d	BOD DECAY per day	BOD SETT m/d	BOD CONV TO SOD	ANAER BOD2 DECAY per day	BOD2 DECAY per day	BOD2 SETT m/d	BOD2 CONV TO SOD	ANAER BOD2 DECAY per day
COEF-1	1	SL	11 TEXAS	0.000	0.000	0.000	1.800	0.028	0.500	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	2	SL	11 TEXAS	0.000	0.000	0.000	3.000	0.030	0.500	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	3	SL	11 TEXAS	0.000	0.000	0.000	2.000	0.091	0.500	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	4	SL	11 TEXAS	0.000	0.000	0.000	2.500	0.087	0.500	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	5	SL	11 TEXAS	0.000	0.000	0.000	2.500	0.074	0.500	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	6	SL	11 TEXAS	0.000	0.000	0.000	2.500	0.082	0.500	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	7	SL	11 TEXAS	0.000	0.000	0.000	2.000	0.094	0.500	0.000	0.000	0.000	0.000	0.000	0.000

ENDATA12

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

CARD TYPE	REACH	ID	NBOD DECA	NBOD SETT	ORGN CONV TO NH3 SRCE	NH3 DECA	NH3 SRCE	PHOS SRCE	DENIT RATE
COEF-2	1	SL	0.046	0.100	0.000	0.000	0.000	0.000	0.000
COEF-2	2	SL	0.087	0.100	0.000	0.000	0.000	0.000	0.000
COEF-2	3	SL	0.104	0.100	0.000	0.000	0.000	0.000	0.000
COEF-2	4	SL	0.089	0.100	0.000	0.000	0.000	0.000	0.000
COEF-2	5	SL	0.052	0.100	0.000	0.000	0.000	0.000	0.000
COEF-2	6	SL	0.041	0.100	0.000	0.000	0.000	0.000	0.000
COEF-2	7	SL	0.058	0.100	0.000	0.000	0.000	0.000	0.000

ENDATA13

$$$ DATA TYPE 14 (ALGAE AND MACROPHYTE COEFFICIENTS) $$$

CARD TYPE	REACH	ID	SECCHI DEPTH	ALGAE: CHL A	ALGAE SETT	ALG CONV TO SOD	ALGAE GROW	ALGAE RESP	MACRO GROW	MACRO RESP

ENDATA14

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

CARD TYPE	REACH	ID	COLIFORM DIE-OFF	NCM DECAY	NCM SETT	NCM CONV TO SOD

ENDATA15

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

CARD TYPE	REACH	ID	OUTFLOW	INFLOW	TEMP	SALIN	CM-I	CM-II	IN/DIST	OUT/DIST
INCR-1	1	SL	0.00000	0.00520	26.58	0.00	55.00	148.00	0.00071	0.00000

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INCR-1            2   SL       0.00000     0.00000     25.66      0.00      0.00      0.00   0.00000   0.00000
INCR-1            3   SL       0.00000     0.00000     27.10      0.00      0.00      0.00   0.00000   0.00000
INCR-1            4   SL       0.00000     0.00000     27.55      0.00      0.00      0.00   0.00000   0.00000
INCR-1            5   SL       0.00000     0.00000     27.99      0.00      0.00      0.00   0.00000   0.00000
INCR-1            6   SL       0.00000     0.00000     27.66      0.00      0.00      0.00   0.00000   0.00000
INCR-1            7   SL       0.00000     0.00000     27.54      0.00      0.00      0.00   0.00000   0.00000
ENDATA16

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

CARD TYPE      REACH  ID          DO       BOD      NBOD                        BOD#2

INCR-2            1   SL        2.00      0.00      0.00      0.00      0.00      0.00
INCR-2            2   SL        2.00      0.00      0.00      0.00      0.00      0.00
INCR-2            3   SL        2.00      0.00      0.00      0.00      0.00      0.00
INCR-2            4   SL        2.00      0.00      0.00      0.00      0.00      0.00
INCR-2            5   SL        2.00      0.00      0.00      0.00      0.00      0.00
INCR-2            6   SL        2.00      0.00      0.00      0.00      0.00      0.00
INCR-2            7   SL        2.00      0.00      0.00      0.00      0.00      0.00
ENDATA17

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

 CARD TYPE      REACH  ID        PHOS     CHL A      COLI       NCM

INCR-3            1   SL        0.00      0.00      0.00      0.00
INCR-3            2   SL        0.00      0.00      0.00      0.00
INCR-3            3   SL        0.00      0.00      0.00      0.00
INCR-3            4   SL        0.00      0.00      0.00      0.00
INCR-3            5   SL        0.00      0.00      0.00      0.00
INCR-3            6   SL        0.00      0.00      0.00      0.00
INCR-3            7   SL        0.00      0.00      0.00      0.00
ENDATA18

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

CARD TYPE      REACH  ID       BOD#1     NBOD       COLI       NCM        DO     BOD#2

NONPOINT          1   SL        1.50      0.59      0.00      0.00      0.00      0.00
NONPOINT          2   SL       20.00      2.00      0.00      0.00      0.00      0.00
NONPOINT          3   SL     3500.00     90.00      0.00      0.00      0.00      0.00
NONPOINT          4   SL     1200.00     30.00      0.00      0.00      0.00      0.00
NONPOINT          5   SL       50.00      1.00      0.00      0.00      0.00      0.00
NONPOINT          6   SL     2300.00    425.00      0.00      0.00      0.00      0.00
NONPOINT          7   SL     9500.00    400.00      0.00      0.00      0.00      0.00
ENDATA19

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

CARD TYPE     ELEMENT   NAME                  UNIT     FLOW     FLOW    TEMP    SALIN      CM-I     CM-II
                                                        m³/s      cfs   deg C      ppt      MG/L      MG/L

HDWTR-1           1     HEADWATER - NBB03A      0   0.00010    0.004   23.89     0.17    38.800   344.400
ENDATA20

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

CARD TYPE     ELEMENT   NAME                          DO     BOD#1     NBOD                          BOD#2
                                                    mg/L      mg/L      mg/L      mg/L      mg/L      mg/L
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HDWTR-2           1     HEADWATER - NBB03A          1.00      6.28      1.88      0.00      0.00      0.00
ENDATA21

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

CARD TYPE     ELEMENT   NAME                        PHOS     CHL A      COLI       NCM
                                                    mg/L      mg/L      mg/L      mg/L

HDWTR-3           1     HEADWATER - NBB03A          0.00     28.50      0.00      0.00
ENDATA22

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

CARD TYPE   JUNCTION   UPSTRM     RIVER     NAME
             ELEMENT  ELEMENT     KILOM

ENDATA23

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

CARD TYPE  ELEMENT    RKILO  NAME                     FLOW       FLOW     FLOW    TEMP    SALIN      CM-I     CM-II
                                                      m³/s        cfs      MGD   deg C      ppt      MG/L      MG/L

WSTLD-1        1      29.10   MANSFIELD STP         0.01010    0.35664    0.231   28.28     0.43   106.000   836.300
WSTLD-1      232       6.00   RAMBIN BAYOU          0.03020    1.06638    0.689   24.85     0.50    11.300   116.800
ENDATA24

$$$ DATA TYPE 25 (WASTELOAD DATA FOR DO, BOD, AND NITROGEN) $$$
                                                                          % BOD                            %
CARD TYPE     ELEMENT   NAME                          DO       BOD      RMVL     NBOD                 NITRIF                BOD#2
                                                     mg/L      mg/L                mg/L      mg/L                 mg/L      mg/L

WSTLD-2           1      MANSFIELD STP              2.49     52.00      0.00      0.00      0.00      0.00      0.00      0.00
WSTLD-2         232      RAMBIN BAYOU               2.13      9.24      0.00      1.69      0.00      0.00      0.00      0.00
ENDATA25

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

CARD TYPE     ELEMENT   NAME                        PHOS     CHL A      COLI       NCM
                                                    mg/L      mg/L      mg/L      mg/L

WSTLD-3           1      MANSFIELD STP              0.00      0.00      0.00      0.00
WSTLD-3         232      RAMBIN BAYOU               0.00      0.00      0.00      0.00
ENDATA26

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

CARD TYPE    CONSTITUENT                    CONCENTRATION

LOWER BC     TEMPERATURE                        =     27.410     deg C
LOWER BC     SALINITY                           =      0.020     ppt
LOWER BC     CONSERVATIVE MATERIAL I            =      6.800     MG/L
LOWER BC     CONSERVATIVE MATERIAL II           =     75.100     MG/L
LOWER BC     DISSOLVED OXYGEN                   =      1.000     mg/L
LOWER BC     BOD1 BIOCHEMICAL OXYGEN DEMAND     =     14.299     mg/L
LOWER BC     CHLOROPHYLL A                      =     27.600     µg/L
LOWER BC     NBOD                               =      2.725     mg/L
ENDATA27
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$$$ DATA TYPE 28 (DAM DATA) $$$

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

ENDATA28

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

CARD TYPE       PARAMETER     COL 1     COL 2     COL 3     COL 4     COL 5     COL 6     COL 7     COL 8

SENSITIV         BASEFLOW      30.0     -30.0       0.0       0.0       0.0       0.0       0.0       0.0
SENSITIV         CHLOR A       30.0     -30.0       0.0       0.0       0.0       0.0       0.0       0.0
SENSITIV         VELOCITY      30.0     -30.0       0.0       0.0       0.0       0.0       0.0       0.0
SENSITIV         TEMPERAT       2.0      -2.0       0.0       0.0       0.0       0.0       0.0       0.0
SENSITIV         BOD DECA      30.0     -30.0       0.0       0.0       0.0       0.0       0.0       0.0
SENSITIV         BOD SETT      30.0     -30.0       0.0       0.0       0.0       0.0       0.0       0.0
SENSITIV         NBOD DEC      30.0     -30.0       0.0       0.0       0.0       0.0       0.0       0.0
SENSITIV         NBOD SET      30.0     -30.0       0.0       0.0       0.0       0.0       0.0       0.0
SENSITIV         BENTHAL       30.0     -30.0       0.0       0.0       0.0       0.0       0.0       0.0
SENSITIV         DISPERSI      30.0     -30.0       0.0       0.0       0.0       0.0       0.0       0.0
SENSITIV         REAERATI      30.0     -30.0       0.0       0.0       0.0       0.0       0.0       0.0
SENSITIV         HDW FLOW      30.0     -30.0       0.0       0.0       0.0       0.0       0.0       0.0
SENSITIV         HDW DO        30.0     -30.0       0.0       0.0       0.0       0.0       0.0       0.0
SENSITIV         HDW BOD       30.0     -30.0       0.0       0.0       0.0       0.0       0.0       0.0
SENSITIV         HDW NBOD      30.0     -30.0       0.0       0.0       0.0       0.0       0.0       0.0
SENSITIV         DEPTH         30.0     -30.0       0.0       0.0       0.0       0.0       0.0       0.0
SENSITIV         WSL FLOW      30.0     -30.0       0.0       0.0       0.0       0.0       0.0       0.0
SENSITIV         WSL TEMP       2.0      -2.0       0.0       0.0       0.0       0.0       0.0       0.0
SENSITIV         WSL DO        30.0     -30.0       0.0       0.0       0.0       0.0       0.0       0.0
SENSITIV         WSL BOD       30.0     -30.0       0.0       0.0       0.0       0.0       0.0       0.0
SENSITIV         WSL NBOD      30.0     -30.0       0.0       0.0       0.0       0.0       0.0       0.0
SENSITIV         LBC TEMP       2.0      -2.0       0.0       0.0       0.0       0.0       0.0       0.0
SENSITIV         LBC DO        30.0     -30.0       0.0       0.0       0.0       0.0       0.0       0.0
SENSITIV         LBC BOD       30.0     -30.0       0.0       0.0       0.0       0.0       0.0       0.0
SENSITIV         LBC NBOD      30.0     -30.0       0.0       0.0       0.0       0.0       0.0       0.0
ENDATA29

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


NUMBER OF PLOTS =  1
NUMBER OF REACHES IN PLOT 1 =   7
PLOT RCH  1  2  3  4  5  6  7
ENDATA30

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


OVERLAY 1 SLKovl.txt                      :MAINSTEM
ENDATA31



     .....NO ERRORS DETECTED IN INPUT DATA
     .....HYDRAULIC CALCULATIONS COMPLETED
     .....TRIDIAGONAL MATRIX TERMS INITIALIZED
     .....OXYGEN DEPENDENT RATES CONVERGENT IN  11 ITERATIONS
     .....CONSTITUENT CALCULATIONS COMPLETED
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     .....GRAPHICS DATA FOR PLOT 1 WRITTEN TO UNIT 21


FINAL REPORT    HEADWATER - NBB03A                              SMITHPORT LAKE WATERSHED MODEL
REACH NO.  1      NBB03C TO NBB02                               SMITHPORTLAKE SENSITIVITY ANALYSIS
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********** REACH INPUTS **********

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CM-I MG/L	CM-II MG/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM
1	HDWTR	0.00010	23.89	0.17	38.80	344.40	1.00	4.77	0.00	6.28	0.00	1.88	0.00	0.00	0.00	15.10	0.00	0.00
EACH	INCR	0.00007	26.58	0.00	55.00	148.00	2.00	0.00	0.00			0.00	0.00	0.00	0.00	0.00	0.00	
1	WSTLD	0.01010	28.28	0.43	106.00	836.30	2.49	52.00	0.00	52.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m^3/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	DEPTH m	WIDTH m	VOLUME m^3	SURFACE AREA m^2	X-SECT AREA m^2	TIDAL PRISM m^3	TIDAL VELO m/s	DISPRSN m^2/s	MEAN VELO m/s
1	29.10	29.00	0.01027	98.3	0.03314	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.033
2	29.00	28.90	0.01034	97.7	0.03337	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.033
3	28.90	28.80	0.01041	97.0	0.03360	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.034
4	28.80	28.70	0.01048	96.3	0.03383	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.034
5	28.70	28.60	0.01056	95.7	0.03406	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.034
6	28.60	28.50	0.01063	95.0	0.03429	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.034
7	28.50	28.40	0.01070	94.4	0.03452	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.035
8	28.40	28.30	0.01077	93.8	0.03475	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.035
9	28.30	28.20	0.01084	93.2	0.03498	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.035
10	28.20	28.10	0.01091	92.6	0.03521	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.035
11	28.10	28.00	0.01098	92.0	0.03544	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.035
12	28.00	27.90	0.01105	91.4	0.03567	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.036
13	27.90	27.80	0.01113	90.8	0.03590	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.036
14	27.80	27.70	0.01120	90.2	0.03612	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.036
15	27.70	27.60	0.01127	89.6	0.03635	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.036
16	27.60	27.50	0.01134	89.1	0.03658	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.037
17	27.50	27.40	0.01141	88.5	0.03681	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.037
18	27.40	27.30	0.01148	88.0	0.03704	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.037
19	27.30	27.20	0.01155	87.4	0.03727	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.037
20	27.20	27.10	0.01162	86.9	0.03750	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.038
21	27.10	27.00	0.01170	86.4	0.03773	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.038
22	27.00	26.90	0.01177	85.8	0.03796	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.038
23	26.90	26.80	0.01184	85.3	0.03819	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.038
24	26.80	26.70	0.01191	84.8	0.03842	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.038
25	26.70	26.60	0.01198	84.3	0.03865	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.039
26	26.60	26.50	0.01205	83.8	0.03888	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.039
27	26.50	26.40	0.01212	83.3	0.03911	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.039
28	26.40	26.30	0.01219	82.8	0.03934	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.039
29	26.30	26.20	0.01227	82.3	0.03957	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
30	26.20	26.10	0.01234	81.9	0.03980	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
31	26.10	26.00	0.01241	81.4	0.04003	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
32	26.00	25.90	0.01248	80.9	0.04026	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
33	25.90	25.80	0.01255	80.5	0.04049	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
34	25.80	25.70	0.01262	80.0	0.04072	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.041
35	25.70	25.60	0.01269	79.6	0.04095	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.041
36	25.60	25.50	0.01276	79.1	0.04118	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.041

37	25.50	25.40	0.01284	78.7	0.04141	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.041
38	25.40	25.30	0.01291	78.3	0.04164	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.042
39	25.30	25.20	0.01298	77.8	0.04187	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.042
40	25.20	25.10	0.01305	77.4	0.04210	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.042
41	25.10	25.00	0.01312	77.0	0.04233	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.042
42	25.00	24.90	0.01319	76.6	0.04256	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.043
43	24.90	24.80	0.01326	76.2	0.04279	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.043
44	24.80	24.70	0.01333	75.7	0.04302	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.043
45	24.70	24.60	0.01341	75.3	0.04325	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.043
46	24.60	24.50	0.01348	74.9	0.04348	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.043
47	24.50	24.40	0.01355	74.5	0.04371	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.044
48	24.40	24.30	0.01362	74.2	0.04394	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.044
49	24.30	24.20	0.01369	73.8	0.04417	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.044
50	24.20	24.10	0.01376	73.4	0.04440	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.044
51	24.10	24.00	0.01383	73.0	0.04463	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.045
52	24.00	23.90	0.01390	72.6	0.04486	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.045
53	23.90	23.80	0.01398	72.3	0.04509	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.045
54	23.80	23.70	0.01405	71.9	0.04532	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.045
55	23.70	23.60	0.01412	71.5	0.04555	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.046
56	23.60	23.50	0.01419	71.2	0.04578	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.046
57	23.50	23.40	0.01426	70.8	0.04601	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.046
58	23.40	23.30	0.01433	70.5	0.04624	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.046
59	23.30	23.20	0.01440	70.1	0.04647	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.046
60	23.20	23.10	0.01447	69.8	0.04670	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.047
61	23.10	23.00	0.01455	69.4	0.04693	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.047
62	23.00	22.90	0.01462	69.1	0.04716	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.047
63	22.90	22.80	0.01469	68.8	0.04739	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.047
64	22.80	22.70	0.01476	68.4	0.04762	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.048
65	22.70	22.60	0.01483	68.1	0.04785	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.048
66	22.60	22.50	0.01490	67.8	0.04808	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.048
67	22.50	22.40	0.01497	67.5	0.04831	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.048
68	22.40	22.30	0.01504	67.1	0.04853	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.049
69	22.30	22.20	0.01512	66.8	0.04876	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.049
70	22.20	22.10	0.01519	66.5	0.04899	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.049
71	22.10	22.00	0.01526	66.2	0.04922	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.049
72	22.00	21.90	0.01533	65.9	0.04945	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.049
73	21.90	21.80	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
TOT						2.07			2262.70	20023.90					
AVG					0.0408		0.11	2.74			0.31				
CUM						2.07									

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD#1 DECAY 1/da	BOD#1 SETT 1/da	ABOD#1 DECAY 1/da	BOD#2 DECAY 1/da	BOD#2 SETT 1/da	ABOD#2 DECAY 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORGN DECAY 1/da	ORGN SETT 1/da	NH3 DECAY 1/da	NH3 SRCE *	DENIT RATE 1/da	PO4 SRCE *	ALG PROD **	MAC PROD **	COLI DECAY 1/da	NCM DECAY 1/da	NCM SETT 1/da
1	29.000	8.02	7.01	0.04	0.58	0.00	0.00	0.00	0.00	2.72	2.72	2.72	0.05	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	28.900	8.02	7.01	0.04	0.58	0.00	0.00	0.00	0.00	2.72	2.72	2.72	0.05	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	28.800	8.02	7.01	0.04	0.58	0.00	0.00	0.00	0.00	2.72	2.72	2.72	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	28.700	8.02	7.01	0.04	0.58	0.00	0.00	0.00	0.00	2.72	2.72	2.72	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	28.600	8.02	7.01	0.04	0.58	0.00	0.00	0.00	0.00	2.71	2.71	2.71	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	28.500	8.03	7.01	0.04	0.58	0.00	0.00	0.00	0.00	2.71	2.71	2.71	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	28.400	8.03	7.00	0.04	0.58	0.00	0.00	0.00	0.00	2.71	2.71	2.71	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	28.300	8.03	7.00	0.04	0.58	0.00	0.00	0.00	0.00	2.71	2.71	2.71	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	28.200	8.03	7.00	0.04	0.58	0.00	0.00	0.00	0.00	2.70	2.70	2.70	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	28.100	8.03	7.00	0.04	0.58	0.00	0.00	0.00	0.00	2.70	2.70	2.70	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

11	28.000	8.04	7.00	0.04	0.58	0.00	0.00	0.00	0.00	2.70	2.70	2.70	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	27.900	8.04	7.00	0.04	0.58	0.00	0.00	0.00	0.00	2.70	2.70	2.70	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	27.800	8.04	6.99	0.04	0.58	0.00	0.00	0.00	0.00	2.70	2.70	2.70	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	27.700	8.04	6.99	0.04	0.58	0.00	0.00	0.00	0.00	2.69	2.69	2.69	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	27.600	8.04	6.99	0.04	0.58	0.00	0.00	0.00	0.00	2.69	2.69	2.69	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	27.500	8.04	6.99	0.04	0.58	0.00	0.00	0.00	0.00	2.69	2.69	2.69	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	27.400	8.05	6.99	0.04	0.58	0.00	0.00	0.00	0.00	2.69	2.69	2.69	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	27.300	8.05	6.99	0.04	0.58	0.00	0.00	0.00	0.00	2.69	2.69	2.69	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	27.200	8.05	6.98	0.04	0.58	0.00	0.00	0.00	0.00	2.68	2.68	2.68	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	27.100	8.05	6.98	0.04	0.58	0.00	0.00	0.00	0.00	2.68	2.68	2.68	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	27.000	8.05	6.98	0.04	0.58	0.00	0.00	0.00	0.00	2.68	2.68	2.68	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	26.900	8.06	6.98	0.04	0.58	0.00	0.00	0.00	0.00	2.68	2.68	2.68	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	26.800	8.06	6.98	0.04	0.58	0.00	0.00	0.00	0.00	2.67	2.67	2.67	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	26.700	8.06	6.98	0.04	0.58	0.00	0.00	0.00	0.00	2.67	2.67	2.67	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	26.600	8.06	6.97	0.04	0.58	0.00	0.00	0.00	0.00	2.67	2.67	2.67	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	26.500	8.06	6.97	0.04	0.58	0.00	0.00	0.00	0.00	2.67	2.67	2.67	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	26.400	8.07	6.97	0.04	0.58	0.00	0.00	0.00	0.00	2.67	2.67	2.67	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	26.300	8.07	6.97	0.04	0.58	0.00	0.00	0.00	0.00	2.66	2.66	2.66	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	26.200	8.07	6.97	0.04	0.58	0.00	0.00	0.00	0.00	2.66	2.66	2.66	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	26.100	8.07	6.97	0.04	0.58	0.00	0.00	0.00	0.00	2.66	2.66	2.66	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	26.000	8.07	6.97	0.04	0.58	0.00	0.00	0.00	0.00	2.66	2.66	2.66	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
32	25.900	8.07	6.96	0.04	0.58	0.00	0.00	0.00	0.00	2.66	2.66	2.66	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
33	25.800	8.08	6.96	0.04	0.58	0.00	0.00	0.00	0.00	2.65	2.65	2.65	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
34	25.700	8.08	6.96	0.04	0.58	0.00	0.00	0.00	0.00	2.65	2.65	2.65	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
35	25.600	8.08	6.96	0.04	0.58	0.00	0.00	0.00	0.00	2.65	2.65	2.65	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
36	25.500	8.08	6.96	0.04	0.58	0.00	0.00	0.00	0.00	2.65	2.65	2.65	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37	25.400	8.08	6.96	0.04	0.58	0.00	0.00	0.00	0.00	2.65	2.65	2.65	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
38	25.300	8.09	6.95	0.04	0.58	0.00	0.00	0.00	0.00	2.64	2.64	2.64	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
39	25.200	8.09	6.95	0.04	0.58	0.00	0.00	0.00	0.00	2.64	2.64	2.64	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
40	25.100	8.09	6.95	0.04	0.58	0.00	0.00	0.00	0.00	2.64	2.64	2.64	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
41	25.000	8.09	6.95	0.04	0.58	0.00	0.00	0.00	0.00	2.64	2.64	2.64	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
42	24.900	8.09	6.95	0.04	0.58	0.00	0.00	0.00	0.00	2.63	2.63	2.63	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
43	24.800	8.10	6.95	0.04	0.58	0.00	0.00	0.00	0.00	2.63	2.63	2.63	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
44	24.700	8.10	6.94	0.04	0.58	0.00	0.00	0.00	0.00	2.63	2.63	2.63	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
45	24.600	8.10	6.94	0.04	0.58	0.00	0.00	0.00	0.00	2.63	2.63	2.63	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
46	24.500	8.10	6.94	0.04	0.58	0.00	0.00	0.00	0.00	2.63	2.63	2.63	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
47	24.400	8.10	6.94	0.04	0.58	0.00	0.00	0.00	0.00	2.62	2.62	2.62	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
48	24.300	8.11	6.94	0.04	0.58	0.00	0.00	0.00	0.00	2.62	2.62	2.62	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
49	24.200	8.11	6.94	0.04	0.58	0.00	0.00	0.00	0.00	2.62	2.62	2.62	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
50	24.100	8.11	6.94	0.04	0.58	0.00	0.00	0.00	0.00	2.62	2.62	2.62	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
51	24.000	8.11	6.93	0.04	0.58	0.00	0.00	0.00	0.00	2.62	2.62	2.62	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
52	23.900	8.11	6.93	0.04	0.58	0.00	0.00	0.00	0.00	2.61	2.61	2.61	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
53	23.800	8.11	6.93	0.04	0.58	0.00	0.00	0.00	0.00	2.61	2.61	2.61	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
54	23.700	8.12	6.93	0.04	0.58	0.00	0.00	0.00	0.00	2.61	2.61	2.61	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
55	23.600	8.12	6.93	0.04	0.57	0.00	0.00	0.00	0.00	2.61	2.61	2.61	0.06	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
56	23.500	8.12	6.93	0.04	0.57	0.00	0.00	0.00	0.00	2.61	2.61	2.61	0.06	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
57	23.400	8.12	6.92	0.04	0.57	0.00	0.00	0.00	0.00	2.60	2.60	2.60	0.06	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
58	23.300	8.12	6.92	0.04	0.57	0.00	0.00	0.00	0.00	2.60	2.60	2.60	0.06	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
59	23.200	8.13	6.92	0.04	0.57	0.00	0.00	0.00	0.00	2.60	2.60	2.60	0.06	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
60	23.100	8.13	6.92	0.04	0.57	0.00	0.00	0.00	0.00	2.60	2.60	2.60	0.06	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
61	23.000	8.13	6.92	0.04	0.57	0.00	0.00	0.00	0.00	2.60	2.60	2.60	0.06	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
62	22.900	8.13	6.92	0.04	0.57	0.00	0.00	0.00	0.00	2.59	2.59	2.59	0.06	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
63	22.800	8.13	6.91	0.04	0.57	0.00	0.00	0.00	0.00	2.59	2.59	2.59	0.06	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
64	22.700	8.14	6.91	0.04	0.57	0.00	0.00	0.00	0.00	2.59	2.59	2.59	0.06	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
65	22.600	8.14	6.91	0.04	0.57	0.00	0.00	0.00	0.00	2.59	2.59	2.59	0.06	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
66	22.500	8.14	6.91	0.04	0.57	0.00	0.00	0.00	0.00	2.59	2.59	2.59	0.06	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
67	22.400	8.14	6.91	0.04	0.57	0.00	0.00	0.00	0.00	2.58	2.58	2.58	0.06	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
68	22.300	8.14	6.91	0.04	0.57	0.00	0.00	0.00	0.00	2.58	2.58	2.58	0.06	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
69	22.200	8.15	6.90	0.04	0.57	0.00	0.00	0.00	0.00	2.58	2.58	2.58	0.06	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

70	22.100	8.15	6.90	0.04	0.57	0.00	0.00	0.00	0.00	2.58	2.58	2.58	0.06	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
71	22.000	8.15	6.90	0.04	0.57	0.00	0.00	0.00	0.00	2.57	2.57	2.57	0.06	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
72	21.900	8.15	6.90	0.04	0.57	0.00	0.00	0.00	0.00	2.57	2.57	2.57	0.06	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
73	21.800	8.15	6.90	0.04	0.57	0.00	0.00	0.00	0.00	2.57	2.57	2.57	0.06	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			6.19	0.03	0.50	0.00	0.00	0.00	0.00	1.80			0.05	0.10	0.00	0.00	0.00	0.00			0.00	0.00	0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I MG/L	CM-II MG/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO g/m³	COLI #/100mL	NCM
1	29.000	26.57	0.30	80.05	644.55	2.31	33.11	0.00	34.62	0.00	0.72	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
2	28.900	26.55	0.30	79.87	641.15	2.70	32.22	0.00	33.73	0.00	0.72	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
3	28.800	26.54	0.30	79.70	637.79	3.01	31.36	0.00	32.87	0.00	0.72	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
4	28.700	26.53	0.30	79.54	634.47	3.27	30.52	0.00	32.03	0.00	0.72	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
5	28.600	26.52	0.30	79.37	631.20	3.48	29.72	0.00	31.23	0.00	0.72	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
6	28.500	26.50	0.30	79.21	627.98	3.64	28.94	0.00	30.45	0.00	0.72	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
7	28.400	26.49	0.29	79.05	624.79	3.78	28.19	0.00	29.70	0.00	0.72	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
8	28.300	26.48	0.29	78.89	621.65	3.89	27.47	0.00	28.98	0.00	0.72	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
9	28.200	26.47	0.29	78.73	618.55	3.99	26.77	0.00	28.28	0.00	0.72	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
10	28.100	26.45	0.29	78.58	615.49	4.06	26.09	0.00	27.60	0.00	0.72	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
11	28.000	26.44	0.29	78.43	612.47	4.13	25.43	0.00	26.94	0.00	0.72	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
12	27.900	26.43	0.29	78.28	609.49	4.18	24.79	0.00	26.30	0.00	0.72	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
13	27.800	26.42	0.29	78.13	606.54	4.22	24.18	0.00	25.69	0.00	0.72	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
14	27.700	26.40	0.29	77.98	603.64	4.26	23.58	0.00	25.09	0.00	0.72	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
15	27.600	26.39	0.29	77.84	600.77	4.29	23.00	0.00	24.51	0.00	0.72	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
16	27.500	26.38	0.29	77.69	597.93	4.32	22.45	0.00	23.96	0.00	0.72	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
17	27.400	26.37	0.29	77.55	595.13	4.34	21.90	0.00	23.41	0.00	0.72	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
18	27.300	26.35	0.29	77.41	592.37	4.36	21.38	0.00	22.89	0.00	0.72	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
19	27.200	26.34	0.28	77.28	589.64	4.38	20.87	0.00	22.38	0.00	0.72	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
20	27.100	26.33	0.28	77.14	586.94	4.40	20.38	0.00	21.89	0.00	0.72	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
21	27.000	26.32	0.28	77.01	584.27	4.41	19.90	0.00	21.41	0.00	0.72	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
22	26.900	26.30	0.28	76.87	581.64	4.42	19.44	0.00	20.95	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
23	26.800	26.29	0.28	76.74	579.04	4.43	18.99	0.00	20.50	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
24	26.700	26.28	0.28	76.61	576.47	4.44	18.55	0.00	20.06	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
25	26.600	26.26	0.28	76.48	573.93	4.45	18.13	0.00	19.64	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
26	26.500	26.25	0.28	76.36	571.42	4.46	17.72	0.00	19.23	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
27	26.400	26.24	0.28	76.23	568.94	4.47	17.32	0.00	18.83	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
28	26.300	26.23	0.28	76.11	566.49	4.48	16.94	0.00	18.45	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
29	26.200	26.21	0.28	75.99	564.06	4.48	16.56	0.00	18.07	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
30	26.100	26.20	0.28	75.87	561.67	4.49	16.20	0.00	17.71	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
31	26.000	26.19	0.27	75.75	559.30	4.50	15.84	0.00	17.35	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
32	25.900	26.18	0.27	75.63	556.96	4.51	15.50	0.00	17.01	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
33	25.800	26.16	0.27	75.51	554.64	4.51	15.17	0.00	16.68	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
34	25.700	26.15	0.27	75.40	552.36	4.52	14.84	0.00	16.35	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
35	25.600	26.14	0.27	75.28	550.09	4.52	14.53	0.00	16.04	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
36	25.500	26.13	0.27	75.17	547.86	4.53	14.22	0.00	15.73	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
37	25.400	26.11	0.27	75.06	545.64	4.54	13.92	0.00	15.43	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
38	25.300	26.10	0.27	74.95	543.45	4.54	13.63	0.00	15.14	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
39	25.200	26.09	0.27	74.84	541.29	4.55	13.35	0.00	14.86	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
40	25.100	26.08	0.27	74.73	539.15	4.55	13.08	0.00	14.59	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
41	25.000	26.06	0.27	74.62	537.03	4.56	12.81	0.00	14.32	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
42	24.900	26.05	0.27	74.52	534.93	4.56	12.55	0.00	14.06	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
43	24.800	26.04	0.26	74.41	532.86	4.57	12.30	0.00	13.81	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
44	24.700	26.03	0.26	74.31	530.81	4.57	12.05	0.00	13.56	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00

45	24.600	26.01	0.26	74.21	528.78	4.58	11.81	0.00	13.32	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
46	24.500	26.00	0.26	74.11	526.77	4.58	11.58	0.00	13.09	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
47	24.400	25.99	0.26	74.01	524.79	4.59	11.35	0.00	12.86	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
48	24.300	25.98	0.26	73.91	522.82	4.59	11.13	0.00	12.64	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
49	24.200	25.96	0.26	73.81	520.87	4.60	10.92	0.00	12.43	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
50	24.100	25.95	0.26	73.71	518.95	4.60	10.71	0.00	12.22	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
51	24.000	25.94	0.26	73.61	517.04	4.61	10.51	0.00	12.02	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
52	23.900	25.92	0.26	73.52	515.16	4.61	10.31	0.00	11.82	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
53	23.800	25.91	0.26	73.43	513.29	4.62	10.11	0.00	11.62	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
54	23.700	25.90	0.26	73.33	511.44	4.62	9.93	0.00	11.44	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
55	23.600	25.89	0.25	73.24	509.61	4.63	9.74	0.00	11.25	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
56	23.500	25.87	0.25	73.15	507.80	4.63	9.56	0.00	11.07	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
57	23.400	25.86	0.25	73.06	506.01	4.64	9.39	0.00	10.90	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
58	23.300	25.85	0.25	72.97	504.23	4.64	9.22	0.00	10.73	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
59	23.200	25.84	0.25	72.88	502.47	4.64	9.05	0.00	10.56	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
60	23.100	25.82	0.25	72.79	500.73	4.65	8.89	0.00	10.40	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
61	23.000	25.81	0.25	72.71	499.01	4.65	8.73	0.00	10.24	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
62	22.900	25.80	0.25	72.62	497.30	4.66	8.58	0.00	10.09	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
63	22.800	25.79	0.25	72.53	495.61	4.66	8.43	0.00	9.94	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
64	22.700	25.77	0.25	72.45	493.94	4.67	8.28	0.00	9.79	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
65	22.600	25.76	0.25	72.37	492.28	4.67	8.14	0.00	9.65	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
66	22.500	25.75	0.25	72.28	490.64	4.68	8.00	0.00	9.51	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
67	22.400	25.74	0.24	72.20	489.01	4.68	7.86	0.00	9.37	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
68	22.300	25.72	0.24	72.12	487.40	4.68	7.73	0.00	9.24	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
69	22.200	25.71	0.24	72.04	485.80	4.69	7.60	0.00	9.11	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
70	22.100	25.70	0.24	71.96	484.22	4.69	7.47	0.00	8.98	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
71	22.000	25.69	0.24	71.88	482.66	4.70	7.35	0.00	8.86	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
72	21.900	25.67	0.24	71.80	481.15	4.70	7.23	0.00	8.74	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00
73	21.800	25.66	0.24	71.74	479.87	4.66	7.13	0.00	8.64	0.00	0.71	0.00	0.00	0.00	0.00	15.10	0.00	0.	0.00

FINAL REPORT HEADWATER - NBB03A SMITHPORT LAKE WATERSHED MODEL
REACH NO. 2 NBB02 TO RB01 SMITHPORTLAKE SENSITIVITY ANALYSIS

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CM-I MG/L	CM-II MG/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM
74	UPR RCH	0.01540	25.66	0.24	71.74	479.87	4.66	7.13	0.00	8.64	0.00	0.71	0.00	0.00	0.00	15.10	0.00	0.00

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m^3/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	DEPTH m	WIDTH m	VOLUME m^3	SURFACE AREA m^2	X-SECT AREA m^2	TIDAL PRISM m^3	TIDAL VELO m/s	DISPRSN m^2/s	MEAN VELO m/s
74	21.80	21.70	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
75	21.70	21.60	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
76	21.60	21.50	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
77	21.50	21.40	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
78	21.40	21.30	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
79	21.30	21.20	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
80	21.20	21.10	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
81	21.10	21.00	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
82	21.00	20.90	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
83	20.90	20.80	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050

84	20.80	20.70	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
85	20.70	20.60	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
86	20.60	20.50	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
87	20.50	20.40	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
88	20.40	20.30	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
89	20.30	20.20	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
90	20.20	20.10	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
91	20.10	20.00	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
92	20.00	19.90	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
93	19.90	19.80	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
94	19.80	19.70	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
95	19.70	19.60	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
96	19.60	19.50	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
97	19.50	19.40	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
98	19.40	19.30	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
99	19.30	19.20	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
100	19.20	19.10	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
101	19.10	19.00	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
102	19.00	18.90	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
103	18.90	18.80	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
104	18.80	18.70	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
105	18.70	18.60	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
106	18.60	18.50	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
107	18.50	18.40	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
108	18.40	18.30	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
109	18.30	18.20	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
110	18.20	18.10	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
111	18.10	18.00	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
112	18.00	17.90	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
113	17.90	17.80	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
114	17.80	17.70	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
115	17.70	17.60	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
116	17.60	17.50	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
117	17.50	17.40	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
118	17.40	17.30	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
119	17.30	17.20	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
120	17.20	17.10	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
121	17.10	17.00	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
122	17.00	16.90	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
123	16.90	16.80	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
124	16.80	16.70	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
125	16.70	16.60	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
126	16.60	16.50	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
127	16.50	16.40	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
128	16.40	16.30	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
129	16.30	16.20	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
130	16.20	16.10	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
131	16.10	16.00	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
132	16.00	15.90	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
133	15.90	15.80	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
134	15.80	15.70	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
135	15.70	15.60	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
136	15.60	15.50	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
137	15.50	15.40	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
138	15.40	15.30	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
139	15.30	15.20	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
140	15.20	15.10	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
141	15.10	15.00	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
142	15.00	14.90	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050

143	14.90	14.80	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
144	14.80	14.70	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
145	14.70	14.60	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
146	14.60	14.50	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
147	14.50	14.40	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
148	14.40	14.30	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
149	14.30	14.20	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
150	14.20	14.10	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
151	14.10	14.00	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
152	14.00	13.90	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
153	13.90	13.80	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
154	13.80	13.70	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
155	13.70	13.60	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
156	13.60	13.50	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
157	13.50	13.40	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
158	13.40	13.30	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
159	13.30	13.20	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
160	13.20	13.10	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
161	13.10	13.00	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
162	13.00	12.90	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
163	12.90	12.80	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
164	12.80	12.70	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
165	12.70	12.60	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
166	12.60	12.50	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
167	12.50	12.40	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
168	12.40	12.30	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
169	12.30	12.20	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
170	12.20	12.10	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
171	12.10	12.00	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
172	12.00	11.90	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
173	11.90	11.80	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
174	11.80	11.70	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
175	11.70	11.60	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
176	11.60	11.50	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
177	11.50	11.40	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
178	11.40	11.30	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
179	11.30	11.20	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
180	11.20	11.10	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
181	11.10	11.00	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
182	11.00	10.90	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
183	10.90	10.80	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
184	10.80	10.70	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
185	10.70	10.60	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
186	10.60	10.50	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
187	10.50	10.40	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
188	10.40	10.30	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
189	10.30	10.20	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
190	10.20	10.10	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
191	10.10	10.00	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
192	10.00	9.90	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
193	9.90	9.80	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
194	9.80	9.70	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
195	9.70	9.60	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
196	9.60	9.50	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
197	9.50	9.40	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
198	9.40	9.30	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
199	9.30	9.20	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
200	9.20	9.10	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
201	9.10	9.00	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050

202	9.00	8.90	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
203	8.90	8.80	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
204	8.80	8.70	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
205	8.70	8.60	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
206	8.60	8.50	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
207	8.50	8.40	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
208	8.40	8.30	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
209	8.30	8.20	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
210	8.20	8.10	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
211	8.10	8.00	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
212	8.00	7.90	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
213	7.90	7.80	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
214	7.80	7.70	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
215	7.70	7.60	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
216	7.60	7.50	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
217	7.50	7.40	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
218	7.40	7.30	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
219	7.30	7.20	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
220	7.20	7.10	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
221	7.10	7.00	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
222	7.00	6.90	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
223	6.90	6.80	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
224	6.80	6.70	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
225	6.70	6.60	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
226	6.60	6.50	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
227	6.50	6.40	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
228	6.40	6.30	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
229	6.30	6.20	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
230	6.20	6.10	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
231	6.10	6.00	0.01540	65.6	0.04968	0.02	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.050
TOT						3.68			4897.35	43339.47					
AVG					0.0497		0.11	2.74			0.31				
CUM						5.75									

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD#1 DECAY 1/da	BOD#1 SETT 1/da	ABOD#1 DECAY 1/da	BOD#2 DECAY 1/da	BOD#2 SETT 1/da	ABOD#2 DECAY 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORGN DECAY 1/da	ORGN SETT 1/da	NH3 DECAY 1/da	NH3 SRCE *	DENIT RATE 1/da	PO4 SRCE *	ALG PROD **	MAC PROD **	COLI DECAY 1/da	NCM DECAY 1/da	NCM SETT 1/da
74	21.700	8.15	6.90	0.04	0.57	0.00	0.00	0.00	0.00	4.29	4.29	4.29	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
75	21.600	8.15	6.90	0.04	0.57	0.00	0.00	0.00	0.00	4.29	4.29	4.29	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
76	21.500	8.15	6.90	0.04	0.57	0.00	0.00	0.00	0.00	4.29	4.29	4.29	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
77	21.400	8.15	6.90	0.04	0.57	0.00	0.00	0.00	0.00	4.29	4.29	4.29	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
78	21.300	8.15	6.90	0.04	0.57	0.00	0.00	0.00	0.00	4.30	4.30	4.30	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
79	21.200	8.14	6.91	0.04	0.57	0.00	0.00	0.00	0.00	4.30	4.30	4.30	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
80	21.100	8.14	6.91	0.04	0.57	0.00	0.00	0.00	0.00	4.30	4.30	4.30	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
81	21.000	8.14	6.91	0.04	0.57	0.00	0.00	0.00	0.00	4.30	4.30	4.30	0.10	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
82	20.900	8.14	6.91	0.04	0.57	0.00	0.00	0.00	0.00	4.31	4.31	4.31	0.10	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
83	20.800	8.14	6.91	0.04	0.57	0.00	0.00	0.00	0.00	4.31	4.31	4.31	0.10	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
84	20.700	8.14	6.91	0.04	0.57	0.00	0.00	0.00	0.00	4.31	4.31	4.31	0.10	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
85	20.600	8.14	6.91	0.04	0.57	0.00	0.00	0.00	0.00	4.31	4.31	4.31	0.10	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
86	20.500	8.14	6.91	0.04	0.57	0.00	0.00	0.00	0.00	4.32	4.32	4.32	0.10	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
87	20.400	8.13	6.91	0.04	0.57	0.00	0.00	0.00	0.00	4.32	4.32	4.32	0.10	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
88	20.300	8.13	6.92	0.04	0.57	0.00	0.00	0.00	0.00	4.32	4.32	4.32	0.10	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
89	20.200	8.13	6.92	0.04	0.57	0.00	0.00	0.00	0.00	4.32	4.32	4.32	0.10	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90	20.100	8.13	6.92	0.04	0.57	0.00	0.00	0.00	0.00	4.33	4.33	4.33	0.10	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

91	20.000	8.13	6.92	0.04	0.57	0.00	0.00	0.00	0.00	4.33	4.33	4.33	0.10	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
92	19.900	8.13	6.92	0.04	0.57	0.00	0.00	0.00	0.00	4.33	4.33	4.33	0.10	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
93	19.800	8.13	6.92	0.04	0.57	0.00	0.00	0.00	0.00	4.33	4.33	4.33	0.10	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
94	19.700	8.13	6.92	0.04	0.57	0.00	0.00	0.00	0.00	4.34	4.34	4.34	0.10	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95	19.600	8.12	6.92	0.04	0.57	0.00	0.00	0.00	0.00	4.34	4.34	4.34	0.10	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
96	19.500	8.12	6.93	0.04	0.57	0.00	0.00	0.00	0.00	4.34	4.34	4.34	0.10	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
97	19.400	8.12	6.93	0.04	0.57	0.00	0.00	0.00	0.00	4.34	4.34	4.34	0.10	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
98	19.300	8.12	6.93	0.04	0.57	0.00	0.00	0.00	0.00	4.35	4.35	4.35	0.10	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
99	19.200	8.12	6.93	0.04	0.58	0.00	0.00	0.00	0.00	4.35	4.35	4.35	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100	19.100	8.12	6.93	0.04	0.58	0.00	0.00	0.00	0.00	4.35	4.35	4.35	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
101	19.000	8.12	6.93	0.04	0.58	0.00	0.00	0.00	0.00	4.35	4.35	4.35	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
102	18.900	8.11	6.93	0.04	0.58	0.00	0.00	0.00	0.00	4.36	4.36	4.36	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
103	18.800	8.11	6.93	0.04	0.58	0.00	0.00	0.00	0.00	4.36	4.36	4.36	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
104	18.700	8.11	6.93	0.04	0.58	0.00	0.00	0.00	0.00	4.36	4.36	4.36	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
105	18.600	8.11	6.94	0.04	0.58	0.00	0.00	0.00	0.00	4.36	4.36	4.36	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
106	18.500	8.11	6.94	0.04	0.58	0.00	0.00	0.00	0.00	4.37	4.37	4.37	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
107	18.400	8.11	6.94	0.04	0.58	0.00	0.00	0.00	0.00	4.37	4.37	4.37	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
108	18.300	8.11	6.94	0.04	0.58	0.00	0.00	0.00	0.00	4.37	4.37	4.37	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
109	18.200	8.11	6.94	0.04	0.58	0.00	0.00	0.00	0.00	4.37	4.37	4.37	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
110	18.100	8.10	6.94	0.04	0.58	0.00	0.00	0.00	0.00	4.38	4.38	4.38	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
111	18.000	8.10	6.94	0.04	0.58	0.00	0.00	0.00	0.00	4.38	4.38	4.38	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
112	17.900	8.10	6.94	0.04	0.58	0.00	0.00	0.00	0.00	4.38	4.38	4.38	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
113	17.800	8.10	6.94	0.04	0.58	0.00	0.00	0.00	0.00	4.38	4.38	4.38	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
114	17.700	8.10	6.95	0.04	0.58	0.00	0.00	0.00	0.00	4.39	4.39	4.39	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
115	17.600	8.10	6.95	0.04	0.58	0.00	0.00	0.00	0.00	4.39	4.39	4.39	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
116	17.500	8.10	6.95	0.04	0.58	0.00	0.00	0.00	0.00	4.39	4.39	4.39	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
117	17.400	8.10	6.95	0.04	0.58	0.00	0.00	0.00	0.00	4.39	4.39	4.39	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
118	17.300	8.09	6.95	0.04	0.58	0.00	0.00	0.00	0.00	4.40	4.40	4.40	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
119	17.200	8.09	6.95	0.04	0.58	0.00	0.00	0.00	0.00	4.40	4.40	4.40	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
120	17.100	8.09	6.95	0.04	0.58	0.00	0.00	0.00	0.00	4.40	4.40	4.40	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
121	17.000	8.09	6.95	0.04	0.58	0.00	0.00	0.00	0.00	4.40	4.40	4.40	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
122	16.900	8.09	6.95	0.04	0.58	0.00	0.00	0.00	0.00	4.41	4.41	4.41	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
123	16.800	8.09	6.96	0.04	0.58	0.00	0.00	0.00	0.00	4.41	4.41	4.41	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
124	16.700	8.09	6.96	0.04	0.58	0.00	0.00	0.00	0.00	4.41	4.41	4.41	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
125	16.600	8.08	6.96	0.04	0.58	0.00	0.00	0.00	0.00	4.41	4.41	4.41	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
126	16.500	8.08	6.96	0.04	0.58	0.00	0.00	0.00	0.00	4.42	4.42	4.42	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
127	16.400	8.08	6.96	0.04	0.58	0.00	0.00	0.00	0.00	4.42	4.42	4.42	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
128	16.300	8.08	6.96	0.04	0.58	0.00	0.00	0.00	0.00	4.42	4.42	4.42	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
129	16.200	8.08	6.96	0.04	0.58	0.00	0.00	0.00	0.00	4.42	4.42	4.42	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
130	16.100	8.08	6.96	0.04	0.58	0.00	0.00	0.00	0.00	4.43	4.43	4.43	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
131	16.000	8.08	6.97	0.04	0.58	0.00	0.00	0.00	0.00	4.43	4.43	4.43	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
132	15.900	8.08	6.97	0.04	0.58	0.00	0.00	0.00	0.00	4.43	4.43	4.43	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
133	15.800	8.07	6.97	0.04	0.58	0.00	0.00	0.00	0.00	4.43	4.43	4.43	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
134	15.700	8.07	6.97	0.04	0.58	0.00	0.00	0.00	0.00	4.44	4.44	4.44	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
135	15.600	8.07	6.97	0.04	0.58	0.00	0.00	0.00	0.00	4.44	4.44	4.44	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
136	15.500	8.07	6.97	0.04	0.58	0.00	0.00	0.00	0.00	4.44	4.44	4.44	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
137	15.400	8.07	6.97	0.04	0.58	0.00	0.00	0.00	0.00	4.45	4.45	4.45	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
138	15.300	8.07	6.97	0.04	0.58	0.00	0.00	0.00	0.00	4.45	4.45	4.45	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
139	15.200	8.07	6.97	0.04	0.58	0.00	0.00	0.00	0.00	4.45	4.45	4.45	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
140	15.100	8.07	6.98	0.04	0.58	0.00	0.00	0.00	0.00	4.45	4.45	4.45	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
141	15.000	8.06	6.98	0.04	0.58	0.00	0.00	0.00	0.00	4.46	4.46	4.46	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
142	14.900	8.06	6.98	0.04	0.58	0.00	0.00	0.00	0.00	4.46	4.46	4.46	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
143	14.800	8.06	6.98	0.04	0.58	0.00	0.00	0.00	0.00	4.46	4.46	4.46	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
144	14.700	8.06	6.98	0.04	0.58	0.00	0.00	0.00	0.00	4.46	4.46	4.46	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
145	14.600	8.06	6.98	0.04	0.58	0.00	0.00	0.00	0.00	4.47	4.47	4.47	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
146	14.500	8.06	6.98	0.04	0.58	0.00	0.00	0.00	0.00	4.47	4.47	4.47	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
147	14.400	8.06	6.98	0.04	0.58	0.00	0.00	0.00	0.00	4.47	4.47	4.47	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
148	14.300	8.06	6.99	0.04	0.58	0.00	0.00	0.00	0.00	4.47	4.47	4.47	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
149	14.200	8.05	6.99	0.04	0.58	0.00	0.00	0.00	0.00	4.48	4.48	4.48	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

150	14.100	8.05	6.99	0.04	0.58	0.00	0.00	0.00	0.00	4.48	4.48	4.48	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
151	14.000	8.05	6.99	0.04	0.58	0.00	0.00	0.00	0.00	4.48	4.48	4.48	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
152	13.900	8.05	6.99	0.04	0.58	0.00	0.00	0.00	0.00	4.48	4.48	4.48	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
153	13.800	8.05	6.99	0.04	0.58	0.00	0.00	0.00	0.00	4.49	4.49	4.49	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
154	13.700	8.05	6.99	0.04	0.58	0.00	0.00	0.00	0.00	4.49	4.49	4.49	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
155	13.600	8.05	6.99	0.04	0.58	0.00	0.00	0.00	0.00	4.49	4.49	4.49	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
156	13.500	8.04	6.99	0.04	0.58	0.00	0.00	0.00	0.00	4.49	4.49	4.49	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
157	13.400	8.04	7.00	0.04	0.58	0.00	0.00	0.00	0.00	4.50	4.50	4.50	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
158	13.300	8.04	7.00	0.04	0.58	0.00	0.00	0.00	0.00	4.50	4.50	4.50	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
159	13.200	8.04	7.00	0.04	0.58	0.00	0.00	0.00	0.00	4.50	4.50	4.50	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
160	13.100	8.04	7.00	0.04	0.58	0.00	0.00	0.00	0.00	4.50	4.50	4.50	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
161	13.000	8.04	7.00	0.04	0.58	0.00	0.00	0.00	0.00	4.51	4.51	4.51	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
162	12.900	8.04	7.00	0.04	0.58	0.00	0.00	0.00	0.00	4.51	4.51	4.51	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
163	12.800	8.04	7.00	0.04	0.58	0.00	0.00	0.00	0.00	4.51	4.51	4.51	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
164	12.700	8.03	7.00	0.04	0.58	0.00	0.00	0.00	0.00	4.51	4.51	4.51	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
165	12.600	8.03	7.00	0.04	0.58	0.00	0.00	0.00	0.00	4.52	4.52	4.52	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
166	12.500	8.03	7.01	0.04	0.58	0.00	0.00	0.00	0.00	4.52	4.52	4.52	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
167	12.400	8.03	7.01	0.04	0.58	0.00	0.00	0.00	0.00	4.52	4.52	4.52	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
168	12.300	8.03	7.01	0.04	0.58	0.00	0.00	0.00	0.00	4.52	4.52	4.52	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
169	12.200	8.03	7.01	0.04	0.58	0.00	0.00	0.00	0.00	4.53	4.53	4.53	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
170	12.100	8.03	7.01	0.04	0.58	0.00	0.00	0.00	0.00	4.53	4.53	4.53	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
171	12.000	8.03	7.01	0.04	0.58	0.00	0.00	0.00	0.00	4.53	4.53	4.53	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
172	11.900	8.02	7.01	0.04	0.58	0.00	0.00	0.00	0.00	4.54	4.54	4.54	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
173	11.800	8.02	7.01	0.04	0.58	0.00	0.00	0.00	0.00	4.54	4.54	4.54	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
174	11.700	8.02	7.01	0.04	0.58	0.00	0.00	0.00	0.00	4.54	4.54	4.54	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
175	11.600	8.02	7.02	0.04	0.58	0.00	0.00	0.00	0.00	4.54	4.54	4.54	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
176	11.500	8.02	7.02	0.04	0.58	0.00	0.00	0.00	0.00	4.55	4.55	4.55	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
177	11.400	8.02	7.02	0.04	0.58	0.00	0.00	0.00	0.00	4.55	4.55	4.55	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
178	11.300	8.02	7.02	0.04	0.58	0.00	0.00	0.00	0.00	4.55	4.55	4.55	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
179	11.200	8.02	7.02	0.04	0.59	0.00	0.00	0.00	0.00	4.55	4.55	4.55	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
180	11.100	8.01	7.02	0.04	0.59	0.00	0.00	0.00	0.00	4.56	4.56	4.56	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
181	11.000	8.01	7.02	0.04	0.59	0.00	0.00	0.00	0.00	4.56	4.56	4.56	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
182	10.900	8.01	7.02	0.04	0.59	0.00	0.00	0.00	0.00	4.56	4.56	4.56	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
183	10.800	8.01	7.03	0.04	0.59	0.00	0.00	0.00	0.00	4.56	4.56	4.56	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
184	10.700	8.01	7.03	0.04	0.59	0.00	0.00	0.00	0.00	4.57	4.57	4.57	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
185	10.600	8.01	7.03	0.04	0.59	0.00	0.00	0.00	0.00	4.57	4.57	4.57	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
186	10.500	8.01	7.03	0.04	0.59	0.00	0.00	0.00	0.00	4.57	4.57	4.57	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
187	10.400	8.01	7.03	0.04	0.59	0.00	0.00	0.00	0.00	4.57	4.57	4.57	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
188	10.300	8.00	7.03	0.04	0.59	0.00	0.00	0.00	0.00	4.58	4.58	4.58	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
189	10.200	8.00	7.03	0.04	0.59	0.00	0.00	0.00	0.00	4.58	4.58	4.58	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
190	10.100	8.00	7.03	0.04	0.59	0.00	0.00	0.00	0.00	4.58	4.58	4.58	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
191	10.000	8.00	7.03	0.04	0.59	0.00	0.00	0.00	0.00	4.58	4.58	4.58	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
192	9.900	8.00	7.04	0.04	0.59	0.00	0.00	0.00	0.00	4.59	4.59	4.59	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
193	9.800	8.00	7.04	0.04	0.59	0.00	0.00	0.00	0.00	4.59	4.59	4.59	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
194	9.700	8.00	7.04	0.04	0.59	0.00	0.00	0.00	0.00	4.59	4.59	4.59	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
195	9.600	8.00	7.04	0.04	0.59	0.00	0.00	0.00	0.00	4.60	4.60	4.60	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
196	9.500	7.99	7.04	0.04	0.59	0.00	0.00	0.00	0.00	4.60	4.60	4.60	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
197	9.400	7.99	7.04	0.04	0.59	0.00	0.00	0.00	0.00	4.60	4.60	4.60	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
198	9.300	7.99	7.04	0.04	0.59	0.00	0.00	0.00	0.00	4.60	4.60	4.60	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
199	9.200	7.99	7.04	0.04	0.59	0.00	0.00	0.00	0.00	4.61	4.61	4.61	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
200	9.100	7.99	7.05	0.04	0.59	0.00	0.00	0.00	0.00	4.61	4.61	4.61	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
201	9.000	7.99	7.05	0.04	0.59	0.00	0.00	0.00	0.00	4.61	4.61	4.61	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
202	8.900	7.99	7.05	0.04	0.59	0.00	0.00	0.00	0.00	4.61	4.61	4.61	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
203	8.800	7.99	7.05	0.04	0.59	0.00	0.00	0.00	0.00	4.62	4.62	4.62	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
204	8.700	7.98	7.05	0.04	0.59	0.00	0.00	0.00	0.00	4.62	4.62	4.62	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
205	8.600	7.98	7.05	0.04	0.59	0.00	0.00	0.00	0.00	4.62	4.62	4.62	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
206	8.500	7.98	7.05	0.04	0.59	0.00	0.00	0.00	0.00	4.62	4.62	4.62	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
207	8.400	7.98	7.05	0.04	0.59	0.00	0.00	0.00	0.00	4.63	4.63	4.63	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
208	8.300	7.98	7.05	0.04	0.59	0.00	0.00	0.00	0.00	4.63	4.63	4.63	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

209	8.200	7.98	7.06	0.04	0.59	0.00	0.00	0.00	0.00	4.63	4.63	4.63	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
210	8.100	7.98	7.06	0.04	0.59	0.00	0.00	0.00	0.00	4.64	4.64	4.64	0.09	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
211	8.000	7.98	7.06	0.04	0.59	0.00	0.00	0.00	0.00	4.64	4.64	4.64	0.09	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
212	7.900	7.97	7.06	0.04	0.59	0.00	0.00	0.00	0.00	4.64	4.64	4.64	0.09	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
213	7.800	7.97	7.06	0.04	0.59	0.00	0.00	0.00	0.00	4.64	4.64	4.64	0.09	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
214	7.700	7.97	7.06	0.04	0.59	0.00	0.00	0.00	0.00	4.65	4.65	4.65	0.09	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
215	7.600	7.97	7.06	0.04	0.59	0.00	0.00	0.00	0.00	4.65	4.65	4.65	0.09	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
216	7.500	7.97	7.06	0.04	0.59	0.00	0.00	0.00	0.00	4.65	4.65	4.65	0.09	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
217	7.400	7.97	7.06	0.04	0.59	0.00	0.00	0.00	0.00	4.65	4.65	4.65	0.09	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
218	7.300	7.97	7.07	0.04	0.59	0.00	0.00	0.00	0.00	4.66	4.66	4.66	0.09	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
219	7.200	7.97	7.07	0.04	0.59	0.00	0.00	0.00	0.00	4.66	4.66	4.66	0.09	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
220	7.100	7.96	7.07	0.04	0.59	0.00	0.00	0.00	0.00	4.66	4.66	4.66	0.09	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
221	7.000	7.96	7.07	0.04	0.59	0.00	0.00	0.00	0.00	4.66	4.66	4.66	0.09	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
222	6.900	7.96	7.07	0.04	0.59	0.00	0.00	0.00	0.00	4.67	4.67	4.67	0.09	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
223	6.800	7.96	7.07	0.04	0.59	0.00	0.00	0.00	0.00	4.67	4.67	4.67	0.09	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
224	6.700	7.96	7.07	0.04	0.59	0.00	0.00	0.00	0.00	4.67	4.67	4.67	0.09	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
225	6.600	7.96	7.07	0.04	0.59	0.00	0.00	0.00	0.00	4.68	4.68	4.68	0.09	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
226	6.500	7.96	7.08	0.04	0.59	0.00	0.00	0.00	0.00	4.68	4.68	4.68	0.09	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
227	6.400	7.95	7.08	0.04	0.59	0.00	0.00	0.00	0.00	4.68	4.68	4.68	0.09	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
228	6.300	7.95	7.08	0.04	0.59	0.00	0.00	0.00	0.00	4.68	4.68	4.68	0.09	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
229	6.200	7.95	7.08	0.04	0.59	0.00	0.00	0.00	0.00	4.69	4.69	4.69	0.09	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
230	6.100	7.95	7.08	0.04	0.59	0.00	0.00	0.00	0.00	4.69	4.69	4.69	0.08	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
231	6.000	7.95	7.08	0.02	0.59	0.00	0.00	0.00	0.00	4.69	4.69	4.69	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			6.19	0.03	0.50	0.00	0.00	0.00	0.00	3.00			0.09	0.10	0.00	0.00	0.00	0.00			0.00	0.00	0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I MG/L	CM-II MG/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO g/m³	COLI #/100mL	NCM
74	21.700	25.67	0.24	71.74	479.87	4.38	7.12	0.00	8.64	0.00	0.71	0.00	0.00	0.00	0.00	15.19	0.00	0.	0.00
75	21.600	25.68	0.24	71.74	479.87	4.14	7.12	0.00	8.65	0.00	0.72	0.00	0.00	0.00	0.00	15.29	0.00	0.	0.00
76	21.500	25.69	0.24	71.74	479.87	3.93	7.11	0.00	8.65	0.00	0.72	0.00	0.00	0.00	0.00	15.38	0.00	0.	0.00
77	21.400	25.70	0.24	71.74	479.87	3.75	7.11	0.00	8.65	0.00	0.73	0.00	0.00	0.00	0.00	15.48	0.00	0.	0.00
78	21.300	25.71	0.24	71.74	479.87	3.59	7.10	0.00	8.66	0.00	0.74	0.00	0.00	0.00	0.00	15.57	0.00	0.	0.00
79	21.200	25.71	0.23	71.74	479.87	3.45	7.09	0.00	8.66	0.00	0.74	0.00	0.00	0.00	0.00	15.67	0.00	0.	0.00
80	21.100	25.72	0.23	71.74	479.87	3.34	7.09	0.00	8.66	0.00	0.75	0.00	0.00	0.00	0.00	15.76	0.00	0.	0.00
81	21.000	25.73	0.23	71.74	479.87	3.23	7.08	0.00	8.67	0.00	0.75	0.00	0.00	0.00	0.00	15.85	0.00	0.	0.00
82	20.900	25.74	0.23	71.74	479.87	3.14	7.08	0.00	8.67	0.00	0.76	0.00	0.00	0.00	0.00	15.95	0.00	0.	0.00
83	20.800	25.75	0.23	71.74	479.87	3.07	7.07	0.00	8.67	0.00	0.76	0.00	0.00	0.00	0.00	16.04	0.00	0.	0.00
84	20.700	25.76	0.23	71.74	479.87	3.00	7.06	0.00	8.68	0.00	0.77	0.00	0.00	0.00	0.00	16.14	0.00	0.	0.00
85	20.600	25.77	0.23	71.74	479.87	2.94	7.06	0.00	8.68	0.00	0.78	0.00	0.00	0.00	0.00	16.23	0.00	0.	0.00
86	20.500	25.78	0.23	71.74	479.87	2.89	7.05	0.00	8.69	0.00	0.78	0.00	0.00	0.00	0.00	16.33	0.00	0.	0.00
87	20.400	25.79	0.23	71.74	479.87	2.84	7.05	0.00	8.69	0.00	0.79	0.00	0.00	0.00	0.00	16.42	0.00	0.	0.00
88	20.300	25.80	0.23	71.74	479.87	2.80	7.04	0.00	8.69	0.00	0.79	0.00	0.00	0.00	0.00	16.51	0.00	0.	0.00
89	20.200	25.81	0.22	71.74	479.87	2.77	7.04	0.00	8.70	0.00	0.80	0.00	0.00	0.00	0.00	16.61	0.00	0.	0.00
90	20.100	25.81	0.22	71.74	479.87	2.74	7.03	0.00	8.70	0.00	0.80	0.00	0.00	0.00	0.00	16.70	0.00	0.	0.00
91	20.000	25.82	0.22	71.74	479.87	2.71	7.03	0.00	8.71	0.00	0.81	0.00	0.00	0.00	0.00	16.80	0.00	0.	0.00
92	19.900	25.83	0.22	71.74	479.87	2.69	7.02	0.00	8.71	0.00	0.81	0.00	0.00	0.00	0.00	16.89	0.00	0.	0.00
93	19.800	25.84	0.22	71.74	479.87	2.67	7.02	0.00	8.71	0.00	0.82	0.00	0.00	0.00	0.00	16.99	0.00	0.	0.00
94	19.700	25.85	0.22	71.74	479.87	2.65	7.01	0.00	8.72	0.00	0.83	0.00	0.00	0.00	0.00	17.08	0.00	0.	0.00
95	19.600	25.86	0.22	71.74	479.87	2.63	7.01	0.00	8.72	0.00	0.83	0.00	0.00	0.00	0.00	17.17	0.00	0.	0.00
96	19.500	25.87	0.22	71.74	479.87	2.62	7.00	0.00	8.73	0.00	0.84	0.00	0.00	0.00	0.00	17.27	0.00	0.	0.00
97	19.400	25.88	0.22	71.74	479.87	2.60	7.00	0.00	8.73	0.00	0.84	0.00	0.00	0.00	0.00	17.36	0.00	0.	0.00
98	19.300	25.89	0.22	71.74	479.87	2.59	6.99	0.00	8.74	0.00	0.85	0.00	0.00	0.00	0.00	17.46	0.00	0.	0.00

99	19.200	25.90	0.22	71.74	479.87	2.58	6.99	0.00	8.74	0.00	0.85	0.00	0.00	0.00	0.00	17.55	0.00	0.	0.00
100	19.100	25.91	0.21	71.74	479.87	2.57	6.98	0.00	8.75	0.00	0.86	0.00	0.00	0.00	0.00	17.65	0.00	0.	0.00
101	19.000	25.92	0.21	71.74	479.87	2.56	6.98	0.00	8.75	0.00	0.86	0.00	0.00	0.00	0.00	17.74	0.00	0.	0.00
102	18.900	25.92	0.21	71.74	479.87	2.55	6.97	0.00	8.76	0.00	0.87	0.00	0.00	0.00	0.00	17.83	0.00	0.	0.00
103	18.800	25.93	0.21	71.74	479.87	2.55	6.97	0.00	8.76	0.00	0.87	0.00	0.00	0.00	0.00	17.93	0.00	0.	0.00
104	18.700	25.94	0.21	71.74	479.87	2.54	6.96	0.00	8.76	0.00	0.88	0.00	0.00	0.00	0.00	18.02	0.00	0.	0.00
105	18.600	25.95	0.21	71.74	479.87	2.53	6.96	0.00	8.77	0.00	0.88	0.00	0.00	0.00	0.00	18.12	0.00	0.	0.00
106	18.500	25.96	0.21	71.74	479.87	2.53	6.95	0.00	8.77	0.00	0.89	0.00	0.00	0.00	0.00	18.21	0.00	0.	0.00
107	18.400	25.97	0.21	71.74	479.87	2.52	6.95	0.00	8.78	0.00	0.89	0.00	0.00	0.00	0.00	18.31	0.00	0.	0.00
108	18.300	25.98	0.21	71.74	479.87	2.51	6.94	0.00	8.78	0.00	0.90	0.00	0.00	0.00	0.00	18.40	0.00	0.	0.00
109	18.200	25.99	0.21	71.74	479.87	2.51	6.94	0.00	8.79	0.00	0.90	0.00	0.00	0.00	0.00	18.49	0.00	0.	0.00
110	18.100	26.00	0.20	71.74	479.87	2.50	6.94	0.00	8.79	0.00	0.91	0.00	0.00	0.00	0.00	18.59	0.00	0.	0.00
111	18.000	26.01	0.20	71.74	479.87	2.50	6.93	0.00	8.80	0.00	0.91	0.00	0.00	0.00	0.00	18.68	0.00	0.	0.00
112	17.900	26.02	0.20	71.74	479.87	2.49	6.93	0.00	8.80	0.00	0.92	0.00	0.00	0.00	0.00	18.78	0.00	0.	0.00
113	17.800	26.02	0.20	71.74	479.87	2.49	6.92	0.00	8.81	0.00	0.92	0.00	0.00	0.00	0.00	18.87	0.00	0.	0.00
114	17.700	26.03	0.20	71.74	479.87	2.48	6.92	0.00	8.81	0.00	0.93	0.00	0.00	0.00	0.00	18.97	0.00	0.	0.00
115	17.600	26.04	0.20	71.74	479.87	2.48	6.91	0.00	8.82	0.00	0.93	0.00	0.00	0.00	0.00	19.06	0.00	0.	0.00
116	17.500	26.05	0.20	71.74	479.87	2.48	6.91	0.00	8.83	0.00	0.94	0.00	0.00	0.00	0.00	19.16	0.00	0.	0.00
117	17.400	26.06	0.20	71.74	479.87	2.47	6.91	0.00	8.83	0.00	0.94	0.00	0.00	0.00	0.00	19.25	0.00	0.	0.00
118	17.300	26.07	0.20	71.74	479.87	2.47	6.90	0.00	8.84	0.00	0.95	0.00	0.00	0.00	0.00	19.34	0.00	0.	0.00
119	17.200	26.08	0.20	71.74	479.87	2.46	6.90	0.00	8.84	0.00	0.95	0.00	0.00	0.00	0.00	19.44	0.00	0.	0.00
120	17.100	26.09	0.20	71.74	479.87	2.46	6.89	0.00	8.85	0.00	0.96	0.00	0.00	0.00	0.00	19.53	0.00	0.	0.00
121	17.000	26.10	0.19	71.74	479.87	2.46	6.89	0.00	8.85	0.00	0.96	0.00	0.00	0.00	0.00	19.63	0.00	0.	0.00
122	16.900	26.11	0.19	71.74	479.87	2.45	6.89	0.00	8.86	0.00	0.97	0.00	0.00	0.00	0.00	19.72	0.00	0.	0.00
123	16.800	26.12	0.19	71.74	479.87	2.45	6.88	0.00	8.86	0.00	0.97	0.00	0.00	0.00	0.00	19.82	0.00	0.	0.00
124	16.700	26.12	0.19	71.74	479.87	2.44	6.88	0.00	8.87	0.00	0.98	0.00	0.00	0.00	0.00	19.91	0.00	0.	0.00
125	16.600	26.13	0.19	71.74	479.87	2.44	6.87	0.00	8.87	0.00	0.98	0.00	0.00	0.00	0.00	20.00	0.00	0.	0.00
126	16.500	26.14	0.19	71.74	479.87	2.44	6.87	0.00	8.88	0.00	0.99	0.00	0.00	0.00	0.00	20.10	0.00	0.	0.00
127	16.400	26.15	0.19	71.74	479.87	2.43	6.87	0.00	8.89	0.00	0.99	0.00	0.00	0.00	0.00	20.19	0.00	0.	0.00
128	16.300	26.16	0.19	71.74	479.87	2.43	6.86	0.00	8.89	0.00	0.99	0.00	0.00	0.00	0.00	20.29	0.00	0.	0.00
129	16.200	26.17	0.19	71.74	479.87	2.43	6.86	0.00	8.90	0.00	1.00	0.00	0.00	0.00	0.00	20.38	0.00	0.	0.00
130	16.100	26.18	0.19	71.74	479.87	2.42	6.85	0.00	8.90	0.00	1.00	0.00	0.00	0.00	0.00	20.48	0.00	0.	0.00
131	16.000	26.19	0.18	71.74	479.87	2.42	6.85	0.00	8.91	0.00	1.01	0.00	0.00	0.00	0.00	20.57	0.00	0.	0.00
132	15.900	26.20	0.18	71.74	479.87	2.41	6.85	0.00	8.91	0.00	1.01	0.00	0.00	0.00	0.00	20.66	0.00	0.	0.00
133	15.800	26.21	0.18	71.74	479.87	2.41	6.84	0.00	8.92	0.00	1.02	0.00	0.00	0.00	0.00	20.76	0.00	0.	0.00
134	15.700	26.22	0.18	71.74	479.87	2.41	6.84	0.00	8.93	0.00	1.02	0.00	0.00	0.00	0.00	20.85	0.00	0.	0.00
135	15.600	26.23	0.18	71.74	479.87	2.40	6.84	0.00	8.93	0.00	1.03	0.00	0.00	0.00	0.00	20.95	0.00	0.	0.00
136	15.500	26.23	0.18	71.74	479.87	2.40	6.83	0.00	8.94	0.00	1.03	0.00	0.00	0.00	0.00	21.04	0.00	0.	0.00
137	15.400	26.24	0.18	71.74	479.87	2.40	6.83	0.00	8.94	0.00	1.03	0.00	0.00	0.00	0.00	21.14	0.00	0.	0.00
138	15.300	26.25	0.18	71.74	479.87	2.39	6.83	0.00	8.95	0.00	1.04	0.00	0.00	0.00	0.00	21.23	0.00	0.	0.00
139	15.200	26.26	0.18	71.74	479.87	2.39	6.82	0.00	8.96	0.00	1.04	0.00	0.00	0.00	0.00	21.32	0.00	0.	0.00
140	15.100	26.27	0.18	71.74	479.87	2.39	6.82	0.00	8.96	0.00	1.05	0.00	0.00	0.00	0.00	21.42	0.00	0.	0.00
141	15.000	26.28	0.18	71.74	479.87	2.38	6.82	0.00	8.97	0.00	1.05	0.00	0.00	0.00	0.00	21.51	0.00	0.	0.00
142	14.900	26.29	0.17	71.74	479.87	2.38	6.81	0.00	8.97	0.00	1.06	0.00	0.00	0.00	0.00	21.61	0.00	0.	0.00
143	14.800	26.30	0.17	71.74	479.87	2.37	6.81	0.00	8.98	0.00	1.06	0.00	0.00	0.00	0.00	21.70	0.00	0.	0.00
144	14.700	26.31	0.17	71.74	479.87	2.37	6.81	0.00	8.99	0.00	1.06	0.00	0.00	0.00	0.00	21.80	0.00	0.	0.00
145	14.600	26.32	0.17	71.74	479.87	2.37	6.80	0.00	8.99	0.00	1.07	0.00	0.00	0.00	0.00	21.89	0.00	0.	0.00
146	14.500	26.33	0.17	71.74	479.87	2.36	6.80	0.00	9.00	0.00	1.07	0.00	0.00	0.00	0.00	21.98	0.00	0.	0.00
147	14.400	26.33	0.17	71.74	479.87	2.36	6.80	0.00	9.00	0.00	1.08	0.00	0.00	0.00	0.00	22.08	0.00	0.	0.00
148	14.300	26.34	0.17	71.74	479.87	2.36	6.79	0.00	9.01	0.00	1.08	0.00	0.00	0.00	0.00	22.17	0.00	0.	0.00
149	14.200	26.35	0.17	71.74	479.87	2.35	6.79	0.00	9.02	0.00	1.09	0.00	0.00	0.00	0.00	22.27	0.00	0.	0.00
150	14.100	26.36	0.17	71.74	479.87	2.35	6.79	0.00	9.02	0.00	1.09	0.00	0.00	0.00	0.00	22.36	0.00	0.	0.00
151	14.000	26.37	0.17	71.74	479.87	2.35	6.78	0.00	9.03	0.00	1.09	0.00	0.00	0.00	0.00	22.46	0.00	0.	0.00
152	13.900	26.38	0.17	71.74	479.87	2.34	6.78	0.00	9.04	0.00	1.10	0.00	0.00	0.00	0.00	22.55	0.00	0.	0.00
153	13.800	26.39	0.16	71.74	479.87	2.34	6.78	0.00	9.04	0.00	1.10	0.00	0.00	0.00	0.00	22.64	0.00	0.	0.00
154	13.700	26.40	0.16	71.74	479.87	2.33	6.77	0.00	9.05	0.00	1.11	0.00	0.00	0.00	0.00	22.74	0.00	0.	0.00
155	13.600	26.41	0.16	71.74	479.87	2.33	6.77	0.00	9.05	0.00	1.11	0.00	0.00	0.00	0.00	22.83	0.00	0.	0.00
156	13.500	26.42	0.16	71.74	479.87	2.33	6.77	0.00	9.06	0.00	1.11	0.00	0.00	0.00	0.00	22.93	0.00	0.	0.00
157	13.400	26.43	0.16	71.74	479.87	2.32	6.76	0.00	9.07	0.00	1.12	0.00	0.00	0.00	0.00	23.02	0.00	0.	0.00

158	13.300	26.43	0.16	71.74	479.87	2.32	6.76	0.00	9.07	0.00	1.12	0.00	0.00	0.00	0.00	23.12	0.00	0.	0.00
159	13.200	26.44	0.16	71.74	479.87	2.32	6.76	0.00	9.08	0.00	1.13	0.00	0.00	0.00	0.00	23.21	0.00	0.	0.00
160	13.100	26.45	0.16	71.74	479.87	2.31	6.76	0.00	9.09	0.00	1.13	0.00	0.00	0.00	0.00	23.30	0.00	0.	0.00
161	13.000	26.46	0.16	71.74	479.87	2.31	6.75	0.00	9.09	0.00	1.13	0.00	0.00	0.00	0.00	23.40	0.00	0.	0.00
162	12.900	26.47	0.16	71.74	479.87	2.30	6.75	0.00	9.10	0.00	1.14	0.00	0.00	0.00	0.00	23.49	0.00	0.	0.00
163	12.800	26.48	0.15	71.74	479.87	2.30	6.75	0.00	9.11	0.00	1.14	0.00	0.00	0.00	0.00	23.59	0.00	0.	0.00
164	12.700	26.49	0.15	71.74	479.87	2.30	6.74	0.00	9.11	0.00	1.14	0.00	0.00	0.00	0.00	23.68	0.00	0.	0.00
165	12.600	26.50	0.15	71.74	479.87	2.29	6.74	0.00	9.12	0.00	1.15	0.00	0.00	0.00	0.00	23.78	0.00	0.	0.00
166	12.500	26.51	0.15	71.74	479.87	2.29	6.74	0.00	9.13	0.00	1.15	0.00	0.00	0.00	0.00	23.87	0.00	0.	0.00
167	12.400	26.52	0.15	71.74	479.87	2.29	6.74	0.00	9.13	0.00	1.16	0.00	0.00	0.00	0.00	23.96	0.00	0.	0.00
168	12.300	26.53	0.15	71.74	479.87	2.28	6.73	0.00	9.14	0.00	1.16	0.00	0.00	0.00	0.00	24.06	0.00	0.	0.00
169	12.200	26.53	0.15	71.74	479.87	2.28	6.73	0.00	9.15	0.00	1.16	0.00	0.00	0.00	0.00	24.15	0.00	0.	0.00
170	12.100	26.54	0.15	71.74	479.87	2.28	6.73	0.00	9.15	0.00	1.17	0.00	0.00	0.00	0.00	24.25	0.00	0.	0.00
171	12.000	26.55	0.15	71.74	479.87	2.27	6.72	0.00	9.16	0.00	1.17	0.00	0.00	0.00	0.00	24.34	0.00	0.	0.00
172	11.900	26.56	0.15	71.74	479.87	2.27	6.72	0.00	9.17	0.00	1.17	0.00	0.00	0.00	0.00	24.44	0.00	0.	0.00
173	11.800	26.57	0.15	71.74	479.87	2.26	6.72	0.00	9.17	0.00	1.18	0.00	0.00	0.00	0.00	24.53	0.00	0.	0.00
174	11.700	26.58	0.14	71.74	479.87	2.26	6.72	0.00	9.18	0.00	1.18	0.00	0.00	0.00	0.00	24.62	0.00	0.	0.00
175	11.600	26.59	0.14	71.74	479.87	2.26	6.71	0.00	9.19	0.00	1.18	0.00	0.00	0.00	0.00	24.72	0.00	0.	0.00
176	11.500	26.60	0.14	71.74	479.87	2.25	6.71	0.00	9.19	0.00	1.19	0.00	0.00	0.00	0.00	24.81	0.00	0.	0.00
177	11.400	26.61	0.14	71.74	479.87	2.25	6.71	0.00	9.20	0.00	1.19	0.00	0.00	0.00	0.00	24.91	0.00	0.	0.00
178	11.300	26.62	0.14	71.74	479.87	2.25	6.71	0.00	9.21	0.00	1.20	0.00	0.00	0.00	0.00	25.00	0.00	0.	0.00
179	11.200	26.63	0.14	71.74	479.87	2.24	6.70	0.00	9.21	0.00	1.20	0.00	0.00	0.00	0.00	25.10	0.00	0.	0.00
180	11.100	26.64	0.14	71.74	479.87	2.24	6.70	0.00	9.22	0.00	1.20	0.00	0.00	0.00	0.00	25.19	0.00	0.	0.00
181	11.000	26.64	0.14	71.74	479.87	2.24	6.70	0.00	9.23	0.00	1.21	0.00	0.00	0.00	0.00	25.28	0.00	0.	0.00
182	10.900	26.65	0.14	71.74	479.87	2.23	6.70	0.00	9.23	0.00	1.21	0.00	0.00	0.00	0.00	25.38	0.00	0.	0.00
183	10.800	26.66	0.14	71.74	479.87	2.23	6.69	0.00	9.24	0.00	1.21	0.00	0.00	0.00	0.00	25.47	0.00	0.	0.00
184	10.700	26.67	0.13	71.74	479.87	2.22	6.69	0.00	9.25	0.00	1.22	0.00	0.00	0.00	0.00	25.57	0.00	0.	0.00
185	10.600	26.68	0.13	71.74	479.87	2.22	6.69	0.00	9.25	0.00	1.22	0.00	0.00	0.00	0.00	25.66	0.00	0.	0.00
186	10.500	26.69	0.13	71.74	479.87	2.22	6.69	0.00	9.26	0.00	1.22	0.00	0.00	0.00	0.00	25.76	0.00	0.	0.00
187	10.400	26.70	0.13	71.74	479.87	2.21	6.68	0.00	9.27	0.00	1.23	0.00	0.00	0.00	0.00	25.85	0.00	0.	0.00
188	10.300	26.71	0.13	71.74	479.87	2.21	6.68	0.00	9.27	0.00	1.23	0.00	0.00	0.00	0.00	25.94	0.00	0.	0.00
189	10.200	26.72	0.13	71.74	479.87	2.21	6.68	0.00	9.28	0.00	1.23	0.00	0.00	0.00	0.00	26.04	0.00	0.	0.00
190	10.100	26.73	0.13	71.74	479.87	2.20	6.68	0.00	9.29	0.00	1.24	0.00	0.00	0.00	0.00	26.13	0.00	0.	0.00
191	10.000	26.74	0.13	71.74	479.87	2.20	6.67	0.00	9.30	0.00	1.24	0.00	0.00	0.00	0.00	26.23	0.00	0.	0.00
192	9.900	26.74	0.13	71.74	479.88	2.20	6.67	0.00	9.30	0.00	1.24	0.00	0.00	0.00	0.00	26.32	0.00	0.	0.00
193	9.800	26.75	0.13	71.74	479.88	2.19	6.67	0.00	9.31	0.00	1.25	0.00	0.00	0.00	0.00	26.42	0.00	0.	0.00
194	9.700	26.76	0.13	71.74	479.88	2.19	6.67	0.00	9.32	0.00	1.25	0.00	0.00	0.00	0.00	26.51	0.00	0.	0.00
195	9.600	26.77	0.12	71.74	479.88	2.18	6.66	0.00	9.32	0.00	1.25	0.00	0.00	0.00	0.00	26.61	0.00	0.	0.00
196	9.500	26.78	0.12	71.74	479.88	2.18	6.66	0.00	9.33	0.00	1.26	0.00	0.00	0.00	0.00	26.70	0.00	0.	0.00
197	9.400	26.79	0.12	71.74	479.88	2.18	6.66	0.00	9.34	0.00	1.26	0.00	0.00	0.00	0.00	26.79	0.00	0.	0.00
198	9.300	26.80	0.12	71.74	479.88	2.17	6.66	0.00	9.35	0.00	1.26	0.00	0.00	0.00	0.00	26.89	0.00	0.	0.00
199	9.200	26.81	0.12	71.74	479.88	2.17	6.65	0.00	9.35	0.00	1.27	0.00	0.00	0.00	0.00	26.98	0.00	0.	0.00
200	9.100	26.82	0.12	71.74	479.88	2.17	6.65	0.00	9.36	0.00	1.27	0.00	0.00	0.00	0.00	27.08	0.00	0.	0.00
201	9.000	26.83	0.12	71.74	479.88	2.16	6.65	0.00	9.37	0.00	1.27	0.00	0.00	0.00	0.00	27.17	0.00	0.	0.00
202	8.900	26.84	0.12	71.74	479.88	2.16	6.65	0.00	9.37	0.00	1.28	0.00	0.00	0.00	0.00	27.27	0.00	0.	0.00
203	8.800	26.84	0.12	71.74	479.88	2.15	6.64	0.00	9.38	0.00	1.28	0.00	0.00	0.00	0.00	27.36	0.00	0.	0.00
204	8.700	26.85	0.12	71.74	479.88	2.15	6.64	0.00	9.39	0.00	1.28	0.00	0.00	0.00	0.00	27.45	0.00	0.	0.00
205	8.600	26.86	0.11	71.74	479.88	2.15	6.64	0.00	9.40	0.00	1.29	0.00	0.00	0.00	0.00	27.55	0.00	0.	0.00
206	8.500	26.87	0.11	71.74	479.88	2.14	6.64	0.00	9.40	0.00	1.29	0.00	0.00	0.00	0.00	27.64	0.00	0.	0.00
207	8.400	26.88	0.11	71.74	479.88	2.14	6.64	0.00	9.41	0.00	1.29	0.00	0.00	0.00	0.00	27.74	0.00	0.	0.00
208	8.300	26.89	0.11	71.74	479.88	2.14	6.63	0.00	9.42	0.00	1.29	0.00	0.00	0.00	0.00	27.83	0.00	0.	0.00
209	8.200	26.90	0.11	71.74	479.88	2.13	6.63	0.00	9.42	0.00	1.30	0.00	0.00	0.00	0.00	27.93	0.00	0.	0.00
210	8.100	26.91	0.11	71.74	479.88	2.13	6.63	0.00	9.43	0.00	1.30	0.00	0.00	0.00	0.00	28.02	0.00	0.	0.00
211	8.000	26.92	0.11	71.74	479.88	2.13	6.63	0.00	9.44	0.00	1.30	0.00	0.00	0.00	0.00	28.11	0.00	0.	0.00
212	7.900	26.93	0.11	71.74	479.88	2.12	6.62	0.00	9.45	0.00	1.31	0.00	0.00	0.00	0.00	28.21	0.00	0.	0.00
213	7.800	26.94	0.11	71.74	479.88	2.12	6.62	0.00	9.45	0.00	1.31	0.00	0.00	0.00	0.00	28.30	0.00	0.	0.00
214	7.700	26.95	0.11	71.74	479.88	2.11	6.62	0.00	9.46	0.00	1.31	0.00	0.00	0.00	0.00	28.40	0.00	0.	0.00
215	7.600	26.95	0.11	71.74	479.88	2.11	6.62	0.00	9.47	0.00	1.32	0.00	0.00	0.00	0.00	28.49	0.00	0.	0.00
216	7.500	26.96	0.10	71.74	479.88	2.11	6.62	0.00	9.47	0.00	1.32	0.00	0.00	0.00	0.00	28.59	0.00	0.	0.00

217	7.400	26.97	0.10	71.74	479.88	2.10	6.61	0.00	9.48	0.00	1.32	0.00	0.00	0.00	0.00	28.68	0.00	0.	0.00
218	7.300	26.98	0.10	71.74	479.88	2.10	6.61	0.00	9.49	0.00	1.33	0.00	0.00	0.00	0.00	28.77	0.00	0.	0.00
219	7.200	26.99	0.10	71.74	479.88	2.10	6.61	0.00	9.50	0.00	1.33	0.00	0.00	0.00	0.00	28.87	0.00	0.	0.00
220	7.100	27.00	0.10	71.74	479.88	2.09	6.61	0.00	9.50	0.00	1.33	0.00	0.00	0.00	0.00	28.96	0.00	0.	0.00
221	7.000	27.01	0.10	71.74	479.88	2.09	6.61	0.00	9.51	0.00	1.33	0.00	0.00	0.00	0.00	29.06	0.00	0.	0.00
222	6.900	27.02	0.10	71.74	479.88	2.09	6.60	0.00	9.52	0.00	1.34	0.00	0.00	0.00	0.00	29.15	0.00	0.	0.00
223	6.800	27.03	0.10	71.74	479.88	2.08	6.60	0.00	9.53	0.00	1.34	0.00	0.00	0.00	0.00	29.25	0.00	0.	0.00
224	6.700	27.04	0.10	71.74	479.88	2.08	6.60	0.00	9.53	0.00	1.34	0.00	0.00	0.00	0.00	29.34	0.00	0.	0.00
225	6.600	27.05	0.10	71.74	479.87	2.07	6.60	0.00	9.54	0.00	1.35	0.00	0.00	0.00	0.00	29.43	0.00	0.	0.00
226	6.500	27.05	0.09	71.73	479.83	2.07	6.60	0.00	9.55	0.00	1.35	0.00	0.00	0.00	0.00	29.53	0.00	0.	0.00
227	6.400	27.06	0.09	71.70	479.61	2.07	6.60	0.00	9.56	0.00	1.35	0.00	0.00	0.00	0.00	29.62	0.00	0.	0.00
228	6.300	27.07	0.09	71.48	478.27	2.06	6.62	0.00	9.59	0.00	1.36	0.00	0.00	0.00	0.00	29.72	0.00	0.	0.00
229	6.200	27.08	0.09	70.19	470.29	2.04	6.73	0.00	9.71	0.00	1.36	0.00	0.00	0.00	0.00	29.81	0.00	0.	0.00
230	6.100	27.09	0.09	62.47	422.66	1.89	7.46	0.00	10.45	0.00	1.38	0.00	0.00	0.00	0.00	29.91	0.00	0.	0.00
231	6.000	27.10	0.09	16.42	138.40	0.92	11.84	0.00	14.84	0.00	1.50	0.00	0.00	0.00	0.00	30.00	0.00	0.	0.00

FINAL REPORT HEADWATER - NBB03A SMITHPORT LAKE WATERSHED MODEL
REACH NO. 3 RB01 TO CLK02 SMITHPORTLAKE SENSITIVITY ANALYSIS

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CM-I MG/L	CM-II MG/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM
232	UPR RCH	0.01540	27.10	0.09	16.42	138.40	0.92	11.84	0.00	14.84	0.00	1.50	0.00	0.00	0.00	30.00	0.00	0.00
232	WSTLD	0.03020	24.85	0.50	11.30	116.80	2.13	9.24	0.00	9.24	0.00	1.69	0.00	0.00	0.00	0.00	0.00	0.00

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m^3/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	DEPTH m	WIDTH m	VOLUME m^3	SURFACE AREA m^2	X-SECT AREA m^2	TIDAL PRISM m^3	TIDAL VELO m/s	DISPRSN m^2/s	MEAN VELO m/s
232	6.00	5.90	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
233	5.90	5.80	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
234	5.80	5.70	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
235	5.70	5.60	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
236	5.60	5.50	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
237	5.50	5.40	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
238	5.40	5.30	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
TOT						102.46			403673.97	103479.59					
AVG					0.0001		3.90	147.83			576.68				
CUM						108.21									

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD#1 DECAY 1/da	BOD#1 SETT 1/da	ABOD#1 DECAY 1/da	BOD#2 DECAY 1/da	BOD#2 SETT 1/da	ABOD#2 DECAY 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORGN DECAY 1/da	ORGN SETT 1/da	NH3 DECAY 1/da	NH3 SRCE *	DENIT RATE 1/da	PO4 SRCE *	ALG PROD **	MAC PROD **	COLI DECAY 1/da	NCM DECAY 1/da	NCM SETT 1/da
232	5.900	7.94	0.21	0.06	0.59	0.00	0.00	0.00	0.00	3.14	3.14	3.14	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
233	5.800	7.93	0.21	0.06	0.59	0.00	0.00	0.00	0.00	3.15	3.15	3.15	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
234	5.700	7.92	0.21	0.06	0.59	0.00	0.00	0.00	0.00	3.17	3.17	3.17	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
235	5.600	7.91	0.21	0.06	0.60	0.00	0.00	0.00	0.00	3.18	3.18	3.18	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

236	5.500	7.90	0.21	0.06	0.60	0.00	0.00	0.00	0.00	3.19	3.19	3.19	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
237	5.400	7.90	0.21	0.06	0.60	0.00	0.00	0.00	0.00	3.20	3.20	3.20	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
238	5.300	7.89	0.21	0.06	0.60	0.00	0.00	0.00	0.00	3.22	3.22	3.22	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.18	0.09	0.50	0.00	0.00	0.00	0.00	2.00			0.10	0.10	0.00	0.00	0.00	0.00			0.00	0.00	0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I MG/L	CM-II MG/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO g/m³	COLI #/100mL	NCM
232	5.900	27.16	0.09	16.12	136.58	0.91	11.86	0.00	15.08	0.00	1.50	0.00	0.00	0.00	0.00	32.13	0.00	0.	0.00
233	5.800	27.23	0.09	16.00	135.77	0.91	11.78	0.00	15.21	0.00	1.50	0.00	0.00	0.00	0.00	34.26	0.00	0.	0.00
234	5.700	27.29	0.09	15.87	134.95	0.91	11.58	0.00	15.22	0.00	1.49	0.00	0.00	0.00	0.00	36.39	0.00	0.	0.00
235	5.600	27.36	0.09	15.75	134.12	0.92	11.25	0.00	15.11	0.00	1.48	0.00	0.00	0.00	0.00	38.51	0.00	0.	0.00
236	5.500	27.42	0.09	15.62	133.29	0.93	10.77	0.00	14.83	0.00	1.46	0.00	0.00	0.00	0.00	40.64	0.00	0.	0.00
237	5.400	27.49	0.09	15.49	132.45	0.95	10.10	0.00	14.37	0.00	1.44	0.00	0.00	0.00	0.00	42.77	0.00	0.	0.00
238	5.300	27.55	0.09	15.37	131.60	0.97	9.18	0.00	13.67	0.00	1.41	0.00	0.00	0.00	0.00	44.90	0.00	0.	0.00

FINAL REPORT HEADWATER - NBB03A SMITHPORT LAKE WATERSHED MODEL
REACH NO. 4 CLK02 TO CLK01 SMITHPORTLAKE SENSITIVITY ANALYSIS

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CM-I MG/L	CM-II MG/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM
239	UPR RCH	0.04560	27.55	0.09	15.37	131.60	0.97	9.18	0.00	13.67	0.00	1.41	0.00	0.00	0.00	44.90	0.00	0.00

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
239	5.30	5.20	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
240	5.20	5.10	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
241	5.10	5.00	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
242	5.00	4.90	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
243	4.90	4.80	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
244	4.80	4.70	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
245	4.70	4.60	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
TOT						102.46			403673.97	103479.59					
AVG					0.0001		3.90	147.83			576.68				
CUM						210.67									

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD#1 DECAY 1/da	BOD#1 SETT 1/da	ABOD#1 DECAY 1/da	BOD#2 DECAY 1/da	BOD#2 SETT 1/da	ABOD#2 DECAY 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORGN DECAY 1/da	ORGN SETT 1/da	NH3 DECAY 1/da	NH3 SRCE *	DENIT RATE 1/da	PO4 SRCE *	ALG PROD **	MAC PROD **	COLI DECAY 1/da	NCM DECAY 1/da	NCM SETT 1/da

239	5.200	7.88	0.21	0.06	0.60	0.00	0.00	0.00	0.00	4.04	4.04	4.04	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
240	5.100	7.87	0.21	0.06	0.60	0.00	0.00	0.00	0.00	4.05	4.05	4.05	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
241	5.000	7.86	0.21	0.06	0.60	0.00	0.00	0.00	0.00	4.07	4.07	4.07	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
242	4.900	7.85	0.21	0.07	0.60	0.00	0.00	0.00	0.00	4.09	4.09	4.09	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
243	4.800	7.84	0.21	0.07	0.60	0.00	0.00	0.00	0.00	4.10	4.10	4.10	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
244	4.700	7.83	0.21	0.07	0.60	0.00	0.00	0.00	0.00	4.12	4.12	4.12	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
245	4.600	7.83	0.21	0.08	0.60	0.00	0.00	0.00	0.00	4.13	4.13	4.13	0.02	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.18	0.09	0.50	0.00	0.00	0.00	0.00	2.50			0.09	0.10	0.00	0.00	0.00	0.00			0.00	0.00	0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I MG/L	CM-II MG/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO g/m³	COLI #/100mL	NCM
239	5.200	27.61	0.09	15.24	130.75	0.98	7.96	0.00	12.45	0.00	1.38	0.00	0.00	0.00	0.00	44.90	0.00	0.	0.00
240	5.100	27.68	0.09	15.11	129.89	1.01	7.00	0.00	11.49	0.00	1.36	0.00	0.00	0.00	0.00	44.90	0.00	0.	0.00
241	5.000	27.74	0.09	14.98	129.03	1.04	6.21	0.00	10.70	0.00	1.35	0.00	0.00	0.00	0.00	44.90	0.00	0.	0.00
242	4.900	27.80	0.08	14.84	128.15	1.08	5.56	0.00	10.05	0.00	1.35	0.00	0.00	0.00	0.00	44.90	0.00	0.	0.00
243	4.800	27.86	0.08	14.71	127.27	1.13	4.98	0.00	9.47	0.00	1.36	0.00	0.00	0.00	0.00	44.90	0.00	0.	0.00
244	4.700	27.93	0.08	14.58	126.39	1.18	4.45	0.00	8.94	0.00	1.39	0.00	0.00	0.00	0.00	44.90	0.00	0.	0.00
245	4.600	27.99	0.08	14.44	125.49	1.23	3.92	0.00	8.41	0.00	1.43	0.00	0.00	0.00	0.00	44.90	0.00	0.	0.00

FINAL REPORT HEADWATER - NBB03A SMITHPORT LAKE WATERSHED MODEL
REACH NO. 5 CLK01 TO SL04 SMITHPORTLAKE SENSITIVITY ANALYSIS

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CM-I MG/L	CM-II MG/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM
246	UPR RCH	0.04560	27.99	0.08	14.44	125.49	1.23	3.92	0.00	8.41	0.00	1.43	0.00	0.00	0.00	44.90	0.00	0.00

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
246	4.60	4.50	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
247	4.50	4.40	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
248	4.40	4.30	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
TOT						43.91			173003.12	44348.40					
AVG					0.0001		3.90	147.83			576.68				
CUM						254.58									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD#1 DECAY	BOD#1 SETT	ABOD#1 DECAY	BOD#2 DECAY	BOD#2 SETT	ABOD#2 DECAY	BKGD SOD	FULL SOD	CORR SOD	ORGN DECAY	ORGN SETT	NH3 DECAY	NH3 SRCE	DENIT RATE	PO4 SRCE	ALG PROD	MAC PROD	COLI DECAY	NCM DECAY	NCM SETT

		mg/L	1/da	1/da	1/da	1/da	1/da	1/da	1/da	*	*	*	1/da	1/da	1/da	*	1/da	*	**	**	1/da	1/da	1/da
246	4.500	7.84	0.21	0.07	0.60	0.00	0.00	0.00	0.00	4.11	4.11	4.11	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
247	4.400	7.86	0.21	0.07	0.60	0.00	0.00	0.00	0.00	4.08	4.08	4.08	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
248	4.300	7.87	0.21	0.07	0.60	0.00	0.00	0.00	0.00	4.05	4.05	4.05	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.18	0.07	0.50	0.00	0.00	0.00	0.00	2.50			0.05	0.10	0.00	0.00	0.00	0.00			0.00	0.00	0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I MG/L	CM-II MG/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO g/m³	COLI #/100mL	NCM
246	4.500	27.88	0.08	14.30	124.59	1.28	3.34	0.00	8.57	0.00	1.48	0.00	0.00	0.00	0.00	52.30	0.00	0.	0.00
247	4.400	27.77	0.07	14.17	123.68	1.32	2.99	0.00	8.96	0.00	1.56	0.00	0.00	0.00	0.00	59.70	0.00	0.	0.00
248	4.300	27.66	0.07	14.03	122.77	1.35	2.84	0.00	9.55	0.00	1.66	0.00	0.00	0.00	0.00	67.10	0.00	0.	0.00

FINAL REPORT HEADWATER - NBB03A SMITHPORT LAKE WATERSHED MODEL
REACH NO. 6 SL04 TO SL03 SMITHPORTLAKE SENSITIVITY ANALYSIS

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CM-I MG/L	CM-II MG/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM
249	UPR RCH	0.04560	27.66	0.07	14.03	122.77	1.35	2.84	0.00	9.55	0.00	1.66	0.00	0.00	0.00	67.10	0.00	0.00

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
249	4.30	4.20	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
250	4.20	4.10	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
251	4.10	4.00	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
252	4.00	3.90	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
253	3.90	3.80	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
254	3.80	3.70	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
255	3.70	3.60	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
256	3.60	3.50	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
257	3.50	3.40	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
258	3.40	3.30	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
259	3.30	3.20	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
260	3.20	3.10	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
261	3.10	3.00	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
262	3.00	2.90	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
263	2.90	2.80	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
264	2.80	2.70	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
265	2.70	2.60	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
266	2.60	2.50	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
267	2.50	2.40	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
268	2.40	2.30	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000

TOT							292.74					1153354.12	295656.00										
AVG						0.0001			3.90	147.83						576.68							
CUM							547.32																

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD#1 DECAY 1/da	BOD#1 SETT 1/da	ABOD#1 DECAY 1/da	BOD#2 DECAY 1/da	BOD#2 SETT 1/da	ABOD#2 DECAY 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORGN DECAY 1/da	ORGN SETT 1/da	NH3 DECAY 1/da	NH3 SRCE *	DENIT RATE 1/da	PO4 SRCE *	ALG PROD **	MAC PROD **	COLI DECAY 1/da	NCM DECAY 1/da	NCM SETT 1/da
249	4.200	7.87	0.21	0.08	0.60	0.00	0.00	0.00	0.00	4.05	4.05	4.05	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
250	4.100	7.87	0.21	0.08	0.60	0.00	0.00	0.00	0.00	4.05	4.05	4.05	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
251	4.000	7.87	0.21	0.08	0.60	0.00	0.00	0.00	0.00	4.05	4.05	4.05	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
252	3.900	7.88	0.21	0.08	0.60	0.00	0.00	0.00	0.00	4.04	4.04	4.04	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
253	3.800	7.88	0.21	0.08	0.60	0.00	0.00	0.00	0.00	4.04	4.04	4.04	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
254	3.700	7.88	0.21	0.08	0.60	0.00	0.00	0.00	0.00	4.04	4.04	4.04	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
255	3.600	7.88	0.21	0.08	0.60	0.00	0.00	0.00	0.00	4.04	4.04	4.04	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
256	3.500	7.88	0.21	0.08	0.60	0.00	0.00	0.00	0.00	4.04	4.04	4.04	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
257	3.400	7.88	0.21	0.08	0.60	0.00	0.00	0.00	0.00	4.04	4.04	4.04	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
258	3.300	7.88	0.21	0.08	0.60	0.00	0.00	0.00	0.00	4.03	4.03	4.03	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
259	3.200	7.88	0.21	0.08	0.60	0.00	0.00	0.00	0.00	4.03	4.03	4.03	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
260	3.100	7.88	0.21	0.08	0.60	0.00	0.00	0.00	0.00	4.03	4.03	4.03	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
261	3.000	7.88	0.21	0.08	0.60	0.00	0.00	0.00	0.00	4.03	4.03	4.03	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
262	2.900	7.88	0.21	0.08	0.60	0.00	0.00	0.00	0.00	4.03	4.03	4.03	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
263	2.800	7.88	0.21	0.07	0.60	0.00	0.00	0.00	0.00	4.03	4.03	4.03	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
264	2.700	7.89	0.21	0.07	0.60	0.00	0.00	0.00	0.00	4.03	4.03	4.03	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
265	2.600	7.89	0.21	0.07	0.60	0.00	0.00	0.00	0.00	4.02	4.02	4.02	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
266	2.500	7.89	0.21	0.07	0.60	0.00	0.00	0.00	0.00	4.02	4.02	4.02	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
267	2.400	7.89	0.21	0.07	0.60	0.00	0.00	0.00	0.00	4.02	4.02	4.02	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
268	2.300	7.89	0.21	0.06	0.60	0.00	0.00	0.00	0.00	4.02	4.02	4.02	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.18	0.08	0.50	0.00	0.00	0.00	0.00	2.50			0.04	0.10	0.00	0.00	0.00	0.00			0.00	0.00	0.00

* $g/m^2/d$ ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I MG/L	CM-II MG/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO g/m^3	COLI #/100mL	NCM
249	4.200	27.65	0.07	13.89	121.85	1.38	2.87	0.00	9.69	0.00	1.78	0.00	0.00	0.00	0.00	68.21	0.00	0.	0.00
250	4.100	27.65	0.07	13.75	120.92	1.40	2.89	0.00	9.82	0.00	1.89	0.00	0.00	0.00	0.00	69.32	0.00	0.	0.00
251	4.000	27.64	0.07	13.60	119.98	1.41	2.91	0.00	9.95	0.00	1.99	0.00	0.00	0.00	0.00	70.43	0.00	0.	0.00
252	3.900	27.64	0.07	13.46	119.03	1.42	2.93	0.00	10.09	0.00	2.08	0.00	0.00	0.00	0.00	71.54	0.00	0.	0.00
253	3.800	27.63	0.06	13.32	118.08	1.42	2.95	0.00	10.22	0.00	2.15	0.00	0.00	0.00	0.00	72.65	0.00	0.	0.00
254	3.700	27.62	0.06	13.17	117.12	1.42	2.98	0.00	10.35	0.00	2.22	0.00	0.00	0.00	0.00	73.76	0.00	0.	0.00
255	3.600	27.62	0.06	13.02	116.16	1.42	3.00	0.00	10.49	0.00	2.28	0.00	0.00	0.00	0.00	74.87	0.00	0.	0.00
256	3.500	27.61	0.06	12.88	115.18	1.41	3.04	0.00	10.63	0.00	2.33	0.00	0.00	0.00	0.00	75.98	0.00	0.	0.00
257	3.400	27.61	0.06	12.73	114.20	1.41	3.08	0.00	10.79	0.00	2.38	0.00	0.00	0.00	0.00	77.09	0.00	0.	0.00
258	3.300	27.60	0.06	12.58	113.21	1.39	3.13	0.00	10.95	0.00	2.42	0.00	0.00	0.00	0.00	78.20	0.00	0.	0.00
259	3.200	27.59	0.06	12.43	112.21	1.38	3.20	0.00	11.13	0.00	2.46	0.00	0.00	0.00	0.00	79.31	0.00	0.	0.00
260	3.100	27.59	0.06	12.27	111.20	1.36	3.29	0.00	11.33	0.00	2.49	0.00	0.00	0.00	0.00	80.42	0.00	0.	0.00
261	3.000	27.58	0.06	12.12	110.19	1.34	3.41	0.00	11.56	0.00	2.52	0.00	0.00	0.00	0.00	81.53	0.00	0.	0.00
262	2.900	27.58	0.06	11.97	109.17	1.32	3.57	0.00	11.83	0.00	2.54	0.00	0.00	0.00	0.00	82.64	0.00	0.	0.00
263	2.800	27.57	0.05	11.81	108.14	1.29	3.77	0.00	12.15	0.00	2.55	0.00	0.00	0.00	0.00	83.75	0.00	0.	0.00
264	2.700	27.56	0.05	11.65	107.10	1.26	4.04	0.00	12.53	0.00	2.57	0.00	0.00	0.00	0.00	84.86	0.00	0.	0.00

265	2.600	27.56	0.05	11.49	106.06	1.23	4.40	0.00	12.99	0.00	2.58	0.00	0.00	0.00	0.00	85.97	0.00	0.	0.00
266	2.500	27.55	0.05	11.33	105.00	1.19	4.86	0.00	13.57	0.00	2.58	0.00	0.00	0.00	0.00	87.08	0.00	0.	0.00
267	2.400	27.55	0.05	11.17	103.94	1.16	5.48	0.00	14.30	0.00	2.58	0.00	0.00	0.00	0.00	88.19	0.00	0.	0.00
268	2.300	27.54	0.05	11.01	102.87	1.12	6.29	0.00	15.22	0.00	2.57	0.00	0.00	0.00	0.00	89.30	0.00	0.	0.00

FINAL REPORT HEADWATER - NBB03A SMITHPORT LAKE WATERSHED MODEL
REACH NO. 7 SL03 TO SL01 SMITHPORTLAKE SENSITIVITY ANALYSIS

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CM-I MG/L	CM-II MG/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM
269	UPR RCH	0.04560	27.54	0.05	11.01	102.87	1.12	6.29	0.00	15.22	0.00	2.57	0.00	0.00	0.00	89.30	0.00	0.00

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m^3/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	DEPTH m	WIDTH m	VOLUME m^3	SURFACE AREA m^2	X-SECT AREA m^2	TIDAL PRISM m^3	TIDAL VELO m/s	DISPRSN m^2/s	MEAN VELO m/s
269	2.30	2.20	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
270	2.20	2.10	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
271	2.10	2.00	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
272	2.00	1.90	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
273	1.90	1.80	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
274	1.80	1.70	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
275	1.70	1.60	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
276	1.60	1.50	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
277	1.50	1.40	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
278	1.40	1.30	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
279	1.30	1.20	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
280	1.20	1.10	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
281	1.10	1.00	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
282	1.00	0.90	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
283	0.90	0.80	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
284	0.80	0.70	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
285	0.70	0.60	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
286	0.60	0.50	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
287	0.50	0.40	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
288	0.40	0.30	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
289	0.30	0.20	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
290	0.20	0.10	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
291	0.10	0.00	0.04560	88.4	0.00008	14.64	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
TOT						336.65			1326357.38	340004.44					
AVG					0.0001		3.90	147.83			576.68				
CUM						883.97									

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD#1 DECAY 1/da	BOD#1 SETT 1/da	ABOD#1 DECAY 1/da	BOD#2 DECAY 1/da	BOD#2 SETT 1/da	ABOD#2 DECAY 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORGN DECAY 1/da	ORGN SETT 1/da	NH3 DECAY 1/da	NH3 SRCE *	DENIT RATE 1/da	PO4 SRCE *	ALG PROD **	MAC PROD **	COLI DECAY 1/da	NCM DECAY 1/da	NCM SETT 1/da

269	2.200	7.89	0.21	0.07	0.60	0.00	0.00	0.00	0.00	3.21	3.21	3.21	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
270	2.100	7.89	0.21	0.07	0.60	0.00	0.00	0.00	0.00	3.21	3.21	3.21	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
271	2.000	7.89	0.21	0.07	0.60	0.00	0.00	0.00	0.00	3.21	3.21	3.21	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
272	1.900	7.89	0.21	0.07	0.60	0.00	0.00	0.00	0.00	3.21	3.21	3.21	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
273	1.800	7.89	0.21	0.06	0.60	0.00	0.00	0.00	0.00	3.21	3.21	3.21	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
274	1.700	7.89	0.21	0.06	0.60	0.00	0.00	0.00	0.00	3.21	3.21	3.21	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
275	1.600	7.90	0.21	0.06	0.60	0.00	0.00	0.00	0.00	3.21	3.21	3.21	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
276	1.500	7.90	0.21	0.06	0.60	0.00	0.00	0.00	0.00	3.21	3.21	3.21	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
277	1.400	7.90	0.21	0.06	0.60	0.00	0.00	0.00	0.00	3.21	3.21	3.21	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
278	1.300	7.90	0.21	0.06	0.60	0.00	0.00	0.00	0.00	3.20	3.20	3.20	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
279	1.200	7.90	0.21	0.06	0.60	0.00	0.00	0.00	0.00	3.20	3.20	3.20	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
280	1.100	7.90	0.21	0.06	0.60	0.00	0.00	0.00	0.00	3.20	3.20	3.20	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
281	1.000	7.90	0.21	0.06	0.60	0.00	0.00	0.00	0.00	3.20	3.20	3.20	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
282	0.900	7.90	0.21	0.06	0.60	0.00	0.00	0.00	0.00	3.20	3.20	3.20	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
283	0.800	7.90	0.21	0.06	0.60	0.00	0.00	0.00	0.00	3.20	3.20	3.20	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
284	0.700	7.90	0.21	0.06	0.60	0.00	0.00	0.00	0.00	3.20	3.20	3.20	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
285	0.600	7.90	0.21	0.06	0.60	0.00	0.00	0.00	0.00	3.20	3.20	3.20	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
286	0.500	7.90	0.21	0.06	0.60	0.00	0.00	0.00	0.00	3.19	3.19	3.19	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
287	0.400	7.91	0.21	0.06	0.60	0.00	0.00	0.00	0.00	3.19	3.19	3.19	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
288	0.300	7.91	0.21	0.06	0.60	0.00	0.00	0.00	0.00	3.19	3.19	3.19	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
289	0.200	7.91	0.21	0.06	0.60	0.00	0.00	0.00	0.00	3.19	3.19	3.19	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
290	0.100	7.91	0.21	0.06	0.60	0.00	0.00	0.00	0.00	3.19	3.19	3.19	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
291	0.000	7.91	0.21	0.06	0.60	0.00	0.00	0.00	0.00	3.19	3.19	3.19	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.18	0.09	0.50	0.00	0.00	0.00	0.00	2.00			0.06	0.10	0.00	0.00	0.00	0.00			0.00	0.00	0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I MG/L	CM-II MG/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO g/m³	COLI #/100mL	NCM
269	2.200	27.53	0.05	10.85	101.79	1.09	7.36	0.00	16.02	0.00	2.56	0.00	0.00	0.00	0.00	86.62	0.00	0.	0.00
270	2.100	27.53	0.05	10.68	100.70	1.06	8.18	0.00	16.57	0.00	2.55	0.00	0.00	0.00	0.00	83.93	0.00	0.	0.00
271	2.000	27.52	0.05	10.51	99.60	1.03	8.81	0.00	16.93	0.00	2.54	0.00	0.00	0.00	0.00	81.25	0.00	0.	0.00
272	1.900	27.52	0.04	10.35	98.50	1.00	9.29	0.00	17.15	0.00	2.54	0.00	0.00	0.00	0.00	78.57	0.00	0.	0.00
273	1.800	27.51	0.04	10.18	97.38	0.98	9.67	0.00	17.26	0.00	2.54	0.00	0.00	0.00	0.00	75.89	0.00	0.	0.00
274	1.700	27.51	0.04	10.01	96.26	0.96	9.96	0.00	17.28	0.00	2.53	0.00	0.00	0.00	0.00	73.20	0.00	0.	0.00
275	1.600	27.50	0.04	9.84	95.13	0.94	10.18	0.00	17.23	0.00	2.53	0.00	0.00	0.00	0.00	70.52	0.00	0.	0.00
276	1.500	27.49	0.04	9.66	93.99	0.92	10.36	0.00	17.14	0.00	2.53	0.00	0.00	0.00	0.00	67.84	0.00	0.	0.00
277	1.400	27.49	0.04	9.49	92.84	0.91	10.49	0.00	17.01	0.00	2.53	0.00	0.00	0.00	0.00	65.16	0.00	0.	0.00
278	1.300	27.48	0.04	9.31	91.68	0.90	10.60	0.00	16.85	0.00	2.54	0.00	0.00	0.00	0.00	62.47	0.00	0.	0.00
279	1.200	27.48	0.04	9.14	90.51	0.89	10.68	0.00	16.66	0.00	2.54	0.00	0.00	0.00	0.00	59.79	0.00	0.	0.00
280	1.100	27.47	0.03	8.96	89.33	0.89	10.75	0.00	16.46	0.00	2.55	0.00	0.00	0.00	0.00	57.11	0.00	0.	0.00
281	1.000	27.47	0.03	8.78	88.14	0.88	10.81	0.00	16.25	0.00	2.55	0.00	0.00	0.00	0.00	54.43	0.00	0.	0.00
282	0.900	27.46	0.03	8.60	86.95	0.88	10.86	0.00	16.03	0.00	2.56	0.00	0.00	0.00	0.00	51.74	0.00	0.	0.00
283	0.800	27.46	0.03	8.41	85.74	0.88	10.90	0.00	15.80	0.00	2.57	0.00	0.00	0.00	0.00	49.06	0.00	0.	0.00
284	0.700	27.45	0.03	8.23	84.53	0.88	10.94	0.00	15.58	0.00	2.58	0.00	0.00	0.00	0.00	46.38	0.00	0.	0.00
285	0.600	27.44	0.03	8.04	83.30	0.88	10.98	0.00	15.35	0.00	2.59	0.00	0.00	0.00	0.00	43.70	0.00	0.	0.00
286	0.500	27.44	0.03	7.86	82.07	0.88	11.02	0.00	15.12	0.00	2.60	0.00	0.00	0.00	0.00	41.01	0.00	0.	0.00
287	0.400	27.43	0.03	7.67	80.82	0.89	11.07	0.00	14.90	0.00	2.62	0.00	0.00	0.00	0.00	38.33	0.00	0.	0.00
288	0.300	27.43	0.02	7.48	79.57	0.90	11.13	0.00	14.70	0.00	2.64	0.00	0.00	0.00	0.00	35.65	0.00	0.	0.00
289	0.200	27.42	0.02	7.29	78.31	0.92	11.21	0.00	14.51	0.00	2.66	0.00	0.00	0.00	0.00	32.97	0.00	0.	0.00
290	0.100	27.42	0.02	7.09	77.03	0.94	11.31	0.00	14.34	0.00	2.68	0.00	0.00	0.00	0.00	30.28	0.00	0.	0.00
291	0.000	27.41	0.02	6.90	75.75	0.97	11.45	0.00	14.21	0.00	2.71	0.00	0.00	0.00	0.00	27.60	0.00	0.	0.00

```
STREAM SUMMARY                                                SMITHPORT LAKE WATERSHED MODEL
HEADWATER - NBB03A                                            SMITHPORTLAKE SENSITIVITY ANALYSIS

 TRAVEL TIME       =         883.97 DAYS

 MAXIMUM EFFLUENT  =          98.33 PERCENT

 FLOW              =   0.01027 TO    0.04560   m³/s
 DISPERSION        =   1.0000  TO    1.0000    m²/s
 VELOCITY          =   0.00008 TO    0.04968   m/s
 DEPTH             =   0.11    TO    3.90      m
 WIDTH             =   2.74    TO  147.83      m

 BOD DECAY         =    0.02   TO    0.08      per day
 NH3 DECAY         =    0.00   TO    0.00      per day
 SOD               =    2.57   TO    4.69      g/m²/d
 NH3 SOURCE        =    0.00   TO    0.00      g/m²/d
 REAERATION        =    0.21   TO    7.08      per day
 BOD SETTLING      =    0.57   TO    0.60      per day
 NBOD DECAY        =    0.00   TO    0.11      per day
 NBOD SETTLING     =    0.11   TO    0.12      per day

 TEMPERATURE       =   25.66   TO   27.99      deg C
 DISSOLVED OXYGEN  =    0.88   TO    4.70      mg/L



     .....BEGIN SENSITIVITY RUN  1 ON PARAMETER SET  1 AND COLUMN  1
     .....HYDRAULIC CALCULATIONS COMPLETED
     .....TRIDIAGONAL MATRIX TERMS INITIALIZED
     .....OXYGEN DEPENDENT RATES CONVERGENT IN  11 ITERATIONS
     .....CONSTITUENT CALCULATIONS COMPLETED



     .....BEGIN SENSITIVITY RUN  2 ON PARAMETER SET  1 AND COLUMN  2
     .....HYDRAULIC CALCULATIONS COMPLETED
     .....TRIDIAGONAL MATRIX TERMS INITIALIZED
     .....OXYGEN DEPENDENT RATES CONVERGENT IN  11 ITERATIONS
     .....CONSTITUENT CALCULATIONS COMPLETED



     .....BEGIN SENSITIVITY RUN  3 ON PARAMETER SET  2 AND COLUMN  1
     .....HYDRAULIC CALCULATIONS COMPLETED
     .....TRIDIAGONAL MATRIX TERMS INITIALIZED
     .....OXYGEN DEPENDENT RATES CONVERGENT IN  11 ITERATIONS
     .....CONSTITUENT CALCULATIONS COMPLETED



     .....BEGIN SENSITIVITY RUN  4 ON PARAMETER SET  2 AND COLUMN  2
     .....HYDRAULIC CALCULATIONS COMPLETED
     .....TRIDIAGONAL MATRIX TERMS INITIALIZED
     .....OXYGEN DEPENDENT RATES CONVERGENT IN  11 ITERATIONS
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.....CONSTITUENT CALCULATIONS COMPLETED



.....BEGIN SENSITIVITY RUN  5 ON PARAMETER SET  3 AND COLUMN  1
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN  11 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED



.....BEGIN SENSITIVITY RUN  6 ON PARAMETER SET  3 AND COLUMN  2
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN  11 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED



.....BEGIN SENSITIVITY RUN  7 ON PARAMETER SET  4 AND COLUMN  1
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN  10 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED



.....BEGIN SENSITIVITY RUN  8 ON PARAMETER SET  4 AND COLUMN  2
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN  11 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED



.....BEGIN SENSITIVITY RUN  9 ON PARAMETER SET  5 AND COLUMN  1
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN  11 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED



.....BEGIN SENSITIVITY RUN 10 ON PARAMETER SET  5 AND COLUMN  2
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN  11 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED
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.....BEGIN SENSITIVITY RUN 11 ON PARAMETER SET  6 AND COLUMN  1
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN  11 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED



.....BEGIN SENSITIVITY RUN 12 ON PARAMETER SET  6 AND COLUMN  2
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN  11 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED



.....BEGIN SENSITIVITY RUN 13 ON PARAMETER SET  7 AND COLUMN  1
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN  13 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED



.....BEGIN SENSITIVITY RUN 14 ON PARAMETER SET  7 AND COLUMN  2
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN   9 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED



.....BEGIN SENSITIVITY RUN 15 ON PARAMETER SET  8 AND COLUMN  1
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN  11 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED



.....BEGIN SENSITIVITY RUN 16 ON PARAMETER SET  8 AND COLUMN  2
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN  11 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED



.....BEGIN SENSITIVITY RUN 17 ON PARAMETER SET  9 AND COLUMN  1
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN  11 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED
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     .....BEGIN SENSITIVITY RUN 18 ON PARAMETER SET  9 AND COLUMN  2
     .....HYDRAULIC CALCULATIONS COMPLETED
     .....TRIDIAGONAL MATRIX TERMS INITIALIZED
     .....OXYGEN DEPENDENT RATES CONVERGENT IN  13 ITERATIONS
     .....CONSTITUENT CALCULATIONS COMPLETED



     .....BEGIN SENSITIVITY RUN 19 ON PARAMETER SET 10 AND COLUMN  1
     .....HYDRAULIC CALCULATIONS COMPLETED
     .....TRIDIAGONAL MATRIX TERMS INITIALIZED
     .....OXYGEN DEPENDENT RATES CONVERGENT IN  11 ITERATIONS
     .....CONSTITUENT CALCULATIONS COMPLETED



     .....BEGIN SENSITIVITY RUN 20 ON PARAMETER SET 10 AND COLUMN  2
     .....HYDRAULIC CALCULATIONS COMPLETED
     .....TRIDIAGONAL MATRIX TERMS INITIALIZED
     .....OXYGEN DEPENDENT RATES CONVERGENT IN  11 ITERATIONS
     .....CONSTITUENT CALCULATIONS COMPLETED



     .....BEGIN SENSITIVITY RUN 21 ON PARAMETER SET 11 AND COLUMN  1
     .....HYDRAULIC CALCULATIONS COMPLETED
     .....TRIDIAGONAL MATRIX TERMS INITIALIZED
     .....OXYGEN DEPENDENT RATES CONVERGENT IN  13 ITERATIONS
     .....CONSTITUENT CALCULATIONS COMPLETED



     .....BEGIN SENSITIVITY RUN 22 ON PARAMETER SET 11 AND COLUMN  2
     .....HYDRAULIC CALCULATIONS COMPLETED
     .....TRIDIAGONAL MATRIX TERMS INITIALIZED
     .....OXYGEN DEPENDENT RATES CONVERGENT IN  11 ITERATIONS
     .....CONSTITUENT CALCULATIONS COMPLETED
***** WARNING:  NEGATIVE CONCENTRATIONS SET TO ZERO FOR Dissolved Oxygen



     .....BEGIN SENSITIVITY RUN 23 ON PARAMETER SET 12 AND COLUMN  1
     .....HYDRAULIC CALCULATIONS COMPLETED
     .....TRIDIAGONAL MATRIX TERMS INITIALIZED
     .....OXYGEN DEPENDENT RATES CONVERGENT IN  11 ITERATIONS
     .....CONSTITUENT CALCULATIONS COMPLETED
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.....BEGIN SENSITIVITY RUN 24 ON PARAMETER SET 12 AND COLUMN  2
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN  11 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED



.....BEGIN SENSITIVITY RUN 25 ON PARAMETER SET 13 AND COLUMN  1
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN  11 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED



.....BEGIN SENSITIVITY RUN 26 ON PARAMETER SET 13 AND COLUMN  2
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN  11 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED



.....BEGIN SENSITIVITY RUN 27 ON PARAMETER SET 14 AND COLUMN  1
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN  11 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED



.....BEGIN SENSITIVITY RUN 28 ON PARAMETER SET 14 AND COLUMN  2
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN  11 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED



.....BEGIN SENSITIVITY RUN 29 ON PARAMETER SET 15 AND COLUMN  1
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN  11 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED



.....BEGIN SENSITIVITY RUN 30 ON PARAMETER SET 15 AND COLUMN  2
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN  11 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED
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.....BEGIN SENSITIVITY RUN 31 ON PARAMETER SET 16 AND COLUMN  1
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN  11 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED



.....BEGIN SENSITIVITY RUN 32 ON PARAMETER SET 16 AND COLUMN  2
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN  11 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED



.....BEGIN SENSITIVITY RUN 33 ON PARAMETER SET 17 AND COLUMN  1
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN  11 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED



.....BEGIN SENSITIVITY RUN 34 ON PARAMETER SET 17 AND COLUMN  2
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN  11 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED



.....BEGIN SENSITIVITY RUN 35 ON PARAMETER SET 18 AND COLUMN  1
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN  11 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED



.....BEGIN SENSITIVITY RUN 36 ON PARAMETER SET 18 AND COLUMN  2
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN  11 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED



.....BEGIN SENSITIVITY RUN 37 ON PARAMETER SET 19 AND COLUMN  1
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.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN  11 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED



.....BEGIN SENSITIVITY RUN 38 ON PARAMETER SET 19 AND COLUMN  2
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN  11 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED



.....BEGIN SENSITIVITY RUN 39 ON PARAMETER SET 20 AND COLUMN  1
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN  11 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED



.....BEGIN SENSITIVITY RUN 40 ON PARAMETER SET 20 AND COLUMN  2
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN  11 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED



.....BEGIN SENSITIVITY RUN 41 ON PARAMETER SET 21 AND COLUMN  1
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN  11 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED



.....BEGIN SENSITIVITY RUN 42 ON PARAMETER SET 21 AND COLUMN  2
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN  11 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED



.....BEGIN SENSITIVITY RUN 43 ON PARAMETER SET 22 AND COLUMN  1
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN  11 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED
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.....BEGIN SENSITIVITY RUN 44 ON PARAMETER SET 22 AND COLUMN  2
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN  11 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED



.....BEGIN SENSITIVITY RUN 45 ON PARAMETER SET 23 AND COLUMN  1
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN  11 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED



.....BEGIN SENSITIVITY RUN 46 ON PARAMETER SET 23 AND COLUMN  2
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN  11 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED



.....BEGIN SENSITIVITY RUN 47 ON PARAMETER SET 24 AND COLUMN  1
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN  11 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED



.....BEGIN SENSITIVITY RUN 48 ON PARAMETER SET 24 AND COLUMN  2
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN  11 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED



.....BEGIN SENSITIVITY RUN 49 ON PARAMETER SET 25 AND COLUMN  1
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN  11 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED



.....BEGIN SENSITIVITY RUN 50 ON PARAMETER SET 25 AND COLUMN  2
.....HYDRAULIC CALCULATIONS COMPLETED
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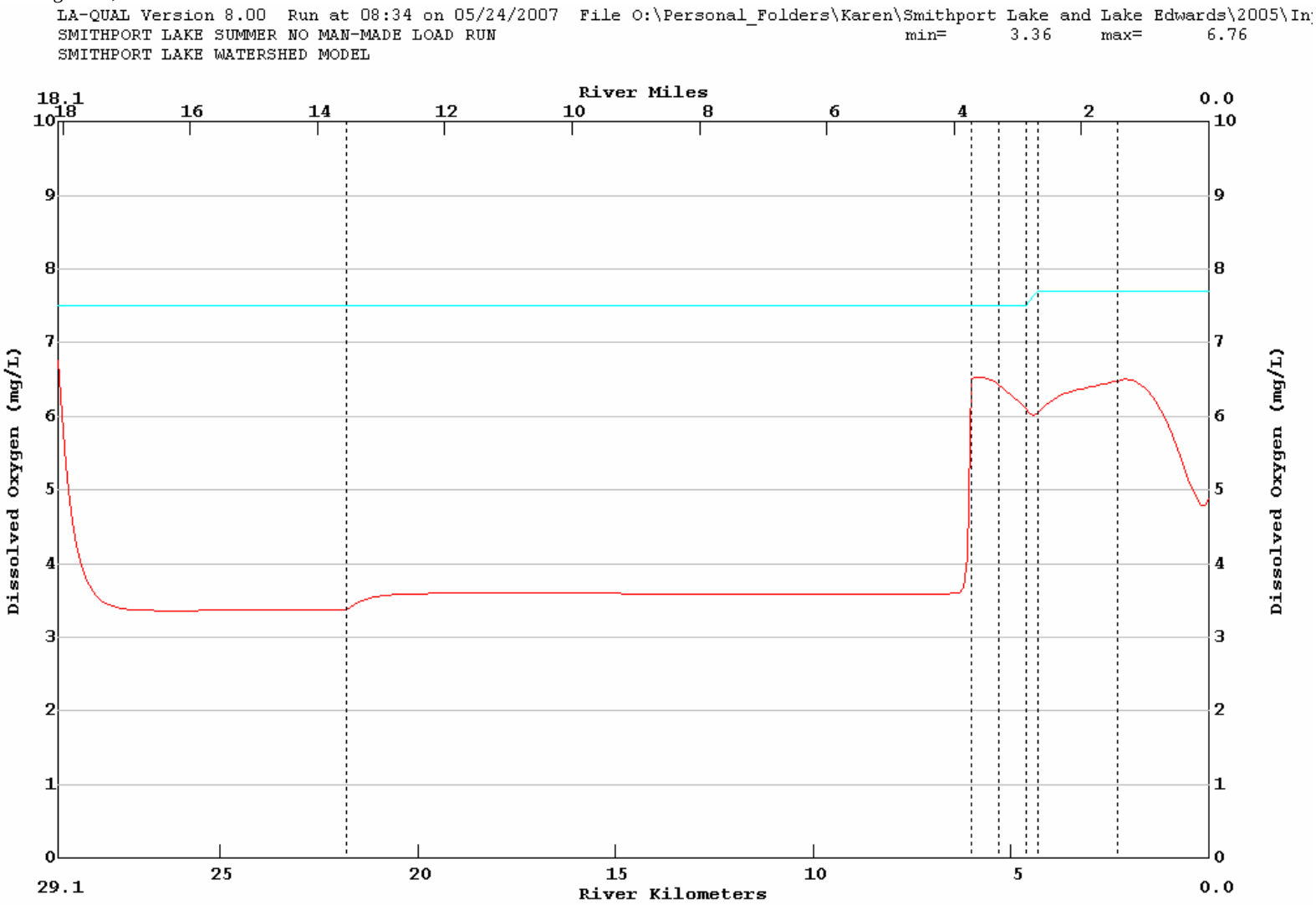
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN  11 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED


.....EXECUTION COMPLETED
```

Appendix J – Additional Projection Scenarios and Associated TMDLs

Appendix J1 – Summer No Load Projection Input and Output File



LAKE EDWARDS/SMITHPORT LAKE 100605 SUMMER NO LOAD PROJECTION INPUT DATA SET

```
CNTROL01     SMITHPORT LAKE WATERSHED MODEL
CNTROL02     SMITHPORT LAKE SUMMER NO MAN-MADE LOAD RUN
CNTROL04 YES METRIC UNITS
ENDATA01
MODOPT01  NO TEMPERATURE
MODOPT02  NO SALINITY
MODOPT03 YES CONSERVATIVE MATERIAL  I = CHLORIDES                  IN MG/L
MODOPT04 YES CONSERVATIVE MATERIAL II = CONDUCTIVITY               IN MG/L
MODOPT05 YES DISSOLVED OXYGEN
MODOPT06 YES BOD1 BIOCHEMICAL OXYGEN DEMAND
MODOPT07  NO BOD2 BIOCHEMICAL OXYGEN DEMAND
MODOPT08 YES NBOD OXYGEN DEMAND
MODOPT10  NO PHOSPHORUS
MODOPT11  NO CHLOROPHYLL A
MODOPT12  NO MACROPHYTES
MODOPT13  NO COLIFORM
ENDATA02
PROGRAM  KL MINIMUM                        =     0.7
PROGRAM  INHIBITION CONTROL VALUE          =     3.
PROGRAM  K2 MAXIMUM                        =     25.0
PROGRAM  HYDRAULIC CALCULATION METHOD      =     2.
PROGRAM  SETTLING RATE UNITS               =     2.
PROGRAM  ALGAE OXYGEN PROD                 =     0.
PROGRAM  EFFECTIVE BOD DUE TO ALGAE        =     0.10
ENDATA03
!Temperature Correction Constants
!--------1---------2---------3---------4---------5---------6---------7---------8
!23456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
!        ******** ********
ENDATA04
ENDATA05
ENDATA06
ENDATA07
!Reach Identification Data
!--------1---------2---------3---------4---------5---------6---------7---------8
!23456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
!         ***  -- ******************************----------*********----------
!          R#  ID   SITE NAME                          RKM        RKM    LENGTH
REACH ID    1  SL   NBB03C TO NBB02                    29.1       21.8      0.1
REACH ID    2  SL   NBB02 TO RB01                      21.8        6.0      0.1
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REACH ID    3  SL   RB01 TO CLK02                        6.0        5.3      0.1
REACH ID    4  SL   CLK02 TO CLK01                       5.3        4.6      0.1
REACH ID    5  SL   CLK01 TO SL04                        4.6        4.3      0.1
REACH ID    6  SL   SL04 TO SL03                        4.3        2.3      0.1
REACH ID    7  SL   SL03 TO SL01                        2.3        0.0      0.1
ENDATA08
!Advective Hydraulic Coefficients
!--------1---------2---------3---------4---------5---------6---------7---------8
!234567890123456789012345678901234567890123456789012345678901234567890123456789 0
!         ***  -------*******-------*******-------*******-------*******
!                a      b       c     d      e        f
!               WIDTH  WIDTH   WIDTH DEPTH  DEPTH   DEPTH
!          R#   COEFF   EXP    CONST COEFF   EXP    CONST SLOPE MANNING
HYDR-1      1   0.00   0.10    2.743  0.00   0.10   0.113
HYDR-1      2   0.00   0.10    2.743  0.00   0.10   0.113
HYDR-1      3   0.00   0.10  147.828  0.00   0.10   3.901
HYDR-1      4   0.00   0.10  147.828  0.00   0.10   3.901
HYDR-1      5   0.00   0.10  147.828  0.00   0.10   3.901
HYDR-1      6   0.00   0.10  147.828  0.00   0.10   3.901
HYDR-1      7   0.00   0.10  147.828  0.00   0.10   3.901
ENDATA09
!Dispersive Hydraulic Coefficients
!--------1---------2---------3---------4---------5---------6---------7---------8
!234567890123456789012345678901234567890123456789012345678901234567890123456789 0
!         ***  -----**********----------**********----------
!              TIDAL
!          R#  RANGE    a          b         c         d
HYDR-2      1   0.0   1.00        0.0       0.0       0.0
HYDR-2      2   0.0   1.00        0.0       0.0       0.0
HYDR-2      3   0.0   1.00        0.0       0.0       0.0
HYDR-2      4   0.0   1.00        0.0       0.0       0.0
HYDR-2      5   0.0   1.00        0.0       0.0       0.0
HYDR-2      6   0.0   1.00        0.0       0.0       0.0
HYDR-2      7   0.0   1.00        0.0       0.0       0.0
ENDATA10
!Initial Conditions
!--------1---------2---------3---------4---------5---------6---------7---------8
!234567890123456789012345678901234567890123456789012345678901234567890123456789 0
!         ***  --------********--------********--------********--------********
!          R#    TEMP  SALINITY   DO     NH3 N  NIT NIT  PHOS   CHL A   MACROPHYTES
INITIAL     1    30.36  0.30     5.00                             5.0
```

```
INITIAL     2    30.36  0.24     5.00                              5.0
INITIAL     3    30.36  0.09     5.00                              5.0
INITIAL     4    30.36  0.09     5.00                              5.0
INITIAL     5    30.36  0.08     5.00                              5.0
INITIAL     6    28.89  0.07     5.00                              5.0
INITIAL     7    28.89  0.05     5.00                              5.0
ENDATA11
!Reaeration, Sediment Oxygen Demand and BOD Coefficients
!--------1---------2---------3---------4---------5---------6---------7---------8---------9
!234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
!         ***  -----******----- ******-------*******-------*******-------*******-------***
!               REA    KL                     BOD 1  BOD 1                BOD 2    BOD 2
!          R#   EQ    MIN              SOD    DECAY  SETT                DECAY    SETT
COEF-1      1  11.00                   1.80   0.0284  0.50
COEF-1      2  11.00                   1.71   0.0302  0.50
COEF-1      3  11.00                   0.11   0.0915  0.50
COEF-1      4  11.00                   0.35   0.0866  0.50
COEF-1      5  11.00                   1.37   0.0743  0.50
COEF-1      6  11.00                   0.43   0.0816  0.50
COEF-1      7  11.00                   0.13   0.0941  0.50
ENDATA12
!Nitrogen and Phosphorus Coefficients
!--------1---------2---------3---------4---------5---------6---------7---------8
!234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
!         ***  -------*******-------*******-------*******-------
!              NBOD     NBOD
!          R#  DECAY    SETT
COEF-2      1  0.0462   0.10
COEF-2      2  0.0875   0.10
COEF-2      3  0.1035   0.10
COEF-2      4  0.0889   0.10
COEF-2      5  0.0520   0.10
COEF-2      6  0.0414   0.10
COEF-2      7  0.0575   0.10
ENDATA13
ENDATA14
!Coliform and Nonconservative Cofficients
!--------1---------2---------3---------4---------5---------6---------7---------8
!234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
!         ***  -------*******-------*******
ENDATA15
```

```
!Incremental Data for Flow, Temperature, Salinity, and Conservatives
!--------1---------2---------3---------4---------5---------6---------7---------8
!23456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
!         ***  ---------********---------********---------********
!          R#   OUTFLOW   INFLOW  TEMP     SALINITY CHLORIDE  COND
INCR-1      1    0.0000   0.0052  30.360             55.00  148.00
INCR-1      2    0.0000   0.0000  30.360              0.00    0.00
INCR-1      3    0.0000   0.0000  30.360              0.00    0.00
INCR-1      4    0.0000   0.0000  30.360              0.00    0.00
INCR-1      5    0.0000   0.0000  30.360              0.00    0.00
INCR-1      6    0.0000   0.0000  28.890              0.00    0.00
INCR-1      7    0.0000   0.0000  28.890              0.00    0.00
ENDATA16
!Incremental Data for DO, BOD, and Nitrogen
!--------1---------2---------3---------4---------5---------6---------7---------8
!23456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
!         ***  ---------********---------********---------********
!          R#      DO     BOD 1     NBOD    NH3 N   NIT NIT    BOD 2
INCR-2      1     2.00
INCR-2      2     2.00
INCR-2      3     2.00
INCR-2      4     2.00
INCR-2      5     2.00
INCR-2      6     2.00
INCR-2      7     2.00
ENDATA17
!Incremental Data for Phosphorus, Chlorophyll, Coliform and Nonconservatives
!--------1---------2---------3---------4---------5---------6---------7---------8
!23456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
!         ***  ---------********---------********
!          R#   PHOSPH    CHL A   COLIFORM NONCONSERVATIVE
INCR-3      1
INCR-3      2
INCR-3      3
INCR-3      4
INCR-3      5
INCR-3      6
INCR-3      7
ENDATA18
!Nonpoint Source Data
!--------1---------2---------3---------4---------5---------6---------7---------8
```

```
!234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
!          ***  ---------*********---------*********---------*********
!           R#     BOD 1    NBOD   COLIFORM NONCONS    DO      BOD 2
NONPOINT    1     1.50     0.59
NONPOINT    2    11.40     1.14
NONPOINT    3   190.77     4.91
NONPOINT    4   166.82     4.17
NONPOINT    5    27.40     0.55
NONPOINT    6   392.60    72.55
NONPOINT    7   610.59    25.71
ENDATA19
!Headwater Data for Flow, Temperature, Salinity, and Conservatives
!--------1---------2---------3---------4---------5---------6---------7---------8
!234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
!        ****  -------------------- *** --------********--------********--------
!         E#    NAME                      FLOW    TEMP  SALIN   CHLORIDE   COND
HDWTR-1     1  HEADWATER - NBB03A         0.0071  30.36  0.17    38.8     344.4
ENDATA20
!Headwater Data for DO, BOD, and Nitrogen
!--------1---------2---------3---------4---------5---------6---------7---------8
!234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
!        ****  ---------*********---------*********---------*********
!          E#      DO      BOD 1    NBOD    NH3 N    NIT NIT  BOD 2
HDWTR-2     1      6.76   4.726    1.157
ENDATA21
!Headwater Data for Phosphorus, Chlorophyll, Coliform, and Nonconservatives
!--------1---------2---------3---------4---------5---------6---------7---------8
!234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
!        ****  ---------*********---------*********
!          E#  PHOSPHOR   CHL A   COLIFORM  NONCONSERVATIVE
HDWTR-3     1               5.0
ENDATA22
ENDATA23
!Wasteload Data for Flow, Temperature, Salinity, and Conservatives
!--------1---------2---------3---------4---------5---------6---------7---------8
!234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
!        ****  --------------------*********---------*********---------*********
!          E#     NAME               FLOW      TEMP   SALINITY CHLORIDE  COND
WSTLD-1   232   RAMBIN BAYOU          0.0028    30.36     0.50   11.3    116.8
ENDATA24
!Wasteload Data for DO, BOD, and Nitrogen
```

```
!--------1---------2---------3---------4---------5---------6---------7---------8
!234567890123456789012345678901234567890123456789012345678901234567890123456789 0
!        ****  ---------*********-----*********---------*****---------*********
!          E#       DO    BOD 1         NBOD    NH3 N          NIT NIT  BOD 2
WSTLD-2   232      5.00    5.037        0.846
ENDATA25
!Wasteload Data for Phosphorus, Chlorophyll, Coliform, and Nonconservatives
!--------1---------2---------3---------4---------5---------6---------7---------8
!234567890123456789012345678901234567890123456789012345678901234567890123456789 0
!        ****  ---------*********---------*********
!          E#  PHOSPHOR  CHL A    COLIFORM NONCONSERVATIVE
WSTLD-3   232
ENDATA26
LOWER BC TEMPERATURE                        =  28.89
LOWER BC SALINITY                           =   0.02
LOWER BC CONSERVATIVE MATERIAL I            =   6.8
LOWER BC CONSERVATIVE MATERIAL II           =  75.1
LOWER BC DISSOLVED OXYGEN                   =   5.00
LOWER BC BOD1 BIOCHEMICAL OXYGEN DEMAND     =  14.299
LOWER BC CHLOROPHYLL A                      =   5.0
LOWER BC NBOD                               =   2.725
ENDATA27
!Dam Data
!--------1---------2---------3---------4---------5---------6---------7---------8
!234567890123456789012345678901234567890123456789012345678901234567890123456789 0
!        ****  ******************* ** ******** ******** ********
!
ENDATA28
ENDATA29
!--------1---------2---------3---------4---------5---------6---------7---------8
!234567890123456789012345678901234567890123456789012345678901234567890123456789 0
!        ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** **
NUMBER OF PLOTS = 1
NUMBER OF REACHES IN PLOT 1 =  07                       INCREMENT = 0.1
PLOT RCH  1  2  3  4  5  6  7
ENDATA30
ENDATA31
```

LAKE EDWARDS/SMITHPORT LAKE 100605 SUMMER NO LOAD PROJECTION OUTPUT DATA SET

```
LA-QUAL Version 8.00
Louisiana Department of Environmental Quality

Input file is O:\Personal_Folders\Karen\Smithport Lake and Lake Edwards\2005\Input Files\SLKsumnoload.txt
Output produced at 08:34 on 05/24/2007

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

CARD TYPE       CONTROL TITLES

TITLE01         SMITHPORT LAKE WATERSHED MODEL
TITLE02         SMITHPORT LAKE SUMMER NO MAN-MADE LOAD RUN
CNTROL04  YES   METRIC UNITS
ENDATA01

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

CARD TYPE       MODEL OPTION

MODOPT01   NO   TEMPERATURE
MODOPT02   NO   SALINITY
MODOPT03  YES   CONSERVATIVE MATERIAL  I = CHLORIDES                 IN MG/L
MODOPT04  YES   CONSERVATIVE MATERIAL II = CONDUCTIVITY               IN MG/L
MODOPT05  YES   DISSOLVED OXYGEN
MODOPT06  YES   BOD1 BIOCHEMICAL OXYGEN DEMAND
MODOPT07   NO   BOD2 BIOCHEMICAL OXYGEN DEMAND
MODOPT08  YES   NBOD OXYGEN DEMAND
MODOPT10   NO   PHOSPHORUS
MODOPT11   NO   CHLOROPHYLL A
MODOPT12   NO   MACROPHYTES
MODOPT13   NO   COLIFORM
ENDATA02

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

CARD TYPE       DESCRIPTION OF CONSTANT                       VALUE

PROGRAM         KL MINIMUM                        =         0.70000 meters/day
PROGRAM         INHIBITION CONTROL VALUE          =         3.00000 (inhibit all rates but SOD)
PROGRAM         K2 MAXIMUM                        =        25.00000 per day
PROGRAM         HYDRAULIC CALCULATION METHOD      =         2.00000 (widths and depths)
PROGRAM         SETTLING RATE UNITS               =         2.00000 (values entered as per day)
PROGRAM         ALGAE OXYGEN PROD                 =         0.00000 mg O/ug chl a/day
PROGRAM         EFFECTIVE BOD DUE TO ALGAE        =         0.10000 mg/L BOD per ug/L chl a
ENDATA03

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

 CARD TYPE     RATE CODE     THETA VALUE

ENDATA04

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

CARD TYPE       DESCRIPTION OF CONSTANT                       VALUE
```

```
ENDATA05

$$$ DATA TYPE 6 (ALGAE CONSTANTS) $$$

CARD TYPE       DESCRIPTION OF CONSTANT                        VALUE

ENDATA06

$$$ DATA TYPE 7 (MACROPHYTE CONSTANTS) $$$

CARD TYPE       DESCRIPTION OF CONSTANT                        VALUE

ENDATA07

$$$ DATA TYPE 8 (REACH IDENTIFICATION DATA) $$$
                                                      BEGIN         END     ELEM    REACH     ELEMS   BEGIN    END
CARD TYPE  REACH  ID  NAME                            REACH       REACH   LENGTH   LENGTH    PER RCH   ELEM   ELEM
                                                         km          km       km       km               NUM    NUM

REACH ID      1   SL    NBB03C TO NBB02               29.10  TO   21.80   0.1000     7.30      73        1     73
REACH ID      2   SL    NBB02 TO RB01                 21.80  TO    6.00   0.1000    15.80     158       74    231
REACH ID      3   SL    RB01 TO CLK02                  6.00  TO    5.30   0.1000     0.70       7      232    238
REACH ID      4   SL    CLK02 TO CLK01                 5.30  TO    4.60   0.1000     0.70       7      239    245
REACH ID      5   SL    CLK01 TO SL04                  4.60  TO    4.30   0.1000     0.30       3      246    248
REACH ID      6   SL    SL04 TO SL03                   4.30  TO    2.30   0.1000     2.00      20      249    268
REACH ID      7   SL    SL03 TO SL01                   2.30  TO    0.00   0.1000     2.30      23      269    291
ENDATA08

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

CARD TYPE  REACH  ID       WIDTH       WIDTH       WIDTH       DEPTH       DEPTH       DEPTH      SLOPE    MANNINGS
                            "A"         "B"         "C"         "D"         "E"         "F"                  "N"

HYDR-1        1   SL       0.000       0.100       2.743       0.000       0.100       0.113     0.00000   0.000
HYDR-1        2   SL       0.000       0.100       2.743       0.000       0.100       0.113     0.00000   0.000
HYDR-1        3   SL       0.000       0.100     147.828       0.000       0.100       3.901     0.00000   0.000
HYDR-1        4   SL       0.000       0.100     147.828       0.000       0.100       3.901     0.00000   0.000
HYDR-1        5   SL       0.000       0.100     147.828       0.000       0.100       3.901     0.00000   0.000
HYDR-1        6   SL       0.000       0.100     147.828       0.000       0.100       3.901     0.00000   0.000
HYDR-1        7   SL       0.000       0.100     147.828       0.000       0.100       3.901     0.00000   0.000
ENDATA09

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

CARD TYPE  REACH  ID     TIDAL     DISPERSION     DISPERSION     DISPERSION     DISPERSION
                         RANGE        "A"            "B"            "C"            "D"

HYDR          1   SL      0.00        1.000          0.000          0.000          0.000
HYDR          2   SL      0.00        1.000          0.000          0.000          0.000
HYDR          3   SL      0.00        1.000          0.000          0.000          0.000
HYDR          4   SL      0.00        1.000          0.000          0.000          0.000
HYDR          5   SL      0.00        1.000          0.000          0.000          0.000
HYDR          6   SL      0.00        1.000          0.000          0.000          0.000
HYDR          7   SL      0.00        1.000          0.000          0.000          0.000
ENDATA10

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

CARD TYPE	REACH	ID	TEMP	SALIN	DO	NH3	NO3+2	PHOS	CHL A	MACRO
INITIAL	1	SL	30.36	0.30	5.00	0.00	0.00	0.00	5.00	0.00
INITIAL	2	SL	30.36	0.24	5.00	0.00	0.00	0.00	5.00	0.00
INITIAL	3	SL	30.36	0.09	5.00	0.00	0.00	0.00	5.00	0.00
INITIAL	4	SL	30.36	0.09	5.00	0.00	0.00	0.00	5.00	0.00
INITIAL	5	SL	30.36	0.08	5.00	0.00	0.00	0.00	5.00	0.00
INITIAL	6	SL	28.89	0.07	5.00	0.00	0.00	0.00	5.00	0.00
INITIAL	7	SL	28.89	0.05	5.00	0.00	0.00	0.00	5.00	0.00

ENDATA11

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

CARD TYPE	RCH NUM	RCH ID	K2 OPT	K2 "A"	K2 "B"	K2 "C"	BKGRND SOD g/m²/d	BOD DECAY per day	BOD SETT m/d	BOD CONV TO SOD	ANAER BOD2 DECAY per day	BOD2 DECAY per day	BOD2 SETT m/d	BOD2 CONV TO SOD	ANAER BOD2 DECAY per day
COEF-1	1	SL	11 TEXAS	0.000	0.000	0.000	1.800	0.028	0.500	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	2	SL	11 TEXAS	0.000	0.000	0.000	1.710	0.030	0.500	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	3	SL	11 TEXAS	0.000	0.000	0.000	0.110	0.091	0.500	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	4	SL	11 TEXAS	0.000	0.000	0.000	0.350	0.087	0.500	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	5	SL	11 TEXAS	0.000	0.000	0.000	1.370	0.074	0.500	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	6	SL	11 TEXAS	0.000	0.000	0.000	0.430	0.082	0.500	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	7	SL	11 TEXAS	0.000	0.000	0.000	0.130	0.094	0.500	0.000	0.000	0.000	0.000	0.000	0.000

ENDATA12

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

CARD TYPE	REACH	ID	NBOD DECA	NBOD SETT	ORGN CONV TO NH3 SRCE	NH3 DECA	NH3 SRCE	PHOS SRCE	DENIT RATE
COEF-2	1	SL	0.046	0.100	0.000	0.000	0.000	0.000	0.000
COEF-2	2	SL	0.087	0.100	0.000	0.000	0.000	0.000	0.000
COEF-2	3	SL	0.104	0.100	0.000	0.000	0.000	0.000	0.000
COEF-2	4	SL	0.089	0.100	0.000	0.000	0.000	0.000	0.000
COEF-2	5	SL	0.052	0.100	0.000	0.000	0.000	0.000	0.000
COEF-2	6	SL	0.041	0.100	0.000	0.000	0.000	0.000	0.000
COEF-2	7	SL	0.058	0.100	0.000	0.000	0.000	0.000	0.000

ENDATA13

$$$ DATA TYPE 14 (ALGAE AND MACROPHYTE COEFFICIENTS) $$$

CARD TYPE	REACH	ID	SECCHI DEPTH	ALGAE: CHL A	ALGAE SETT	ALG CONV TO SOD	ALGAE GROW	ALGAE RESP	MACRO GROW	MACRO RESP

ENDATA14

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

CARD TYPE	REACH	ID	COLIFORM DIE-OFF	NCM DECAY	NCM SETT	NCM CONV TO SOD

ENDATA15

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

CARD TYPE	REACH	ID	OUTFLOW	INFLOW	TEMP	SALIN	CM-I	CM-II	IN/DIST	OUT/DIST
INCR-1	1	SL	0.00000	0.00520	30.36	0.00	55.00	148.00	0.00071	0.00000

```
INCR-1            2   SL       0.00000     0.00000     30.36      0.00      0.00      0.00   0.00000   0.00000
INCR-1            3   SL       0.00000     0.00000     30.36      0.00      0.00      0.00   0.00000   0.00000
INCR-1            4   SL       0.00000     0.00000     30.36      0.00      0.00      0.00   0.00000   0.00000
INCR-1            5   SL       0.00000     0.00000     30.36      0.00      0.00      0.00   0.00000   0.00000
INCR-1            6   SL       0.00000     0.00000     28.89      0.00      0.00      0.00   0.00000   0.00000
INCR-1            7   SL       0.00000     0.00000     28.89      0.00      0.00      0.00   0.00000   0.00000
ENDATA16

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

CARD TYPE      REACH  ID          DO       BOD      NBOD                        BOD#2

INCR-2            1   SL        2.00      0.00      0.00      0.00      0.00      0.00
INCR-2            2   SL        2.00      0.00      0.00      0.00      0.00      0.00
INCR-2            3   SL        2.00      0.00      0.00      0.00      0.00      0.00
INCR-2            4   SL        2.00      0.00      0.00      0.00      0.00      0.00
INCR-2            5   SL        2.00      0.00      0.00      0.00      0.00      0.00
INCR-2            6   SL        2.00      0.00      0.00      0.00      0.00      0.00
INCR-2            7   SL        2.00      0.00      0.00      0.00      0.00      0.00
ENDATA17

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

 CARD TYPE      REACH  ID        PHOS     CHL A      COLI       NCM

INCR-3            1   SL        0.00      0.00      0.00      0.00
INCR-3            2   SL        0.00      0.00      0.00      0.00
INCR-3            3   SL        0.00      0.00      0.00      0.00
INCR-3            4   SL        0.00      0.00      0.00      0.00
INCR-3            5   SL        0.00      0.00      0.00      0.00
INCR-3            6   SL        0.00      0.00      0.00      0.00
INCR-3            7   SL        0.00      0.00      0.00      0.00
ENDATA18

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

CARD TYPE      REACH  ID       BOD#1     NBOD       COLI       NCM        DO     BOD#2

NONPOINT          1   SL        1.50      0.59      0.00      0.00      0.00      0.00
NONPOINT          2   SL       11.40      1.14      0.00      0.00      0.00      0.00
NONPOINT          3   SL      190.77      4.91      0.00      0.00      0.00      0.00
NONPOINT          4   SL      166.82      4.17      0.00      0.00      0.00      0.00
NONPOINT          5   SL       27.40      0.55      0.00      0.00      0.00      0.00
NONPOINT          6   SL      392.60     72.55      0.00      0.00      0.00      0.00
NONPOINT          7   SL      610.59     25.71      0.00      0.00      0.00      0.00
ENDATA19

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

CARD TYPE     ELEMENT   NAME                  UNIT     FLOW     FLOW    TEMP    SALIN      CM-I     CM-II
                                                        m³/s      cfs   deg C      ppt      MG/L      MG/L

HDWTR-1           1     HEADWATER - NBB03A      0   0.00710    0.251   30.36     0.17    38.800   344.400
ENDATA20

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

CARD TYPE     ELEMENT   NAME                          DO     BOD#1     NBOD                          BOD#2
                                                    mg/L      mg/L      mg/L      mg/L      mg/L      mg/L
```

```
HDWTR-2           1     HEADWATER - NBB03A          6.76      4.73      1.16      0.00      0.00      0.00
ENDATA21

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

CARD TYPE     ELEMENT   NAME                        PHOS     CHL A      COLI       NCM
                                                    mg/L      mg/L      mg/L      mg/L

HDWTR-3           1     HEADWATER - NBB03A          0.00      5.00      0.00      0.00
ENDATA22

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

CARD TYPE   JUNCTION   UPSTRM     RIVER     NAME
             ELEMENT  ELEMENT     KILOM

ENDATA23

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

CARD TYPE  ELEMENT    RKILO  NAME                      FLOW       FLOW     FLOW    TEMP    SALIN      CM-I     CM-II
                                                       m³/s        cfs      MGD   deg C      ppt      MG/L      MG/L

WSTLD-1      232       6.00   RAMBIN BAYOU          0.00280    0.09887    0.064   30.36     0.50    11.300   116.800
ENDATA24

$$$ DATA TYPE 25 (WASTELOAD DATA FOR DO, BOD, AND NITROGEN) $$$
                                                                  % BOD                                 %
CARD TYPE     ELEMENT   NAME                          DO       BOD      RMVL     NBOD                NITRIF                BOD#2
                                                     mg/L      mg/L                mg/L      mg/L                 mg/L      mg/L

WSTLD-2         232      RAMBIN BAYOU               5.00      5.04      0.00      0.85      0.00      0.00      0.00      0.00
ENDATA25

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

CARD TYPE     ELEMENT   NAME                        PHOS     CHL A      COLI       NCM
                                                    mg/L      mg/L      mg/L      mg/L

WSTLD-3         232      RAMBIN BAYOU               0.00      0.00      0.00      0.00
ENDATA26

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

CARD TYPE    CONSTITUENT                    CONCENTRATION

LOWER BC     TEMPERATURE                        =     28.890     deg C
LOWER BC     SALINITY                           =      0.020     ppt
LOWER BC     CONSERVATIVE MATERIAL I            =      6.800     MG/L
LOWER BC     CONSERVATIVE MATERIAL II           =     75.100     MG/L
LOWER BC     DISSOLVED OXYGEN                   =      5.000     mg/L
LOWER BC     BOD1 BIOCHEMICAL OXYGEN DEMAND     =     14.299     mg/L
LOWER BC     CHLOROPHYLL A                      =      5.000     µg/L
LOWER BC     NBOD                               =      2.725     mg/L
ENDATA27

$$$ DATA TYPE 28 (DAM DATA) $$$
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CARD TYPE     ELEMENT   NAME                  EQN      "A"       "B"       "H"

ENDATA28

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

CARD TYPE       PARAMETER     COL 1     COL 2     COL 3     COL 4     COL 5     COL 6     COL 7     COL 8

ENDATA29

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


NUMBER OF PLOTS =  1
NUMBER OF REACHES IN PLOT 1 =   7
PLOT RCH  1  2  3  4  5  6  7
ENDATA30

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


ENDATA31



     .....NO ERRORS DETECTED IN INPUT DATA
     .....HYDRAULIC CALCULATIONS COMPLETED
     .....TRIDIAGONAL MATRIX TERMS INITIALIZED
     .....OXYGEN DEPENDENT RATES CONVERGENT IN   4 ITERATIONS
     .....CONSTITUENT CALCULATIONS COMPLETED
     .....GRAPHICS DATA FOR PLOT 1 WRITTEN TO UNIT 11


FINAL REPORT    HEADWATER - NBB03A                              SMITHPORT LAKE WATERSHED MODEL
REACH NO.  1      NBB03C TO NBB02                               SMITHPORT LAKE SUMMER NO MAN-MADE LOAD RUN

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

 ELEM  TYPE        FLOW     TEMP     SALN     CM-I    CM-II     DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN    NH3  NO3+2   PHOS  CHL A     COLI     NCM
 NO.                       deg C      ppt     MG/L     MG/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   µg/L  #/100mL

    1  HDWTR     0.00710   30.36     0.17    38.80   344.40   6.76   4.23   0.00   4.73   0.00   1.16   0.00   0.00   0.00   5.00     0.00    0.00
 EACH  INCR      0.00007   30.36     0.00    55.00   148.00   2.00   0.00   0.00                  0.00   0.00   0.00   0.00     0.00    0.00

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

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

    1   29.10   29.00    0.00717   0.0   0.02314     0.05    0.11    2.74     31.00     274.30    0.31      0.00   0.000     1.000   0.023
    2   29.00   28.90    0.00724   0.0   0.02337     0.05    0.11    2.74     31.00     274.30    0.31      0.00   0.000     1.000   0.023
    3   28.90   28.80    0.00731   0.0   0.02360     0.05    0.11    2.74     31.00     274.30    0.31      0.00   0.000     1.000   0.024
    4   28.80   28.70    0.00738   0.0   0.02383     0.05    0.11    2.74     31.00     274.30    0.31      0.00   0.000     1.000   0.024
    5   28.70   28.60    0.00746   0.0   0.02406     0.05    0.11    2.74     31.00     274.30    0.31      0.00   0.000     1.000   0.024
    6   28.60   28.50    0.00753   0.0   0.02429     0.05    0.11    2.74     31.00     274.30    0.31      0.00   0.000     1.000   0.024
    7   28.50   28.40    0.00760   0.0   0.02451     0.05    0.11    2.74     31.00     274.30    0.31      0.00   0.000     1.000   0.025
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8	28.40	28.30	0.00767	0.0	0.02474	0.05	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.025
9	28.30	28.20	0.00774	0.0	0.02497	0.05	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.025
10	28.20	28.10	0.00781	0.0	0.02520	0.05	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.025
11	28.10	28.00	0.00788	0.0	0.02543	0.05	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.025
12	28.00	27.90	0.00795	0.0	0.02566	0.05	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.026
13	27.90	27.80	0.00803	0.0	0.02589	0.04	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.026
14	27.80	27.70	0.00810	0.0	0.02612	0.04	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.026
15	27.70	27.60	0.00817	0.0	0.02635	0.04	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.026
16	27.60	27.50	0.00824	0.0	0.02658	0.04	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.027
17	27.50	27.40	0.00831	0.0	0.02681	0.04	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.027
18	27.40	27.30	0.00838	0.0	0.02704	0.04	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.027
19	27.30	27.20	0.00845	0.0	0.02727	0.04	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.027
20	27.20	27.10	0.00852	0.0	0.02750	0.04	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.028
21	27.10	27.00	0.00860	0.0	0.02773	0.04	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.028
22	27.00	26.90	0.00867	0.0	0.02796	0.04	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.028
23	26.90	26.80	0.00874	0.0	0.02819	0.04	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.028
24	26.80	26.70	0.00881	0.0	0.02842	0.04	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.028
25	26.70	26.60	0.00888	0.0	0.02865	0.04	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.029
26	26.60	26.50	0.00895	0.0	0.02888	0.04	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.029
27	26.50	26.40	0.00902	0.0	0.02911	0.04	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.029
28	26.40	26.30	0.00909	0.0	0.02934	0.04	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.029
29	26.30	26.20	0.00917	0.0	0.02957	0.04	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.030
30	26.20	26.10	0.00924	0.0	0.02980	0.04	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.030
31	26.10	26.00	0.00931	0.0	0.03003	0.04	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.030
32	26.00	25.90	0.00938	0.0	0.03026	0.04	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.030
33	25.90	25.80	0.00945	0.0	0.03049	0.04	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.030
34	25.80	25.70	0.00952	0.0	0.03072	0.04	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.031
35	25.70	25.60	0.00959	0.0	0.03095	0.04	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.031
36	25.60	25.50	0.00966	0.0	0.03118	0.04	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.031
37	25.50	25.40	0.00974	0.0	0.03141	0.04	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.031
38	25.40	25.30	0.00981	0.0	0.03164	0.04	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.032
39	25.30	25.20	0.00988	0.0	0.03187	0.04	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.032
40	25.20	25.10	0.00995	0.0	0.03210	0.04	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.032
41	25.10	25.00	0.01002	0.0	0.03233	0.04	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.032
42	25.00	24.90	0.01009	0.0	0.03256	0.04	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.033
43	24.90	24.80	0.01016	0.0	0.03279	0.04	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.033
44	24.80	24.70	0.01023	0.0	0.03302	0.04	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.033
45	24.70	24.60	0.01031	0.0	0.03325	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.033
46	24.60	24.50	0.01038	0.0	0.03348	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.033
47	24.50	24.40	0.01045	0.0	0.03371	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.034
48	24.40	24.30	0.01052	0.0	0.03394	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.034
49	24.30	24.20	0.01059	0.0	0.03417	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.034
50	24.20	24.10	0.01066	0.0	0.03440	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.034
51	24.10	24.00	0.01073	0.0	0.03463	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.035
52	24.00	23.90	0.01080	0.0	0.03486	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.035
53	23.90	23.80	0.01088	0.0	0.03509	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.035
54	23.80	23.70	0.01095	0.0	0.03532	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.035
55	23.70	23.60	0.01102	0.0	0.03555	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.036
56	23.60	23.50	0.01109	0.0	0.03578	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.036
57	23.50	23.40	0.01116	0.0	0.03601	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.036
58	23.40	23.30	0.01123	0.0	0.03624	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.036
59	23.30	23.20	0.01130	0.0	0.03647	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.036
60	23.20	23.10	0.01137	0.0	0.03670	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.037
61	23.10	23.00	0.01145	0.0	0.03692	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.037
62	23.00	22.90	0.01152	0.0	0.03715	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.037
63	22.90	22.80	0.01159	0.0	0.03738	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.037
64	22.80	22.70	0.01166	0.0	0.03761	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.038
65	22.70	22.60	0.01173	0.0	0.03784	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.038
66	22.60	22.50	0.01180	0.0	0.03807	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.038

67	22.50	22.40	0.01187	0.0	0.03830	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.038
68	22.40	22.30	0.01194	0.0	0.03853	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.039
69	22.30	22.20	0.01202	0.0	0.03876	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.039
70	22.20	22.10	0.01209	0.0	0.03899	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.039
71	22.10	22.00	0.01216	0.0	0.03922	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.039
72	22.00	21.90	0.01223	0.0	0.03945	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.039
73	21.90	21.80	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
TOT						2.76			2262.70	20023.90					
AVG					0.0306		0.11	2.74			0.31				
CUM						2.76									

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD#1 DECAY 1/da	BOD#1 SETT 1/da	ABOD#1 DECAY 1/da	BOD#2 DECAY 1/da	BOD#2 SETT 1/da	ABOD#2 DECAY 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORGN DECAY 1/da	ORGN SETT 1/da	NH3 DECAY 1/da	NH3 SRCE *	DENIT RATE 1/da	PO4 SRCE *	ALG PROD **	MAC PROD **	COLI DECAY 1/da	NCM DECAY 1/da	NCM SETT 1/da
1	29.000	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.09	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	28.900	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.09	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	28.800	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	28.700	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	28.600	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	28.500	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	28.400	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	28.300	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	28.200	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	28.100	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	28.000	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	27.900	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	27.800	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	27.700	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	27.600	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	27.500	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	27.400	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	27.300	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	27.200	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	27.100	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	27.000	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	26.900	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	26.800	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	26.700	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	26.600	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	26.500	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	26.400	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	26.300	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	26.200	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	26.100	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	26.000	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
32	25.900	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
33	25.800	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
34	25.700	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
35	25.600	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
36	25.500	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37	25.400	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
38	25.300	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
39	25.200	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
40	25.100	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

41	25.000	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
42	24.900	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
43	24.800	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
44	24.700	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
45	24.600	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
46	24.500	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
47	24.400	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
48	24.300	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
49	24.200	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
50	24.100	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
51	24.000	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
52	23.900	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
53	23.800	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
54	23.700	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
55	23.600	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
56	23.500	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
57	23.400	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
58	23.300	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
59	23.200	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
60	23.100	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
61	23.000	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
62	22.900	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
63	22.800	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
64	22.700	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
65	22.600	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
66	22.500	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
67	22.400	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
68	22.300	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
69	22.200	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
70	22.100	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
71	22.000	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
72	21.900	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
73	21.800	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.46	3.46	3.46	0.08	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			6.19	0.03	0.50	0.00	0.00	0.00	0.00	1.80			0.05	0.10	0.00	0.00	0.00	0.00			0.00	0.00	0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I MG/L	CM-II MG/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO g/m³	COLI #/100mL	NCM
1	29.000	30.36	0.30	38.92	342.91	6.04	4.11	0.00	4.61	0.00	1.15	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
2	28.900	30.36	0.30	39.08	341.01	5.35	3.97	0.00	4.47	0.00	1.14	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
3	28.800	30.36	0.30	39.23	339.15	4.84	3.84	0.00	4.34	0.00	1.13	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
4	28.700	30.36	0.30	39.38	337.32	4.46	3.72	0.00	4.22	0.00	1.12	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
5	28.600	30.36	0.30	39.53	335.52	4.18	3.60	0.00	4.10	0.00	1.11	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
6	28.500	30.36	0.30	39.68	333.76	3.97	3.48	0.00	3.98	0.00	1.10	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
7	28.400	30.36	0.29	39.82	332.03	3.82	3.37	0.00	3.87	0.00	1.09	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
8	28.300	30.36	0.29	39.96	330.34	3.70	3.27	0.00	3.77	0.00	1.08	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
9	28.200	30.36	0.29	40.10	328.67	3.62	3.17	0.00	3.67	0.00	1.08	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
10	28.100	30.36	0.29	40.23	327.04	3.55	3.08	0.00	3.58	0.00	1.07	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
11	28.000	30.36	0.29	40.36	325.43	3.50	2.99	0.00	3.49	0.00	1.06	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
12	27.900	30.36	0.29	40.50	323.85	3.47	2.90	0.00	3.40	0.00	1.05	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
13	27.800	30.36	0.29	40.62	322.30	3.44	2.82	0.00	3.32	0.00	1.05	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
14	27.700	30.36	0.29	40.75	320.78	3.42	2.75	0.00	3.25	0.00	1.04	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
15	27.600	30.36	0.29	40.87	319.28	3.41	2.67	0.00	3.17	0.00	1.03	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00

16	27.500	30.36	0.29	40.99	317.81	3.39	2.60	0.00	3.10	0.00	1.02	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
17	27.400	30.36	0.29	41.11	316.36	3.39	2.53	0.00	3.03	0.00	1.02	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
18	27.300	30.36	0.29	41.23	314.94	3.38	2.47	0.00	2.97	0.00	1.01	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
19	27.200	30.36	0.28	41.35	313.54	3.37	2.41	0.00	2.91	0.00	1.01	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
20	27.100	30.36	0.28	41.46	312.17	3.37	2.35	0.00	2.85	0.00	1.00	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
21	27.000	30.36	0.28	41.57	310.81	3.37	2.29	0.00	2.79	0.00	0.99	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
22	26.900	30.36	0.28	41.68	309.48	3.37	2.24	0.00	2.74	0.00	0.99	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
23	26.800	30.36	0.28	41.79	308.18	3.37	2.19	0.00	2.69	0.00	0.98	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
24	26.700	30.36	0.28	41.89	306.89	3.36	2.14	0.00	2.64	0.00	0.98	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
25	26.600	30.36	0.28	42.00	305.62	3.36	2.09	0.00	2.59	0.00	0.97	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
26	26.500	30.36	0.28	42.10	304.37	3.36	2.04	0.00	2.54	0.00	0.97	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
27	26.400	30.36	0.28	42.20	303.14	3.36	2.00	0.00	2.50	0.00	0.96	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
28	26.300	30.36	0.28	42.30	301.94	3.36	1.96	0.00	2.46	0.00	0.96	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
29	26.200	30.36	0.28	42.40	300.75	3.36	1.92	0.00	2.42	0.00	0.95	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
30	26.100	30.36	0.28	42.50	299.57	3.36	1.88	0.00	2.38	0.00	0.95	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
31	26.000	30.36	0.27	42.59	298.42	3.36	1.84	0.00	2.34	0.00	0.94	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
32	25.900	30.36	0.27	42.69	297.28	3.36	1.81	0.00	2.31	0.00	0.94	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
33	25.800	30.36	0.27	42.78	296.16	3.36	1.77	0.00	2.27	0.00	0.93	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
34	25.700	30.36	0.27	42.87	295.06	3.36	1.74	0.00	2.24	0.00	0.93	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
35	25.600	30.36	0.27	42.96	293.97	3.36	1.71	0.00	2.21	0.00	0.92	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
36	25.500	30.36	0.27	43.05	292.90	3.36	1.68	0.00	2.18	0.00	0.92	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
37	25.400	30.36	0.27	43.13	291.85	3.36	1.65	0.00	2.15	0.00	0.92	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
38	25.300	30.36	0.27	43.22	290.81	3.36	1.62	0.00	2.12	0.00	0.91	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
39	25.200	30.36	0.27	43.31	289.78	3.36	1.59	0.00	2.09	0.00	0.91	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
40	25.100	30.36	0.27	43.39	288.77	3.36	1.57	0.00	2.07	0.00	0.90	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
41	25.000	30.36	0.27	43.47	287.77	3.37	1.54	0.00	2.04	0.00	0.90	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
42	24.900	30.36	0.27	43.55	286.79	3.37	1.52	0.00	2.02	0.00	0.90	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
43	24.800	30.36	0.26	43.63	285.82	3.37	1.50	0.00	2.00	0.00	0.89	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
44	24.700	30.36	0.26	43.71	284.87	3.37	1.47	0.00	1.97	0.00	0.89	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
45	24.600	30.36	0.26	43.79	283.93	3.37	1.45	0.00	1.95	0.00	0.89	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
46	24.500	30.36	0.26	43.86	283.00	3.37	1.43	0.00	1.93	0.00	0.88	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
47	24.400	30.36	0.26	43.94	282.08	3.37	1.41	0.00	1.91	0.00	0.88	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
48	24.300	30.36	0.26	44.02	281.18	3.37	1.39	0.00	1.89	0.00	0.88	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
49	24.200	30.36	0.26	44.09	280.28	3.37	1.37	0.00	1.87	0.00	0.87	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
50	24.100	30.36	0.26	44.16	279.40	3.37	1.36	0.00	1.86	0.00	0.87	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
51	24.000	30.36	0.26	44.23	278.53	3.37	1.34	0.00	1.84	0.00	0.87	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
52	23.900	30.36	0.26	44.30	277.68	3.37	1.32	0.00	1.82	0.00	0.86	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
53	23.800	30.36	0.26	44.37	276.83	3.37	1.31	0.00	1.81	0.00	0.86	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
54	23.700	30.36	0.26	44.44	275.99	3.37	1.29	0.00	1.79	0.00	0.86	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
55	23.600	30.36	0.25	44.51	275.17	3.37	1.28	0.00	1.78	0.00	0.86	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
56	23.500	30.36	0.25	44.58	274.36	3.37	1.26	0.00	1.76	0.00	0.85	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
57	23.400	30.36	0.25	44.64	273.55	3.37	1.25	0.00	1.75	0.00	0.85	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
58	23.300	30.36	0.25	44.71	272.76	3.37	1.23	0.00	1.73	0.00	0.85	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
59	23.200	30.36	0.25	44.77	271.98	3.37	1.22	0.00	1.72	0.00	0.84	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
60	23.100	30.36	0.25	44.84	271.20	3.37	1.21	0.00	1.71	0.00	0.84	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
61	23.000	30.36	0.25	44.90	270.44	3.37	1.19	0.00	1.69	0.00	0.84	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
62	22.900	30.36	0.25	44.96	269.68	3.37	1.18	0.00	1.68	0.00	0.84	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
63	22.800	30.36	0.25	45.02	268.94	3.37	1.17	0.00	1.67	0.00	0.83	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
64	22.700	30.36	0.25	45.09	268.20	3.37	1.16	0.00	1.66	0.00	0.83	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
65	22.600	30.36	0.25	45.15	267.47	3.37	1.15	0.00	1.65	0.00	0.83	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
66	22.500	30.36	0.25	45.20	266.75	3.37	1.14	0.00	1.64	0.00	0.83	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
67	22.400	30.36	0.24	45.26	266.04	3.37	1.13	0.00	1.63	0.00	0.83	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
68	22.300	30.36	0.24	45.32	265.34	3.37	1.12	0.00	1.62	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
69	22.200	30.36	0.24	45.38	264.65	3.37	1.11	0.00	1.61	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
70	22.100	30.36	0.24	45.43	263.96	3.37	1.10	0.00	1.60	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
71	22.000	30.36	0.24	45.49	263.29	3.37	1.09	0.00	1.59	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
72	21.900	30.36	0.24	45.54	262.65	3.37	1.09	0.00	1.59	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
73	21.800	30.36	0.24	45.59	262.12	3.38	1.09	0.00	1.59	0.00	0.81	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00

FINAL REPORT HEADWATER - NBB03A SMITHPORT LAKE WATERSHED MODEL
REACH NO. 2 NBB02 TO RB01 SMITHPORT LAKE SUMMER NO MAN-MADE LOAD RUN

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CM-I MG/L	CM-II MG/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM
74	UPR RCH	0.01230	30.36	0.24	45.59	262.12	3.38	1.09	0.00	1.59	0.00	0.81	0.00	0.00	0.00	5.00	0.00	0.00

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m^3/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	DEPTH m	WIDTH m	VOLUME m^3	SURFACE AREA m^2	X-SECT AREA m^2	TIDAL PRISM m^3	TIDAL VELO m/s	DISPRSN m^2/s	MEAN VELO m/s
74	21.80	21.70	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
75	21.70	21.60	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
76	21.60	21.50	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
77	21.50	21.40	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
78	21.40	21.30	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
79	21.30	21.20	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
80	21.20	21.10	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
81	21.10	21.00	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
82	21.00	20.90	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
83	20.90	20.80	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
84	20.80	20.70	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
85	20.70	20.60	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
86	20.60	20.50	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
87	20.50	20.40	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
88	20.40	20.30	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
89	20.30	20.20	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
90	20.20	20.10	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
91	20.10	20.00	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
92	20.00	19.90	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
93	19.90	19.80	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
94	19.80	19.70	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
95	19.70	19.60	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
96	19.60	19.50	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
97	19.50	19.40	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
98	19.40	19.30	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
99	19.30	19.20	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
100	19.20	19.10	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
101	19.10	19.00	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
102	19.00	18.90	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
103	18.90	18.80	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
104	18.80	18.70	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
105	18.70	18.60	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
106	18.60	18.50	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
107	18.50	18.40	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
108	18.40	18.30	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
109	18.30	18.20	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
110	18.20	18.10	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
111	18.10	18.00	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
112	18.00	17.90	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
113	17.90	17.80	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040

114	17.80	17.70	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
115	17.70	17.60	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
116	17.60	17.50	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
117	17.50	17.40	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
118	17.40	17.30	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
119	17.30	17.20	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
120	17.20	17.10	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
121	17.10	17.00	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
122	17.00	16.90	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
123	16.90	16.80	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
124	16.80	16.70	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
125	16.70	16.60	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
126	16.60	16.50	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
127	16.50	16.40	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
128	16.40	16.30	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
129	16.30	16.20	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
130	16.20	16.10	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
131	16.10	16.00	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
132	16.00	15.90	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
133	15.90	15.80	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
134	15.80	15.70	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
135	15.70	15.60	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
136	15.60	15.50	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
137	15.50	15.40	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
138	15.40	15.30	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
139	15.30	15.20	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
140	15.20	15.10	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
141	15.10	15.00	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
142	15.00	14.90	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
143	14.90	14.80	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
144	14.80	14.70	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
145	14.70	14.60	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
146	14.60	14.50	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
147	14.50	14.40	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
148	14.40	14.30	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
149	14.30	14.20	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
150	14.20	14.10	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
151	14.10	14.00	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
152	14.00	13.90	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
153	13.90	13.80	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
154	13.80	13.70	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
155	13.70	13.60	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
156	13.60	13.50	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
157	13.50	13.40	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
158	13.40	13.30	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
159	13.30	13.20	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
160	13.20	13.10	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
161	13.10	13.00	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
162	13.00	12.90	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
163	12.90	12.80	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
164	12.80	12.70	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
165	12.70	12.60	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
166	12.60	12.50	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
167	12.50	12.40	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
168	12.40	12.30	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
169	12.30	12.20	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
170	12.20	12.10	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
171	12.10	12.00	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
172	12.00	11.90	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040

173	11.90	11.80	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
174	11.80	11.70	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
175	11.70	11.60	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
176	11.60	11.50	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
177	11.50	11.40	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
178	11.40	11.30	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
179	11.30	11.20	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
180	11.20	11.10	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
181	11.10	11.00	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
182	11.00	10.90	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
183	10.90	10.80	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
184	10.80	10.70	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
185	10.70	10.60	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
186	10.60	10.50	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
187	10.50	10.40	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
188	10.40	10.30	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
189	10.30	10.20	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
190	10.20	10.10	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
191	10.10	10.00	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
192	10.00	9.90	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
193	9.90	9.80	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
194	9.80	9.70	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
195	9.70	9.60	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
196	9.60	9.50	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
197	9.50	9.40	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
198	9.40	9.30	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
199	9.30	9.20	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
200	9.20	9.10	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
201	9.10	9.00	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
202	9.00	8.90	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
203	8.90	8.80	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
204	8.80	8.70	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
205	8.70	8.60	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
206	8.60	8.50	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
207	8.50	8.40	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
208	8.40	8.30	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
209	8.30	8.20	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
210	8.20	8.10	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
211	8.10	8.00	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
212	8.00	7.90	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
213	7.90	7.80	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
214	7.80	7.70	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
215	7.70	7.60	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
216	7.60	7.50	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
217	7.50	7.40	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
218	7.40	7.30	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
219	7.30	7.20	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
220	7.20	7.10	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
221	7.10	7.00	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
222	7.00	6.90	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
223	6.90	6.80	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
224	6.80	6.70	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
225	6.70	6.60	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
226	6.60	6.50	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
227	6.50	6.40	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
228	6.40	6.30	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
229	6.30	6.20	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
230	6.20	6.10	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040
231	6.10	6.00	0.01230	0.0	0.03968	0.03	0.11	2.74	31.00	274.30	0.31	0.00	0.000	1.000	0.040

TOT							4.61					4897.35	43339.47										
AVG						0.0397		0.11	2.74					0.31									
CUM							7.37																

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD#1 DECAY 1/da	BOD#1 SETT 1/da	ABOD#1 DECAY 1/da	BOD#2 DECAY 1/da	BOD#2 SETT 1/da	ABOD#2 DECAY 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORGN DECAY 1/da	ORGN SETT 1/da	NH3 DECAY 1/da	NH3 SRCE *	DENIT RATE 1/da	PO4 SRCE *	ALG PROD **	MAC PROD **	COLI DECAY 1/da	NCM DECAY 1/da	NCM SETT 1/da
74	21.700	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
75	21.600	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
76	21.500	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
77	21.400	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
78	21.300	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
79	21.200	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
80	21.100	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
81	21.000	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
82	20.900	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
83	20.800	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
84	20.700	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
85	20.600	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
86	20.500	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
87	20.400	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
88	20.300	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
89	20.200	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90	20.100	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
91	20.000	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
92	19.900	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
93	19.800	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
94	19.700	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95	19.600	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
96	19.500	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
97	19.400	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
98	19.300	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
99	19.200	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100	19.100	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
101	19.000	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
102	18.900	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
103	18.800	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
104	18.700	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
105	18.600	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
106	18.500	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
107	18.400	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
108	18.300	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
109	18.200	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
110	18.100	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
111	18.000	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
112	17.900	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
113	17.800	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
114	17.700	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
115	17.600	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
116	17.500	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
117	17.400	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
118	17.300	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
119	17.200	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
120	17.100	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

121	17.000	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
122	16.900	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
123	16.800	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
124	16.700	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
125	16.600	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
126	16.500	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
127	16.400	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
128	16.300	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
129	16.200	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
130	16.100	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
131	16.000	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
132	15.900	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
133	15.800	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
134	15.700	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
135	15.600	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
136	15.500	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
137	15.400	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
138	15.300	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
139	15.200	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
140	15.100	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
141	15.000	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
142	14.900	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
143	14.800	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
144	14.700	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
145	14.600	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
146	14.500	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
147	14.400	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
148	14.300	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
149	14.200	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
150	14.100	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
151	14.000	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
152	13.900	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
153	13.800	7.50	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
154	13.700	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
155	13.600	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
156	13.500	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
157	13.400	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
158	13.300	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
159	13.200	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
160	13.100	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
161	13.000	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
162	12.900	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
163	12.800	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
164	12.700	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
165	12.600	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
166	12.500	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
167	12.400	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
168	12.300	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
169	12.200	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
170	12.100	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
171	12.000	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
172	11.900	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
173	11.800	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
174	11.700	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
175	11.600	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
176	11.500	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
177	11.400	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
178	11.300	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
179	11.200	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

180	11.100	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
181	11.000	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
182	10.900	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
183	10.800	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
184	10.700	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
185	10.600	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
186	10.500	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
187	10.400	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
188	10.300	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
189	10.200	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
190	10.100	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
191	10.000	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
192	9.900	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
193	9.800	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
194	9.700	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
195	9.600	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
196	9.500	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
197	9.400	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
198	9.300	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
199	9.200	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
200	9.100	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
201	9.000	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
202	8.900	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
203	8.800	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
204	8.700	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
205	8.600	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
206	8.500	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
207	8.400	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
208	8.300	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
209	8.200	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
210	8.100	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
211	8.000	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
212	7.900	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
213	7.800	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
214	7.700	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
215	7.600	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
216	7.500	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
217	7.400	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
218	7.300	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
219	7.200	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
220	7.100	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
221	7.000	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
222	6.900	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
223	6.800	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
224	6.700	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
225	6.600	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
226	6.500	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
227	6.400	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
228	6.300	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
229	6.200	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
230	6.100	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.15	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
231	6.000	7.51	7.50	0.05	0.64	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.17	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			6.19	0.03	0.50	0.00	0.00	0.00	0.00	1.71			0.09	0.10	0.00	0.00	0.00	0.00			0.00	0.00	0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I MG/L	CM-II MG/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO g/m³	COLI #/100mL	NCM
74	21.700	30.36	0.24	45.59	262.12	3.42	1.13	0.00	1.63	0.00	0.81	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
75	21.600	30.36	0.24	45.59	262.12	3.45	1.18	0.00	1.68	0.00	0.81	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
76	21.500	30.36	0.24	45.59	262.12	3.48	1.22	0.00	1.72	0.00	0.81	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
77	21.400	30.36	0.24	45.59	262.12	3.50	1.26	0.00	1.76	0.00	0.81	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
78	21.300	30.36	0.24	45.59	262.12	3.52	1.30	0.00	1.80	0.00	0.81	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
79	21.200	30.36	0.23	45.59	262.12	3.53	1.34	0.00	1.84	0.00	0.81	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
80	21.100	30.36	0.23	45.59	262.12	3.54	1.38	0.00	1.88	0.00	0.81	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
81	21.000	30.36	0.23	45.59	262.12	3.55	1.42	0.00	1.92	0.00	0.81	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
82	20.900	30.36	0.23	45.59	262.12	3.56	1.46	0.00	1.96	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
83	20.800	30.36	0.23	45.59	262.12	3.57	1.50	0.00	2.00	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
84	20.700	30.36	0.23	45.59	262.12	3.57	1.54	0.00	2.04	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
85	20.600	30.36	0.23	45.59	262.12	3.58	1.57	0.00	2.07	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
86	20.500	30.36	0.23	45.59	262.12	3.58	1.61	0.00	2.11	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
87	20.400	30.36	0.23	45.59	262.12	3.58	1.64	0.00	2.14	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
88	20.300	30.36	0.23	45.59	262.12	3.59	1.68	0.00	2.18	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
89	20.200	30.36	0.22	45.59	262.12	3.59	1.71	0.00	2.21	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
90	20.100	30.36	0.22	45.59	262.12	3.59	1.74	0.00	2.24	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
91	20.000	30.36	0.22	45.59	262.12	3.59	1.78	0.00	2.28	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
92	19.900	30.36	0.22	45.59	262.12	3.59	1.81	0.00	2.31	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
93	19.800	30.36	0.22	45.59	262.12	3.59	1.84	0.00	2.34	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
94	19.700	30.36	0.22	45.59	262.12	3.59	1.87	0.00	2.37	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
95	19.600	30.36	0.22	45.59	262.12	3.60	1.90	0.00	2.40	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
96	19.500	30.36	0.22	45.59	262.12	3.60	1.93	0.00	2.43	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
97	19.400	30.36	0.22	45.59	262.12	3.60	1.96	0.00	2.46	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
98	19.300	30.36	0.22	45.59	262.12	3.60	1.98	0.00	2.48	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
99	19.200	30.36	0.22	45.59	262.12	3.60	2.01	0.00	2.51	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
100	19.100	30.36	0.21	45.59	262.12	3.60	2.04	0.00	2.54	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
101	19.000	30.36	0.21	45.59	262.12	3.60	2.06	0.00	2.56	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
102	18.900	30.36	0.21	45.59	262.12	3.60	2.09	0.00	2.59	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
103	18.800	30.36	0.21	45.59	262.12	3.60	2.12	0.00	2.62	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
104	18.700	30.36	0.21	45.59	262.12	3.60	2.14	0.00	2.64	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
105	18.600	30.36	0.21	45.59	262.12	3.60	2.16	0.00	2.66	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
106	18.500	30.36	0.21	45.59	262.12	3.60	2.19	0.00	2.69	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
107	18.400	30.36	0.21	45.59	262.12	3.60	2.21	0.00	2.71	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
108	18.300	30.36	0.21	45.59	262.12	3.60	2.23	0.00	2.73	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
109	18.200	30.36	0.21	45.59	262.12	3.60	2.26	0.00	2.76	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
110	18.100	30.36	0.20	45.59	262.12	3.60	2.28	0.00	2.78	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
111	18.000	30.36	0.20	45.59	262.12	3.60	2.30	0.00	2.80	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
112	17.900	30.36	0.20	45.59	262.12	3.60	2.32	0.00	2.82	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
113	17.800	30.36	0.20	45.59	262.12	3.60	2.34	0.00	2.84	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
114	17.700	30.36	0.20	45.59	262.12	3.60	2.36	0.00	2.86	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
115	17.600	30.36	0.20	45.59	262.12	3.60	2.38	0.00	2.88	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
116	17.500	30.36	0.20	45.59	262.12	3.60	2.40	0.00	2.90	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
117	17.400	30.36	0.20	45.59	262.12	3.60	2.42	0.00	2.92	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
118	17.300	30.36	0.20	45.59	262.12	3.60	2.44	0.00	2.94	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
119	17.200	30.36	0.20	45.59	262.12	3.60	2.46	0.00	2.96	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
120	17.100	30.36	0.20	45.59	262.12	3.60	2.48	0.00	2.98	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
121	17.000	30.36	0.19	45.59	262.12	3.60	2.49	0.00	2.99	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
122	16.900	30.36	0.19	45.59	262.12	3.60	2.51	0.00	3.01	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
123	16.800	30.36	0.19	45.59	262.12	3.60	2.53	0.00	3.03	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
124	16.700	30.36	0.19	45.59	262.12	3.60	2.55	0.00	3.05	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
125	16.600	30.36	0.19	45.59	262.12	3.60	2.56	0.00	3.06	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
126	16.500	30.36	0.19	45.59	262.12	3.60	2.58	0.00	3.08	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
127	16.400	30.36	0.19	45.59	262.12	3.60	2.59	0.00	3.09	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
128	16.300	30.36	0.19	45.59	262.12	3.60	2.61	0.00	3.11	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00

129	16.200	30.36	0.19	45.59	262.12	3.60	2.63	0.00	3.13	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
130	16.100	30.36	0.19	45.59	262.12	3.59	2.64	0.00	3.14	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
131	16.000	30.36	0.18	45.59	262.12	3.59	2.65	0.00	3.15	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
132	15.900	30.36	0.18	45.59	262.12	3.59	2.67	0.00	3.17	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
133	15.800	30.36	0.18	45.59	262.12	3.59	2.68	0.00	3.18	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
134	15.700	30.36	0.18	45.59	262.12	3.59	2.70	0.00	3.20	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
135	15.600	30.36	0.18	45.59	262.12	3.59	2.71	0.00	3.21	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
136	15.500	30.36	0.18	45.59	262.12	3.59	2.72	0.00	3.22	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
137	15.400	30.36	0.18	45.59	262.12	3.59	2.74	0.00	3.24	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
138	15.300	30.36	0.18	45.59	262.12	3.59	2.75	0.00	3.25	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
139	15.200	30.36	0.18	45.59	262.12	3.59	2.76	0.00	3.26	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
140	15.100	30.36	0.18	45.59	262.12	3.59	2.77	0.00	3.27	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
141	15.000	30.36	0.18	45.59	262.12	3.59	2.79	0.00	3.29	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
142	14.900	30.36	0.17	45.59	262.12	3.59	2.80	0.00	3.30	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
143	14.800	30.36	0.17	45.59	262.12	3.59	2.81	0.00	3.31	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
144	14.700	30.36	0.17	45.59	262.12	3.59	2.82	0.00	3.32	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
145	14.600	30.36	0.17	45.59	262.12	3.59	2.83	0.00	3.33	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
146	14.500	30.36	0.17	45.59	262.12	3.59	2.84	0.00	3.34	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
147	14.400	30.36	0.17	45.59	262.12	3.59	2.85	0.00	3.35	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
148	14.300	30.36	0.17	45.59	262.12	3.59	2.86	0.00	3.36	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
149	14.200	30.36	0.17	45.59	262.12	3.59	2.87	0.00	3.37	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
150	14.100	30.36	0.17	45.59	262.12	3.59	2.88	0.00	3.38	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
151	14.000	30.36	0.17	45.59	262.12	3.59	2.89	0.00	3.39	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
152	13.900	30.36	0.17	45.59	262.12	3.59	2.90	0.00	3.40	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
153	13.800	30.36	0.16	45.59	262.12	3.59	2.91	0.00	3.41	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
154	13.700	30.36	0.16	45.59	262.12	3.59	2.92	0.00	3.42	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
155	13.600	30.36	0.16	45.59	262.12	3.59	2.93	0.00	3.43	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
156	13.500	30.36	0.16	45.59	262.12	3.59	2.94	0.00	3.44	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
157	13.400	30.36	0.16	45.59	262.12	3.59	2.95	0.00	3.45	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
158	13.300	30.36	0.16	45.59	262.12	3.59	2.96	0.00	3.46	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
159	13.200	30.36	0.16	45.59	262.12	3.59	2.96	0.00	3.46	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
160	13.100	30.36	0.16	45.59	262.12	3.59	2.97	0.00	3.47	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
161	13.000	30.36	0.16	45.59	262.12	3.59	2.98	0.00	3.48	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
162	12.900	30.36	0.16	45.59	262.12	3.59	2.99	0.00	3.49	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
163	12.800	30.36	0.15	45.59	262.12	3.59	3.00	0.00	3.50	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
164	12.700	30.36	0.15	45.59	262.12	3.59	3.00	0.00	3.50	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
165	12.600	30.36	0.15	45.59	262.12	3.59	3.01	0.00	3.51	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
166	12.500	30.36	0.15	45.59	262.12	3.59	3.02	0.00	3.52	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
167	12.400	30.36	0.15	45.59	262.12	3.59	3.03	0.00	3.53	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
168	12.300	30.36	0.15	45.59	262.12	3.59	3.03	0.00	3.53	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
169	12.200	30.36	0.15	45.59	262.12	3.59	3.04	0.00	3.54	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
170	12.100	30.36	0.15	45.59	262.12	3.59	3.05	0.00	3.55	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
171	12.000	30.36	0.15	45.59	262.12	3.59	3.05	0.00	3.55	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
172	11.900	30.36	0.15	45.59	262.12	3.59	3.06	0.00	3.56	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
173	11.800	30.36	0.15	45.59	262.12	3.59	3.07	0.00	3.57	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
174	11.700	30.36	0.14	45.59	262.12	3.59	3.07	0.00	3.57	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
175	11.600	30.36	0.14	45.59	262.12	3.59	3.08	0.00	3.58	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
176	11.500	30.36	0.14	45.59	262.12	3.59	3.08	0.00	3.58	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
177	11.400	30.36	0.14	45.59	262.12	3.59	3.09	0.00	3.59	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
178	11.300	30.36	0.14	45.59	262.12	3.59	3.10	0.00	3.60	0.00	0.83	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
179	11.200	30.36	0.14	45.59	262.12	3.59	3.10	0.00	3.60	0.00	0.83	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
180	11.100	30.36	0.14	45.59	262.12	3.59	3.11	0.00	3.61	0.00	0.83	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
181	11.000	30.36	0.14	45.59	262.12	3.59	3.11	0.00	3.61	0.00	0.83	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
182	10.900	30.36	0.14	45.59	262.12	3.59	3.12	0.00	3.62	0.00	0.83	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
183	10.800	30.36	0.14	45.59	262.12	3.59	3.12	0.00	3.62	0.00	0.83	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
184	10.700	30.36	0.13	45.59	262.12	3.59	3.13	0.00	3.63	0.00	0.83	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
185	10.600	30.36	0.13	45.59	262.12	3.59	3.13	0.00	3.63	0.00	0.83	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
186	10.500	30.36	0.13	45.59	262.12	3.59	3.14	0.00	3.64	0.00	0.83	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
187	10.400	30.36	0.13	45.59	262.12	3.59	3.14	0.00	3.64	0.00	0.83	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00

188	10.300	30.36	0.13	45.59	262.12	3.59	3.15	0.00	3.65	0.00	0.83	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
189	10.200	30.36	0.13	45.59	262.12	3.59	3.15	0.00	3.65	0.00	0.83	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
190	10.100	30.36	0.13	45.59	262.12	3.59	3.16	0.00	3.66	0.00	0.83	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
191	10.000	30.36	0.13	45.59	262.12	3.59	3.16	0.00	3.66	0.00	0.83	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
192	9.900	30.36	0.13	45.59	262.12	3.59	3.17	0.00	3.67	0.00	0.83	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
193	9.800	30.36	0.13	45.59	262.12	3.59	3.17	0.00	3.67	0.00	0.83	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
194	9.700	30.36	0.13	45.59	262.12	3.59	3.17	0.00	3.67	0.00	0.83	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
195	9.600	30.36	0.12	45.59	262.12	3.59	3.18	0.00	3.68	0.00	0.83	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
196	9.500	30.36	0.12	45.59	262.12	3.59	3.18	0.00	3.68	0.00	0.83	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
197	9.400	30.36	0.12	45.59	262.12	3.59	3.19	0.00	3.69	0.00	0.83	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
198	9.300	30.36	0.12	45.59	262.12	3.59	3.19	0.00	3.69	0.00	0.83	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
199	9.200	30.36	0.12	45.59	262.12	3.59	3.19	0.00	3.69	0.00	0.83	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
200	9.100	30.36	0.12	45.59	262.12	3.59	3.20	0.00	3.70	0.00	0.83	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
201	9.000	30.36	0.12	45.59	262.12	3.59	3.20	0.00	3.70	0.00	0.83	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
202	8.900	30.36	0.12	45.59	262.12	3.59	3.20	0.00	3.70	0.00	0.83	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
203	8.800	30.36	0.12	45.59	262.12	3.59	3.21	0.00	3.71	0.00	0.83	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
204	8.700	30.36	0.12	45.59	262.12	3.59	3.21	0.00	3.71	0.00	0.83	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
205	8.600	30.36	0.11	45.59	262.12	3.59	3.22	0.00	3.72	0.00	0.83	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
206	8.500	30.36	0.11	45.59	262.12	3.59	3.22	0.00	3.72	0.00	0.83	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
207	8.400	30.36	0.11	45.59	262.12	3.59	3.22	0.00	3.72	0.00	0.83	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
208	8.300	30.36	0.11	45.59	262.12	3.59	3.22	0.00	3.72	0.00	0.83	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
209	8.200	30.36	0.11	45.59	262.12	3.59	3.23	0.00	3.73	0.00	0.83	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
210	8.100	30.36	0.11	45.59	262.12	3.59	3.23	0.00	3.73	0.00	0.83	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
211	8.000	30.36	0.11	45.59	262.12	3.59	3.23	0.00	3.73	0.00	0.83	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
212	7.900	30.36	0.11	45.59	262.12	3.59	3.24	0.00	3.74	0.00	0.83	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
213	7.800	30.36	0.11	45.59	262.12	3.59	3.24	0.00	3.74	0.00	0.83	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
214	7.700	30.36	0.11	45.59	262.12	3.59	3.24	0.00	3.74	0.00	0.83	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
215	7.600	30.36	0.11	45.59	262.12	3.59	3.25	0.00	3.75	0.00	0.83	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
216	7.500	30.36	0.10	45.59	262.12	3.59	3.25	0.00	3.75	0.00	0.83	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
217	7.400	30.36	0.10	45.59	262.12	3.59	3.25	0.00	3.75	0.00	0.83	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
218	7.300	30.36	0.10	45.59	262.12	3.59	3.25	0.00	3.75	0.00	0.83	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
219	7.200	30.36	0.10	45.59	262.12	3.59	3.26	0.00	3.76	0.00	0.83	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
220	7.100	30.36	0.10	45.59	262.12	3.59	3.26	0.00	3.76	0.00	0.83	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
221	7.000	30.36	0.10	45.59	262.12	3.59	3.26	0.00	3.76	0.00	0.83	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
222	6.900	30.36	0.10	45.59	262.12	3.59	3.26	0.00	3.76	0.00	0.83	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
223	6.800	30.36	0.10	45.59	262.12	3.59	3.27	0.00	3.77	0.00	0.83	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
224	6.700	30.36	0.10	45.59	262.12	3.59	3.27	0.00	3.77	0.00	0.83	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
225	6.600	30.36	0.10	45.58	262.11	3.59	3.27	0.00	3.77	0.00	0.83	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
226	6.500	30.36	0.09	45.58	262.06	3.59	3.27	0.00	3.77	0.00	0.83	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
227	6.400	30.36	0.09	45.53	261.85	3.60	3.27	0.00	3.77	0.00	0.83	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
228	6.300	30.36	0.09	45.31	260.79	3.61	3.26	0.00	3.76	0.00	0.82	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
229	6.200	30.36	0.09	44.21	255.50	3.68	3.18	0.00	3.68	0.00	0.80	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
230	6.100	30.36	0.09	38.75	229.26	4.08	2.76	0.00	3.26	0.00	0.67	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
231	6.000	30.36	0.09	11.62	98.85	6.51	0.62	0.00	1.12	0.00	0.06	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00

FINAL REPORT HEADWATER - NBB03A SMITHPORT LAKE WATERSHED MODEL
REACH NO. 3 RB01 TO CLK02 SMITHPORT LAKE SUMMER NO MAN-MADE LOAD RUN

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CM-I MG/L	CM-II MG/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM
232	UPR RCH	0.01230	30.36	0.09	11.62	98.85	6.51	0.62	0.00	1.12	0.00	0.06	0.00	0.00	0.00	5.00	0.00	0.00
232	WSTLD	0.00280	30.36	0.50	11.30	116.80	5.00	5.04	0.00	5.04	0.00	0.85	0.00	0.00	0.00	0.00	0.00	0.00

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
232	6.00	5.90	0.01510	18.5	0.00003	44.20	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
233	5.90	5.80	0.01510	18.5	0.00003	44.20	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
234	5.80	5.70	0.01510	18.5	0.00003	44.20	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
235	5.70	5.60	0.01510	18.5	0.00003	44.20	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
236	5.60	5.50	0.01510	18.5	0.00003	44.20	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
237	5.50	5.40	0.01510	18.5	0.00003	44.20	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
238	5.40	5.30	0.01510	18.5	0.00003	44.20	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
TOT						309.41			403673.97	103479.59					
AVG					0.0000		3.90	147.83			576.68				
CUM						316.78									

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD#1 DECAY 1/da	BOD#1 SETT 1/da	ABOD#1 DECAY 1/da	BOD#2 DECAY 1/da	BOD#2 SETT 1/da	ABOD#2 DECAY 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORGN DECAY 1/da	ORGN SETT 1/da	NH3 DECAY 1/da	NH3 SRCE *	DENIT RATE 1/da	PO4 SRCE *	ALG PROD **	MAC PROD **	COLI DECAY 1/da	NCM DECAY 1/da	NCM SETT 1/da
232	5.900	7.51	0.22	0.15	0.64	0.00	0.00	0.00	0.00	0.21	0.21	0.21	0.20	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
233	5.800	7.51	0.22	0.15	0.64	0.00	0.00	0.00	0.00	0.21	0.21	0.21	0.20	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
234	5.700	7.51	0.22	0.15	0.64	0.00	0.00	0.00	0.00	0.21	0.21	0.21	0.20	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
235	5.600	7.51	0.22	0.15	0.64	0.00	0.00	0.00	0.00	0.21	0.21	0.21	0.20	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
236	5.500	7.51	0.22	0.15	0.64	0.00	0.00	0.00	0.00	0.21	0.21	0.21	0.20	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
237	5.400	7.51	0.22	0.15	0.64	0.00	0.00	0.00	0.00	0.21	0.21	0.21	0.20	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
238	5.300	7.51	0.22	0.15	0.64	0.00	0.00	0.00	0.00	0.21	0.21	0.21	0.20	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.18	0.09	0.50	0.00	0.00	0.00	0.00	0.11			0.10	0.10	0.00	0.00	0.00	0.00			0.00	0.00	0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I MG/L	CM-II MG/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO g/m³	COLI #/100mL	NCM
232	5.900	30.36	0.09	11.47	98.15	6.53	0.61	0.00	1.11	0.00	0.06	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
233	5.800	30.36	0.09	11.40	97.79	6.53	0.61	0.00	1.11	0.00	0.06	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
234	5.700	30.36	0.09	11.33	97.43	6.53	0.60	0.00	1.10	0.00	0.05	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
235	5.600	30.36	0.09	11.25	97.07	6.51	0.59	0.00	1.09	0.00	0.05	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
236	5.500	30.36	0.09	11.18	96.71	6.49	0.58	0.00	1.08	0.00	0.06	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
237	5.400	30.36	0.09	11.11	96.35	6.47	0.57	0.00	1.07	0.00	0.06	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
238	5.300	30.36	0.09	11.03	95.99	6.43	0.56	0.00	1.06	0.00	0.06	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00

FINAL REPORT HEADWATER - NBB03A SMITHPORT LAKE WATERSHED MODEL
REACH NO. 4 CLK02 TO CLK01 SMITHPORT LAKE SUMMER NO MAN-MADE LOAD RUN

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

ELEM	TYPE	FLOW	TEMP	SALN	CM-I	CM-II	DO	BOD#1	BOD#2	EBOD#1	EBOD#2	ORGN	NH3	NO3+2	PHOS	CHL A	COLI	NCM

NO.			deg C	ppt	MG/L	MG/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	#/100mL	
239	UPR RCH	0.01510	30.36	0.09	11.03	95.99	6.43	0.56	0.00	1.06	0.00	0.06	0.00	0.00	0.00	5.00		0.00	0.00

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
239	5.30	5.20	0.01510	18.5	0.00003	44.20	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
240	5.20	5.10	0.01510	18.5	0.00003	44.20	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
241	5.10	5.00	0.01510	18.5	0.00003	44.20	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
242	5.00	4.90	0.01510	18.5	0.00003	44.20	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
243	4.90	4.80	0.01510	18.5	0.00003	44.20	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
244	4.80	4.70	0.01510	18.5	0.00003	44.20	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
245	4.70	4.60	0.01510	18.5	0.00003	44.20	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
TOT						309.41			403673.97	103479.59					
AVG					0.0000		3.90	147.83			576.68				
CUM						626.19									

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD#1 DECAY 1/da	BOD#1 SETT 1/da	ABOD#1 DECAY 1/da	BOD#2 DECAY 1/da	BOD#2 SETT 1/da	ABOD#2 DECAY 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORGN DECAY 1/da	ORGN SETT 1/da	NH3 DECAY 1/da	NH3 SRCE *	DENIT RATE 1/da	PO4 SRCE *	ALG PROD **	MAC PROD **	COLI DECAY 1/da	NCM DECAY 1/da	NCM SETT 1/da
239	5.200	7.51	0.22	0.14	0.64	0.00	0.00	0.00	0.00	0.67	0.67	0.67	0.17	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
240	5.100	7.51	0.22	0.14	0.64	0.00	0.00	0.00	0.00	0.67	0.67	0.67	0.17	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
241	5.000	7.51	0.22	0.14	0.64	0.00	0.00	0.00	0.00	0.67	0.67	0.67	0.17	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
242	4.900	7.51	0.22	0.14	0.64	0.00	0.00	0.00	0.00	0.67	0.67	0.67	0.17	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
243	4.800	7.51	0.22	0.14	0.64	0.00	0.00	0.00	0.00	0.67	0.67	0.67	0.17	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
244	4.700	7.51	0.22	0.14	0.64	0.00	0.00	0.00	0.00	0.67	0.67	0.67	0.17	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
245	4.600	7.51	0.22	0.14	0.64	0.00	0.00	0.00	0.00	0.67	0.67	0.67	0.17	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.18	0.09	0.50	0.00	0.00	0.00	0.00	0.35			0.09	0.10	0.00	0.00	0.00	0.00			0.00	0.00	0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I MG/L	CM-II MG/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO g/m³	COLI #/100mL	NCM
239	5.200	30.36	0.09	10.96	95.62	6.39	0.55	0.00	1.05	0.00	0.06	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
240	5.100	30.36	0.09	10.88	95.26	6.34	0.53	0.00	1.03	0.00	0.06	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
241	5.000	30.36	0.09	10.81	94.89	6.30	0.52	0.00	1.02	0.00	0.07	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
242	4.900	30.36	0.08	10.74	94.52	6.25	0.51	0.00	1.01	0.00	0.08	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
243	4.800	30.36	0.08	10.66	94.15	6.21	0.49	0.00	0.99	0.00	0.08	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
244	4.700	30.36	0.08	10.59	93.79	6.15	0.47	0.00	0.97	0.00	0.09	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
245	4.600	30.36	0.08	10.51	93.42	6.10	0.45	0.00	0.95	0.00	0.10	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CM-I MG/L	CM-II MG/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM
246	UPR RCH	0.01510	30.36	0.08	10.51	93.42	6.10	0.45	0.00	0.95	0.00	0.10	0.00	0.00	0.00	5.00	0.00	0.00

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
246	4.60	4.50	0.01510	18.5	0.00003	44.20	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
247	4.50	4.40	0.01510	18.5	0.00003	44.20	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
248	4.40	4.30	0.01510	18.5	0.00003	44.20	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
TOT						132.61			173003.12	44348.40					
AVG					0.0000		3.90	147.83			576.68				
CUM						758.80									

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD#1 DECAY 1/da	BOD#1 SETT 1/da	ABOD#1 DECAY 1/da	BOD#2 DECAY 1/da	BOD#2 SETT 1/da	ABOD#2 DECAY 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORGN DECAY 1/da	ORGN SETT 1/da	NH3 DECAY 1/da	NH3 SRCE *	DENIT RATE 1/da	PO4 SRCE *	ALG PROD **	MAC PROD **	COLI DECAY 1/da	NCM DECAY 1/da	NCM SETT 1/da
246	4.500	7.57	0.22	0.12	0.63	0.00	0.00	0.00	0.00	2.55	2.55	2.55	0.10	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
247	4.400	7.64	0.21	0.11	0.62	0.00	0.00	0.00	0.00	2.47	2.47	2.47	0.09	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
248	4.300	7.70	0.21	0.11	0.62	0.00	0.00	0.00	0.00	2.40	2.40	2.40	0.09	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.18	0.07	0.50	0.00	0.00	0.00	0.00	1.37			0.05	0.10	0.00	0.00	0.00	0.00			0.00	0.00	0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I MG/L	CM-II MG/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO g/m³	COLI #/100mL	NCM
246	4.500	29.87	0.08	10.44	93.04	6.04	0.41	0.00	0.91	0.00	0.12	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
247	4.400	29.38	0.07	10.36	92.67	6.02	0.40	0.00	0.90	0.00	0.13	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
248	4.300	28.89	0.07	10.29	92.30	6.04	0.40	0.00	0.90	0.00	0.15	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00

FINAL REPORT HEADWATER - NBB03A SMITHPORT LAKE WATERSHED MODEL
REACH NO. 6 SL04 TO SL03 SMITHPORT LAKE SUMMER NO MAN-MADE LOAD RUN

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CM-I MG/L	CM-II MG/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM

249	UPR RCH	0.01510	28.89	0.07	10.29	92.30	6.04	0.40	0.00	0.90	0.00	0.15	0.00	0.00	0.00	5.00	0.00	0.00

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m^3/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	DEPTH m	WIDTH m	VOLUME m^3	SURFACE AREA m^2	X-SECT AREA m^2	TIDAL PRISM m^3	TIDAL VELO m/s	DISPRSN m^2/s	MEAN VELO m/s
249	4.30	4.20	0.01510	18.5	0.00003	44.20	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
250	4.20	4.10	0.01510	18.5	0.00003	44.20	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
251	4.10	4.00	0.01510	18.5	0.00003	44.20	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
252	4.00	3.90	0.01510	18.5	0.00003	44.20	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
253	3.90	3.80	0.01510	18.5	0.00003	44.20	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
254	3.80	3.70	0.01510	18.5	0.00003	44.20	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
255	3.70	3.60	0.01510	18.5	0.00003	44.20	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
256	3.60	3.50	0.01510	18.5	0.00003	44.20	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
257	3.50	3.40	0.01510	18.5	0.00003	44.20	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
258	3.40	3.30	0.01510	18.5	0.00003	44.20	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
259	3.30	3.20	0.01510	18.5	0.00003	44.20	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
260	3.20	3.10	0.01510	18.5	0.00003	44.20	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
261	3.10	3.00	0.01510	18.5	0.00003	44.20	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
262	3.00	2.90	0.01510	18.5	0.00003	44.20	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
263	2.90	2.80	0.01510	18.5	0.00003	44.20	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
264	2.80	2.70	0.01510	18.5	0.00003	44.20	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
265	2.70	2.60	0.01510	18.5	0.00003	44.20	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
266	2.60	2.50	0.01510	18.5	0.00003	44.20	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
267	2.50	2.40	0.01510	18.5	0.00003	44.20	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
268	2.40	2.30	0.01510	18.5	0.00003	44.20	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
TOT						884.04			1153354.12	295656.00					
AVG					0.0000		3.90	147.83			576.68				
CUM						1642.84									

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD#1 DECAY 1/da	BOD#1 SETT 1/da	ABOD#1 DECAY 1/da	BOD#2 DECAY 1/da	BOD#2 SETT 1/da	ABOD#2 DECAY 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORGN DECAY 1/da	ORGN SETT 1/da	NH3 DECAY 1/da	NH3 SRCE *	DENIT RATE 1/da	PO4 SRCE *	ALG PROD **	MAC PROD **	COLI DECAY 1/da	NCM DECAY 1/da	NCM SETT 1/da
249	4.200	7.70	0.21	0.12	0.62	0.00	0.00	0.00	0.00	0.75	0.75	0.75	0.07	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
250	4.100	7.70	0.21	0.12	0.62	0.00	0.00	0.00	0.00	0.75	0.75	0.75	0.07	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
251	4.000	7.70	0.21	0.12	0.62	0.00	0.00	0.00	0.00	0.75	0.75	0.75	0.07	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
252	3.900	7.70	0.21	0.12	0.62	0.00	0.00	0.00	0.00	0.75	0.75	0.75	0.07	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
253	3.800	7.70	0.21	0.12	0.62	0.00	0.00	0.00	0.00	0.75	0.75	0.75	0.07	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
254	3.700	7.70	0.21	0.12	0.62	0.00	0.00	0.00	0.00	0.75	0.75	0.75	0.07	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
255	3.600	7.70	0.21	0.12	0.62	0.00	0.00	0.00	0.00	0.75	0.75	0.75	0.07	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
256	3.500	7.70	0.21	0.12	0.62	0.00	0.00	0.00	0.00	0.75	0.75	0.75	0.07	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
257	3.400	7.70	0.21	0.12	0.62	0.00	0.00	0.00	0.00	0.75	0.75	0.75	0.07	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
258	3.300	7.70	0.21	0.12	0.62	0.00	0.00	0.00	0.00	0.75	0.75	0.75	0.07	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
259	3.200	7.70	0.21	0.12	0.62	0.00	0.00	0.00	0.00	0.75	0.75	0.75	0.07	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
260	3.100	7.70	0.21	0.12	0.62	0.00	0.00	0.00	0.00	0.75	0.75	0.75	0.07	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
261	3.000	7.70	0.21	0.12	0.62	0.00	0.00	0.00	0.00	0.75	0.75	0.75	0.07	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
262	2.900	7.70	0.21	0.12	0.62	0.00	0.00	0.00	0.00	0.75	0.75	0.75	0.07	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
263	2.800	7.70	0.21	0.12	0.62	0.00	0.00	0.00	0.00	0.75	0.75	0.75	0.07	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
264	2.700	7.70	0.21	0.12	0.62	0.00	0.00	0.00	0.00	0.75	0.75	0.75	0.07	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
265	2.600	7.70	0.21	0.12	0.62	0.00	0.00	0.00	0.00	0.75	0.75	0.75	0.07	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
266	2.500	7.70	0.21	0.12	0.62	0.00	0.00	0.00	0.00	0.75	0.75	0.75	0.07	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

267	2.400	7.70	0.21	0.12	0.62	0.00	0.00	0.00	0.00	0.75	0.75	0.75	0.07	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
268	2.300	7.70	0.21	0.12	0.62	0.00	0.00	0.00	0.00	0.75	0.75	0.75	0.07	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.18	0.08	0.50	0.00	0.00	0.00	0.00	0.43			0.04	0.10	0.00	0.00	0.00	0.00			0.00	0.00	0.00	

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I MG/L	CM-II MG/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO g/m³	COLI #/100mL	NCM
249	4.200	28.89	0.07	10.21	91.93	6.10	0.41	0.00	0.91	0.00	0.18	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
250	4.100	28.89	0.07	10.13	91.55	6.15	0.43	0.00	0.93	0.00	0.19	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
251	4.000	28.89	0.07	10.06	91.17	6.20	0.43	0.00	0.93	0.00	0.21	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
252	3.900	28.89	0.07	9.98	90.80	6.23	0.44	0.00	0.94	0.00	0.23	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
253	3.800	28.89	0.06	9.90	90.42	6.26	0.45	0.00	0.95	0.00	0.24	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
254	3.700	28.89	0.06	9.83	90.04	6.29	0.45	0.00	0.95	0.00	0.25	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
255	3.600	28.89	0.06	9.75	89.66	6.31	0.45	0.00	0.95	0.00	0.26	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
256	3.500	28.89	0.06	9.67	89.28	6.33	0.46	0.00	0.96	0.00	0.26	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
257	3.400	28.89	0.06	9.60	88.90	6.35	0.46	0.00	0.96	0.00	0.27	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
258	3.300	28.89	0.06	9.52	88.52	6.36	0.46	0.00	0.96	0.00	0.27	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
259	3.200	28.89	0.06	9.44	88.13	6.38	0.46	0.00	0.96	0.00	0.28	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
260	3.100	28.89	0.06	9.36	87.75	6.39	0.47	0.00	0.97	0.00	0.28	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
261	3.000	28.89	0.06	9.28	87.36	6.40	0.47	0.00	0.97	0.00	0.28	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
262	2.900	28.89	0.06	9.21	86.97	6.41	0.47	0.00	0.97	0.00	0.28	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
263	2.800	28.89	0.05	9.13	86.59	6.42	0.48	0.00	0.98	0.00	0.28	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
264	2.700	28.89	0.05	9.05	86.20	6.43	0.48	0.00	0.98	0.00	0.28	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
265	2.600	28.89	0.05	8.97	85.81	6.44	0.49	0.00	0.99	0.00	0.28	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
266	2.500	28.89	0.05	8.89	85.42	6.45	0.50	0.00	1.00	0.00	0.27	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
267	2.400	28.89	0.05	8.81	85.03	6.47	0.52	0.00	1.02	0.00	0.27	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
268	2.300	28.89	0.05	8.73	84.63	6.48	0.53	0.00	1.03	0.00	0.26	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00

FINAL REPORT HEADWATER - NBB03A SMITHPORT LAKE WATERSHED MODEL
REACH NO. 7 SL03 TO SL01 SMITHPORT LAKE SUMMER NO MAN-MADE LOAD RUN

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CM-I MG/L	CM-II MG/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM
269	UPR RCH	0.01510	28.89	0.05	8.73	84.63	6.48	0.53	0.00	1.03	0.00	0.26	0.00	0.00	0.00	5.00	0.00	0.00

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
269	2.30	2.20	0.01510	18.5	0.00003	44.20	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
270	2.20	2.10	0.01510	18.5	0.00003	44.20	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
271	2.10	2.00	0.01510	18.5	0.00003	44.20	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
272	2.00	1.90	0.01510	18.5	0.00003	44.20	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
273	1.90	1.80	0.01510	18.5	0.00003	44.20	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
274	1.80	1.70	0.01510	18.5	0.00003	44.20	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000

275	1.70	1.60	0.01510	18.5	0.00003	44.20	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
276	1.60	1.50	0.01510	18.5	0.00003	44.20	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
277	1.50	1.40	0.01510	18.5	0.00003	44.20	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
278	1.40	1.30	0.01510	18.5	0.00003	44.20	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
279	1.30	1.20	0.01510	18.5	0.00003	44.20	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
280	1.20	1.10	0.01510	18.5	0.00003	44.20	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
281	1.10	1.00	0.01510	18.5	0.00003	44.20	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
282	1.00	0.90	0.01510	18.5	0.00003	44.20	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
283	0.90	0.80	0.01510	18.5	0.00003	44.20	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
284	0.80	0.70	0.01510	18.5	0.00003	44.20	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
285	0.70	0.60	0.01510	18.5	0.00003	44.20	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
286	0.60	0.50	0.01510	18.5	0.00003	44.20	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
287	0.50	0.40	0.01510	18.5	0.00003	44.20	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
288	0.40	0.30	0.01510	18.5	0.00003	44.20	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
289	0.30	0.20	0.01510	18.5	0.00003	44.20	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
290	0.20	0.10	0.01510	18.5	0.00003	44.20	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
291	0.10	0.00	0.01510	18.5	0.00003	44.20	3.90	147.83	57667.71	14782.80	576.68	0.00	0.000	1.000	0.000
TOT						1016.65			1326357.38	340004.44					
AVG					0.0000		3.90	147.83			576.68				
CUM						2659.48									

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD#1 DECAY 1/da	BOD#1 SETT 1/da	ABOD#1 DECAY 1/da	BOD#2 DECAY 1/da	BOD#2 SETT 1/da	ABOD#2 DECAY 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORGN DECAY 1/da	ORGN SETT 1/da	NH3 DECAY 1/da	NH3 SRCE *	DENIT RATE 1/da	PO4 SRCE *	ALG PROD **	MAC PROD **	COLI DECAY 1/da	NCM DECAY 1/da	NCM SETT 1/da
269	2.200	7.70	0.21	0.14	0.62	0.00	0.00	0.00	0.00	0.23	0.23	0.23	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
270	2.100	7.70	0.21	0.14	0.62	0.00	0.00	0.00	0.00	0.23	0.23	0.23	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
271	2.000	7.70	0.21	0.14	0.62	0.00	0.00	0.00	0.00	0.23	0.23	0.23	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
272	1.900	7.70	0.21	0.14	0.62	0.00	0.00	0.00	0.00	0.23	0.23	0.23	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
273	1.800	7.70	0.21	0.14	0.62	0.00	0.00	0.00	0.00	0.23	0.23	0.23	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
274	1.700	7.70	0.21	0.14	0.62	0.00	0.00	0.00	0.00	0.23	0.23	0.23	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
275	1.600	7.70	0.21	0.14	0.62	0.00	0.00	0.00	0.00	0.23	0.23	0.23	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
276	1.500	7.70	0.21	0.14	0.62	0.00	0.00	0.00	0.00	0.23	0.23	0.23	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
277	1.400	7.70	0.21	0.14	0.62	0.00	0.00	0.00	0.00	0.23	0.23	0.23	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
278	1.300	7.70	0.21	0.14	0.62	0.00	0.00	0.00	0.00	0.23	0.23	0.23	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
279	1.200	7.70	0.21	0.14	0.62	0.00	0.00	0.00	0.00	0.23	0.23	0.23	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
280	1.100	7.70	0.21	0.14	0.62	0.00	0.00	0.00	0.00	0.23	0.23	0.23	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
281	1.000	7.70	0.21	0.14	0.62	0.00	0.00	0.00	0.00	0.23	0.23	0.23	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
282	0.900	7.70	0.21	0.14	0.62	0.00	0.00	0.00	0.00	0.23	0.23	0.23	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
283	0.800	7.70	0.21	0.14	0.62	0.00	0.00	0.00	0.00	0.23	0.23	0.23	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
284	0.700	7.70	0.21	0.14	0.62	0.00	0.00	0.00	0.00	0.23	0.23	0.23	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
285	0.600	7.70	0.21	0.14	0.62	0.00	0.00	0.00	0.00	0.23	0.23	0.23	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
286	0.500	7.70	0.21	0.14	0.62	0.00	0.00	0.00	0.00	0.23	0.23	0.23	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
287	0.400	7.70	0.21	0.14	0.62	0.00	0.00	0.00	0.00	0.23	0.23	0.23	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
288	0.300	7.70	0.21	0.14	0.62	0.00	0.00	0.00	0.00	0.23	0.23	0.23	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
289	0.200	7.70	0.21	0.14	0.62	0.00	0.00	0.00	0.00	0.23	0.23	0.23	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
290	0.100	7.70	0.21	0.14	0.62	0.00	0.00	0.00	0.00	0.23	0.23	0.23	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
291	0.000	7.70	0.21	0.14	0.62	0.00	0.00	0.00	0.00	0.23	0.23	0.23	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.18	0.09	0.50	0.00	0.00	0.00	0.00	0.13			0.06	0.10	0.00	0.00	0.00	0.00			0.00	0.00	0.00

* $g/m^2/d$ ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I MG/L	CM-II MG/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO g/m³	COLI #/100mL	NCM
269	2.200	28.89	0.05	8.65	84.24	6.50	0.56	0.00	1.06	0.00	0.26	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
270	2.100	28.89	0.05	8.57	83.84	6.50	0.58	0.00	1.08	0.00	0.25	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
271	2.000	28.89	0.05	8.49	83.45	6.50	0.60	0.00	1.10	0.00	0.26	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
272	1.900	28.89	0.04	8.41	83.05	6.49	0.62	0.00	1.12	0.00	0.26	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
273	1.800	28.89	0.04	8.33	82.65	6.46	0.64	0.00	1.14	0.00	0.27	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
274	1.700	28.89	0.04	8.25	82.25	6.43	0.67	0.00	1.17	0.00	0.29	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
275	1.600	28.89	0.04	8.17	81.85	6.38	0.69	0.00	1.19	0.00	0.31	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
276	1.500	28.89	0.04	8.09	81.45	6.33	0.73	0.00	1.23	0.00	0.34	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
277	1.400	28.89	0.04	8.01	81.05	6.26	0.78	0.00	1.28	0.00	0.37	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
278	1.300	28.89	0.04	7.92	80.65	6.18	0.84	0.00	1.34	0.00	0.41	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
279	1.200	28.89	0.04	7.84	80.24	6.09	0.92	0.00	1.42	0.00	0.46	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
280	1.100	28.89	0.03	7.76	79.84	5.99	1.04	0.00	1.54	0.00	0.52	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
281	1.000	28.89	0.03	7.68	79.43	5.87	1.19	0.00	1.69	0.00	0.59	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
282	0.900	28.89	0.03	7.60	79.02	5.75	1.39	0.00	1.89	0.00	0.67	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
283	0.800	28.89	0.03	7.51	78.62	5.61	1.66	0.00	2.16	0.00	0.77	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
284	0.700	28.89	0.03	7.43	78.21	5.46	2.02	0.00	2.52	0.00	0.88	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
285	0.600	28.89	0.03	7.35	77.80	5.31	2.51	0.00	3.01	0.00	1.02	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
286	0.500	28.89	0.03	7.26	77.38	5.15	3.16	0.00	3.66	0.00	1.18	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
287	0.400	28.89	0.03	7.18	76.97	5.01	4.04	0.00	4.54	0.00	1.37	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
288	0.300	28.89	0.02	7.10	76.56	4.88	5.23	0.00	5.73	0.00	1.59	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
289	0.200	28.89	0.02	7.01	76.14	4.80	6.83	0.00	7.33	0.00	1.85	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
290	0.100	28.89	0.02	6.93	75.73	4.78	8.97	0.00	9.47	0.00	2.16	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00
291	0.000	28.89	0.02	6.84	75.31	4.87	11.86	0.00	12.36	0.00	2.51	0.00	0.00	0.00	0.00	5.00	0.00	0.	0.00

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STREAM SUMMARY                                          SMITHPORT LAKE WATERSHED MODEL
HEADWATER - NBB03A                                      SMITHPORT LAKE SUMMER NO MAN-MADE LOAD RUN

 TRAVEL TIME       =        2659.48 DAYS

 MAXIMUM EFFLUENT  =          18.54 PERCENT

 FLOW              =   0.00717 TO    0.01510   m³/s
 DISPERSION        =   1.0000  TO    1.0000    m²/s
 VELOCITY          =   0.00003 TO    0.03968   m/s
 DEPTH             =   0.11    TO    3.90      m
 WIDTH             =   2.74    TO  147.83      m

 BOD DECAY         =    0.05   TO    0.15      per day
 NH3 DECAY         =    0.00   TO    0.00      per day
 SOD               =    0.21   TO    3.46      g/m²/d
 NH3 SOURCE        =    0.00   TO    0.00      g/m²/d
 REAERATION        =    0.21   TO    7.50      per day
 BOD SETTLING      =    0.62   TO    0.64      per day
 NBOD DECAY        =    0.07   TO    0.20      per day
 NBOD SETTLING     =    0.12   TO    0.13      per day

 TEMPERATURE       =   28.89   TO   30.36      deg C
 DISSOLVED OXYGEN  =    3.36   TO    6.53      mg/L


     .....EXECUTION COMPLETED
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Appendix J2 – Summer No Load Projection Justifications

DATA TYPE 3 - PROGRAM CONSTANTS			
CONSTANT NAME	**VALUE**	**UNITS**	**DATA SOURCE**
KL MINIMUM	0.7	m/day	The minimum KL of 2.3 ft/day converted to 0.70 m/day.
INHIBITION CONTROL VALUE	3		The water column dissolved oxygen demand is assumed to come primarily from facultative bacteria under anoxic conditions and SOD is not influenced by modeled dissolved oxygen levels in the upper water column.
K2 MAXIMUM	25	1/day at 20 deg C	EPA Policy in the absence of a measured value.
HYDRAULIC CALCULATION METHOD	2		The low slopes in this waterbody cause a substantial amount of water to be present during critical flow conditions. This method allows the model to predict a more accurate depth and width during low flow conditions.
SETTLING RATE UNITS	2		LAQUAL Default
ALGAE OXYGEN PRODUCTION	0		Standard practice for steady state calibration to a wide variation in DO.
EFFECTIVE BOD DUE TO ALGAE	0.1		Standard practice for steady state calibration to a wide variation in DO.

DATA TYPE 8 - REACH IDENTIFICATION DATA					
Reach	**ID**	**Name**	**Upstream River Kilometer**	**Upstream River Kilometer**	**Element Length, meters**
1	SL	Bayou Na Bonchase at Mansfield STP Discharger to Bayou Na Bonchase at Hwy 175	29.1	21.8	0.1
2	SL	Bayou Na Bonchase at Hwy 175 to Rambin Bayou Intercept	21.8	6.0	0.1
3	SL	Rambin Bayou intercept to Center of Clear Lake	6.0	5.3	0.1
4	SL	Center of Clear Lake to Clear Lake north of Hwy 509	5.3	4.6	0.1
5	SL	Clear lake north of Hwy 509 to Smithport Lake south of Hwy 509	4.6	4.3	0.1
6	SL	Smithport Lake south of hwy 509 to Center of Smithport Lake	4.3	2.3	0.1
7	SL	Center of Smithport lake to Smithport Lake Dam	2.3	0.0	0.1

		DATA TYPE 9 - ADVECTIVE HYDRAULIC COEFFICIENTS			
Reach	Name	Width Coeff. "a"	Width Exp. "b"	Width Const. "c"	Data Source
1	Bayou Na Bonchase at Mansfield STP Discharger to Bayou Na Bonchase at Hwy 175	0.00	0.10	2.74	Constant - NBB02 and Coefficients and Exponent - calibration
2	Bayou Na Bonchase at Hwy 175 to Rambin Bayou Intercept	0.00	0.10	2.74	Constant - NBB02 and Coefficients and Exponent - calibration
3	Rambin Bayou intercept to Center of Clear Lake	0.00	0.10	147.83	Constant - CLK01 and Coefficients and Exponent - calibration
4	Center of Clear Lake to Clear Lake north of Hwy 509	0.00	0.10	147.83	Constant - CLK01 and Coefficients and Exponent - calibration
5	Clear lake north of Hwy 509 to Smithport Lake south of Hwy 509	0.00	0.10	147.83	Constant - CLK01 and Coefficients and Exponent - calibration
6	Smithport Lake south of hwy 509 to Center of Smithport Lake	0.00	0.10	147.83	Constant - CLK01 and Coefficients and Exponent - calibration
7	Center of Smithport lake to Smithport Lake Dam	0.00	0.10	147.83	Constant - CLK01 and Coefficients and Exponent - calibration

		DATA TYPE 9 - ADVECTIVE HYDRAULIC COEFFICIENTS			
Reach	Name	Depth Coeff. "d"	Depth Exp. "e"	Depth Const. "f"	Data Source
1	Bayou Na Bonchase at Mansfield STP Discharger to Bayou Na Bonchase at Hwy 175	0.00	0.10	0.11	Constant - NBB02 and Coefficients and Exponent - calibration
2	Bayou Na Bonchase at Hwy 175 to Rambin Bayou Intercept	0.00	0.10	0.11	Constant - NBB02 and Coefficients and Exponent - calibration
3	Rambin Bayou intercept to Center of Clear Lake	0.00	0.10	3.90	Constant - CLK01 and Coefficients and Exponent - calibration
4	Center of Clear Lake to Clear Lake north of Hwy 509	0.00	0.10	3.90	Constant - CLK01 and Coefficients and Exponent - calibration
5	Clear lake north of Hwy 509 to Smithport Lake south of Hwy 509	0.00	0.10	3.90	Constant - CLK01 and Coefficients and Exponent - calibration
6	Smithport Lake south of hwy 509 to Center of Smithport Lake	0.00	0.10	3.90	Constant - CLK01 and Coefficients and Exponent - calibration
7	Center of Smithport lake to Smithport Lake Dam	0.00	0.10	3.90	Constant - CLK01 and Coefficients and Exponent - calibration

DATA TYPE 10 - DISPERSIVE HYDRAULIC COEFFICIENTS			
Reach	Name	Dispersion Coeff. "a"	Data Source
1	Bayou Na Bonchase at Mansfield STP Discharger to Bayou Na Bonchase at Hwy 175	1.000	Best professional judgement
2	Bayou Na Bonchase at Hwy 175 to Rambin Bayou Intercept	1.000	Best professional judgement
3	Rambin Bayou intercept to Center of Clear Lake	1.000	Best professional judgement
4	Center of Clear Lake to Clear Lake north of Hwy 509	1.000	Best professional judgement
5	Clear lake north of Hwy 509 to Smithport Lake south of Hwy 509	1.000	Best professional judgement
6	Smithport Lake south of hwy 509 to Center of Smithport Lake	1.000	Best professional judgement
7	Center of Smithport lake to Smithport Lake Dam	1.000	Best professional judgement

DATA TYPE 11 - INITIAL CONDITIONS									
Reach	Name	Temp, deg C	Data Source	SALINITY	Data Source	DO, mg/l	Data Source	Chl a, ug/l	Data Source
1	Bayou Na Bonchase at Mansfield STP Discharger to Bayou Na Bonchase at Hwy 175	30.36	90th percentile Temperature for WQN Site 0281	0.30	Continuous Monitoring Data Average (NBB03C+NBB02)	5.00	Disolved Oxygen Standard for Subsegment 100605	5.00	Best Professional Judgement
2	Bayou Na Bonchase at Hwy 175 to Rambin Bayou Intercept	30.36	90th percentile Temperature for WQN Site 0281	0.24	NBB02 Continuous Monitoring Data Average	5.00	Disolved Oxygen Standard for Subsegment 100605	5.00	Best Professional Judgement
3	Rambin Bayou intercept to Center of Clear Lake	30.36	90th percentile Temperature for WQN Site 0281	0.09	Continuous Monitoring Data Average (CLK02+CLK01)	5.00	Disolved Oxygen Standard for Subsegment 100605	5.00	Best Professional Judgement
4	Center of Clear Lake to Clear Lake north of Hwy 509	30.36	90th percentile Temperature for WQN Site 0281	0.09	Continuous Monitoring Data Average (CLK02+CLK01)	5.00	Disolved Oxygen Standard for Subsegment 100605	5.00	Best Professional Judgement
5	Clear lake north of Hwy 509 to Smithport Lake south of Hwy 509	30.36	90th percentile Temperature for WQN Site 0281	0.08	CLK01 Continuous Monitoring Data Average	5.00	Disolved Oxygen Standard for Subsegment 100605	5.00	Best Professional Judgement
6	Smithport Lake south of hwy 509 to Center of Smithport Lake	28.89	90th percentile Temperature for WQN Site 1208	0.07	SL03 Continuous Monitoring Data Average	5.00	Disolved Oxygen Standard for Subsegment 100605	5.00	Best Professional Judgement
7	Center of Smithport lake to Smithport Lake Dam	28.89	90th percentile Temperature for WQN Site 1208	0.05	Continuous Monitoring Data Average (SL03+SL02)	5.00	Disolved Oxygen Standard for Subsegment 100605	5.00	Best Professional Judgement

		DATA TYPE 12 - REAERATION, SEDIMENT OXYGEN DEMAND AND BOD COEFFICIENTS						
REACH	NAME	K_2 OPT	K_2 "A"	K_2 "B"	K_2 "C"	Data Source	BKGRND SOD, gmO_2/m^2/day at 20 deg C	Data Source
1	Bayou Na Bonchase at Mansfield STP Discharger to Bayou Na Bonchase at Hwy 175	11				Texas	1.80	100% Reduction of man-made sources
2	Bayou Na Bonchase at Hwy 175 to Rambin Bayou Intercept	11				Texas	1.71	100% Reduction of man-made sources
3	Rambin Bayou intercept to Center of Clear Lake	11				Texas	0.11	100% Reduction of man-made sources
4	Center of Clear Lake to Clear Lake north of Hwy 509	11				Texas	0.35	100% Reduction of man-made sources
5	Clear lake north of Hwy 509 to Smithport Lake south of Hwy 509	11				Texas	1.37	100% Reduction of man-made sources
6	Smithport Lake south of hwy 509 to Center of Smithport Lake	11				Texas	0.43	100% Reduction of man-made sources
7	Center of Smithport lake to Smithport Lake Dam	11				Texas	0.13	100% Reduction of man-made sources

		DATA TYPE 12 - REAERATION, SEDIMENT OXYGEN DEMAND AND BOD COEFFICIENTS			
REACH	NAME	BOD1 Decay Rate (1/Day)	Data Source	BOD1 SETT RATE (1/day)	Data Source
1	Bayou Na Bonchase at Mansfield STP Discharger to Bayou Na Bonchase at Hwy 175	0.0284	Lab Data avg(NBB03c+NBB02)	0.5	Calibration
2	Bayou Na Bonchase at Hwy 175 to Rambin Bayou Intercept	0.0302	Lab Data NBB02	0.5	Calibration
3	Rambin Bayou intercept to Center of Clear Lake	0.0915	Lab Data CLK02	0.5	Calibration
4	Center of Clear Lake to Clear Lake north of Hwy 509	0.0866	Lab Data avg(CLK02+CLK01)	0.5	Calibration
5	Clear lake north of Hwy 509 to Smithport Lake south of Hwy 509	0.0743	Lab Data avg(CLK01+SL04)	0.5	Calibration
6	Smithport Lake south of hwy 509 to Center of Smithport Lake	0.0816	Lab Data avg(SL04+SL03)	0.5	Calibration
7	Center of Smithport lake to Smithport Lake Dam	0.0941	Lab Data avg(SL03+SL02)	0.5	Calibration

DATA TYPE 13 - NITROGEN AND PHOSPHORUS COEFFICIENTS					
Reach	Name	NBOD decay rate, 1/day	Data Source	NBOD settling rate, 1/day	Data Source
1	Bayou Na Bonchase at Mansfield STP Discharger to Bayou Na Bonchase at Hwy 175	0.0462	Lab Data avg(NBB03c+NBB02)	0.100	Calibration
2	Bayou Na Bonchase at Hwy 175 to Rambin Bayou Intercept	0.0875	Lab Data NBB02	0.100	Calibration
3	Rambin Bayou intercept to Center of Clear Lake	0.1035	Lab Data CLK02	0.100	Calibration
4	Center of Clear Lake to Clear Lake north of Hwy 509	0.0889	Lab Data avg(CLK02+CLK01)	0.100	Calibration
5	Clear lake north of Hwy 509 to Smithport Lake south of Hwy 509	0.0520	Lab Data avg(CLK01+SL04)	0.100	Calibration
6	Smithport Lake south of hwy 509 to Center of Smithport Lake	0.0414	Lab Data avg(SL04+SL03)	0.100	Calibration
7	Center of Smithport lake to Smithport Lake Dam	0.0575	Lab Data avg(SL03+SL02)	0.100	Calibration

DATA TYPES 16 - INCREMENTAL DATA FOR TEMP AND CONS					DATA TYPES 16 - INCREMENTAL DATA FOR TEMP AND CONS				
Reach	Reach Name	Incr. Ouflow, m3	Incr. Inflow, m3	Data Source	Temp, deg C	Data Source	Chl	Cond	Data Source
1	Bayou Na Bonchase at Mansfield STP Discharger to Bayou Na Bonchase at Hwy 175	0.0000	0.0052	Flow Balance Calculation	30.360	90th Percentile Temperature for WQ site 0281	55	148	Calibration
2	Bayou Na Bonchase at Hwy 175 to Rambin Bayou Intercept	0.0000	0.0000	Flow Balance Calculation	30.360	90th Percentile Temperature for WQ site 0281	0	0	Calibration
3	Rambin Bayou intercept to Center of Clear Lake	0.0000	0.0000	Flow Balance Calculation	30.360	90th Percentile Temperature for WQ site 0281	0	0	Calibration
4	Center of Clear Lake to Clear Lake north of Hwy 509	0.0000	0.0000	Flow Balance Calculation	30.360	90th Percentile Temperature for WQ site 0281	0	0	Calibration
5	Clear lake north of Hwy 509 to Smithport Lake south of Hwy 509	0.0000	0.0000	Flow Balance Calculation	30.360	90th Percentile Temperature for WQ site 0281	0	0	Calibration
6	Smithport Lake south of hwy 509 to Center of Smithport Lake	0.0000	0.0000	Flow Balance Calculation	28.89	90th Percentile Temperature for WQ site 1208	0	0	Calibration
7	Center of Smithport lake to Smithport Lake Dam	0.0000	0.0000	Flow Balance Calculation	28.89	90th Percentile Temperature for WQ site 1208	0	0	Calibration

DATA TYPES 17 - INCREMENTAL DATA FOR DO, BOD, AND NITROGEN			
Reach	Reach Name	DO, mg/l	Data Source
1	Bayou Na Bonchase at Mansfield STP Discharger to Bayou Na Bonchase at Hwy 175	2	Normal Groundwater DO
2	Bayou Na Bonchase at Hwy 175 to Rambin Bayou Intercept	2	Normal Groundwater DO
3	Rambin Bayou intercept to Center of Clear Lake	2	Normal Groundwater DO
4	Center of Clear Lake to Clear Lake north of Hwy 509	2	Normal Groundwater DO
5	Center of Clear Lake to Clear Lake north of Hwy 509	2	Normal Groundwater DO
6	Clear lake north of Hwy 509 to Smithport Lake south of Hwy 509	2	Normal Groundwater DO
7	Smithport Lake south of hwy 509 to Center of Smithport Lake	2	Normal Groundwater DO

DATA TYPE 19 - NONPOINT SOURCES

Reach	Reach Name	Length of Reach, km	UCBOD, kg/day	NBOD, kg/day	Data Source
1	Bayou Na Bonchase at Mansfield STP Discharger to Bayou Na Bonchase at Hwy 175	7.3	1.5	0.59	100% Reduction of man-made sources
2	Bayou Na Bonchase at Hwy 175 to Rambin Bayou Intercept	15.8	11.4	1.14	100% Reduction of man-made sources
3	Rambin Bayou intercept to Center of Clear Lake	0.7	190.8	4.91	100% Reduction of man-made sources
4	Center of Clear Lake to Clear Lake north of Hwy 509	0.7	166.8	4.17	100% Reduction of man-made sources
5	Clear lake north of Hwy 509 to Smithport Lake south of Hwy 509	0.3	27.4	0.55	100% Reduction of man-made sources
6	Smithport Lake south of hwy 509 to Center of Smithport Lake	2.0	392.6	72.55	100% Reduction of man-made sources
7	Center of Smithport lake to Smithport Lake Dam	2.3	610.6	25.71	100% Reduction of man-made sources

DATA TYPES 20 - HEADWATER DATA FOR FLOW, TEMPERATURE, SALINITY, AND CONSERVATIVES

Headwater Name	Element No.	Headwater Flow, cms	Temp, deg C	Salinity	Chlorides	Conductivity	Data Source
Bayou Na Bonchase Headwater upstream from Mansfield STP	1	0.0071	30.36	0.17	38.8	344.4	90th Percentile Temp for WQ Site 0281 Lab Data - Chlorides Insitu - Salinity and Conductivity 7Q10 Flow for Na Bonchase Bayou

Datatype 21

Headwater Name	Dissolved Oxygen, mg/L	Data Source	UCBOD1, mg/l	NBOD, mg/l	Data Source
Bayou Na Bonchase Headwater upstream from Mansfield STP	6.76	90% DO Saturation for WQ site 0281	4.7263	1.157	100% Reduction of man-made sources

DATA TYPES 24 - WASTELOAD DATA FOR FLOW, TEMPERATURE, SALINITY, AND CONSERVATIVES

Wasteload / Withdrawal Name	EL #	Flow, cms	Data Source	Temperature, deg C	Data Source	Salinity	Conductivity	Data Source	Chlorides	Data Source
Rambin Bayou	232	0.0028	LTP Minimum flow for Summer	30.36	90th Percentile Temp for WQ Site 0281	0.50	116.8	Insitu Data at RB01	11.3	Lab Data at RB01

DATA TYPES 25 - WASTELOAD DATA FOR DO, BOD, AND NITROGEN

Wasteload / Withdrawal Name	EL #	DO, mg/l	Data Source	UCBOD1, mg/l	UNBOD, mg/l	Data Source
Rambin Bayou	232	5.00	Disolved Oxygen Standard for Subsegment 100605	5.037	0.846	100% Reduction of man-made sources

DATA TYPES 27 - LOWER BOUNDARY CONDITIONS

Parameter	Value	Units	Data Source
TEMPERATURE	28.890	^{O}C	90th Percentile Temp from WQ site 1208
SALINITY	0.020	mg/L	SL02 Insitu
CHLORIDES	6.800	ppm	SL02 Lab Data
CONDUCTIVITY	75.100	umhos/cm	SL02 Insitu
DISSOLVED OXYGEN	5.000	mg/L	Disolved Oxygen Standard for Subsegment 100605
CBOD1	14.299	mg/L	SL02 BOD Calculation
NBOD	2.725	mg/L	SL02 BOD Calculation
CHLOROPHYLL A	5.000	ug/L	Best professional Judgement

Appendix J3 – Summer No Load Projection Loading

Lake Edwards/Smithport Lake Watershed TMDL
Subsegment 100605
Originated: June 13, 2007
Final: August 31, 2007

Summer Projection, Non-Point Benthic Load Input and TMDL Calculations:

Modeled stream or water body **LAKE EDWARDS SMITHPORT LAKE (Subsegment 100605)**

Shaded cells are input values for calcu RGIN OF SAFETY (MOS) (%) = [MOG + MOU] = **20%**
Values to be used in the projection models.

Reach Number and Description	Calibration Model Values: Total Non-Point UCBOD	Total Non-Point UNBOD	SOD @ 20°C	Total Calb. Benthic Load (TCBL)	Reach Length	Proj. Model Avg. Reach Width	Proj. Temp.	Background Benthic Load	Effective Background Benthic Load	Man-Made Benthic Load	Background percentage reduction	Percentage Reduction of man-made sources	Reduced Background Benthic Load	Reduced Man-Made Benthic Load	Reduced TCBL adjusted for MOS	Reduced Man-Made Loads: Reduced Total UCBOD Load	Reduced UNBOD Load	Reduced SOD Load at Projection Temp.	Projected Model Loads: SOD @ 20°C	Total Non-Point UCBOD INPUTS	Non-Point UNBOD INPUTS	Total MOS at Projection Temp.	Non-Point UCBOD LA	Non-Point UNBOD LA	SOD LA at Projection Temp.
	$g\ O_2 / [(m^2)(day)]$	$g\ O_2 / [(m^2)(day)]$	$g\ O_2 / [(m^2)(day)]$	$g\ O_2 / [(m^2)(day)]$	Kilo-meters	Meters	(deg Celcius)	$g\ O_2 / [(m^2)(day)]$	$g\ O_2 / [(m^2)(day)]$	$g\ O_2 / [(m^2)(day)]$	%	%	$g\ O_2 / [(m^2)(day)]$	$g\ O_2 / [(m^2)(day)]$	$g\ O_2 / [(m^2)(day)]$	$kg\ O_2/day$	$kg\ O_2/day$	$kg\ O_2/day$	$g\ O_2 / [(m^2)(day)]$	$kg\ O_2/day$	$kg\ O_2/day$	$kg\ O_2/day$	$kg\ O_2/day$	$kg\ O_2/day$	$kg\ O_2/day$
REACH 1: NBB03c (downstream Bayou Na Bonchase from Mansfield STP) - NBB02 (Bayou Na Bonchase @ State Hwy 175)	0.075	0.029	1.80	1.904	7.30	2.74	30.36	2.00	1.90	0.00	0%	100%	1.90	0.00	1.90	0.00	0.00	0.00	1.80	1.50	0.59	0.00	1.50	0.59	69.21
REACH 2: NBB02 (Bayou Na Bonchase at State Hwy 175) - RB01 intersect (Inflow of Rambin Bayou)	0.461	0.046	3.00	3.508	15.80	2.74	30.36	2.00	2.00	1.51	0%	100%	2.00	0.00	2.00	0.00	0.00	0.00	1.71	11.40	1.14	0.00	11.40	1.14	142.35
REACH 3: RB01 intersects (In flow of Rambin Bayou) - CLK02 (Center of Clear lake)	33.823	0.870	2.00	36.693	0.70	147.83	30.36	2.00	2.00	34.69	0%	100%	2.00	0.00	2.00	0.00	0.00	0.00	0.11	190.77	4.91	0.00	190.77	4.91	21.66
REACH 4: CLK02 (Center of Clear Lake) - CLK01 (Clear lake north of Hwy 509)	11.596	0.290	2.50	14.386	0.70	147.83	30.36	2.00	2.00	12.39	0%	100%	2.00	0.00	2.00	0.00	0.00	0.00	0.35	166.82	4.17	0.00	166.82	4.17	69.06
REACH 5: CLK01 (Clear Lake North of Hwy 509) - SL04 (Smithport lake south of Hwy 509)	1.127	0.023	2.50	3.650	0.30	147.83	30.36	2.00	2.00	1.65	0%	100%	2.00	0.00	2.00	0.00	0.00	0.00	1.37	27.40	0.55	0.00	27.40	0.55	116.65
REACH 6: SL04 (Smithport Lake south of Hwy 509) - SL03 (Center of Smithport Lake)	7.779	1.437	2.50	11.717	2.00	147.83	28.89	2.00	2.00	9.72	0%	100%	2.00	0.00	2.00	0.00	0.00	0.00	0.43	392.60	72.55	0.00	392.60	72.55	220.84
REACH 7: SL03 (Center of Smithport Lake) - SL01 (Smithport Lake Dam)	27.941	1.176	2.00	31.117	2.30	147.83	28.89	2.00	2.00	29.12	0%	100%	2.00	0.00	2.00	0.00	0.00	0.00	0.13	610.59	25.71	0.00	610.59	25.71	76.50
Sub-Total									13.90	89.07			13.90	0.00	13.90	0.00	0.00	0.00		1401.09	109.61	0.00	**1401.09**	**109.61**	**716.28**

Summer TMDL Calculations for Point Source loads:

LAKE EDWARDS SMITHPORT LAKE (Subsegment 100605)

Input data into the shaded cells.

Point Source Loading Calculations

Pt. Source / Facility Description and Reach #	Receiving Stream	Included in the Projection Model (Yes/No)	Anticipated/ design flow (cms)	Flow with MOS (cms)	Proposed Permit Limits: $CBOD_5$ (mg/l)	NH_3N (mg/l)	PHOSPHORUS (mg/L)	MOS (%)	UCBOD: Ultimate Conc. (mg/l) (2)	Loads (kg/day) (1)	WLA (kg/day)	Reserve/ MOS Load (kg/day)	UNBOD: Ultimate Conc. (mg/l) (2)	Loads (kg/day) (1)	WLA (kg/day)	Reserve/ MOS Load (kg/day)	Sub-Total of Point Source Phosphorus Loads: Loads (kg/day)	WLA (kg/day)	Reserve/ MOS Load (kg/day)	Sub-Total of Point Source BOD Loads: Loads (kg/day)	WLA (kg/day)	Reserve/ MOS (kg/day)
			A	**A1 = A/(1-E)**	**B**	**C**	**D**	**E**	**F = 2.3 x B**	**G = (86.4)(A1)(F)**	**H = (1-E) x G**	**I = (E)(G)**	**J = 4.3 x C**	**K = (86.4)(A1)(J)**	**L = (1-E) x K**	**M = (D)(K)**	**N = 86.4(A1)(D)**	**O = (1-E) x N**	**P = E x N**	**G + K + N**	**H + L +O**	**I + M + P**
Mansfield STP - Reach #1	Na Bonchasse Bayou	Yes	0.0101	0.012625	10.0	5.0		20%	23.0	25	20	5	21.5	23	19	5	**0**	**0**	**0**	**49**	**39**	**10**
SUB-TOTAL Loads										**25.09**	**20.07**	**5.02**		**23.45**	**18.76**	**4.69**	**0.00**	**0.00**	**0.00**	**48.54**	**38.83**	**9.71**

Summer TMDL calculations and Projection model calculations for Headwater / Tributary loads:

LAKE EDWARDS SMITHPORT LAKE (Subsegment 100605)

Shaded cells are input values for calculations. RGIN OF SAFETY (MOS) (%)
Values to be used in the projection models. ies, be sure that columns "H" a

Headwater / Tributary Load Determinations

Headwater / Tributary Description and Reach #	FROM CALIBRATION: Seasonal Critical flow (cms)	UCBOD1 (mg O_2/L)	Total UCBOD (mg O_2/L)	UNBOD (mg O_2/L)	Total UNBOD (mg O_2/L)	BACKGROUND VALUES: Background UCBOD1 conc. (mg O_2/L)	Background UCBOD conc. (mg O_2/L)	Background UNBOD conc. (mg O_2/L)	Background UNBOD conc. (mg O_2/L)	Background % Reduction	Percent reduction of Man-Made loads	Reduced Background Loads: Total reduced Background UCBOD load (kg O_2/day)	Reduced Background UNBOD load (kg O_2/day)	Reduced Man-Made Loads: Reduced UCBOD load (kg O_2/day)	Reduced UNBOD load (kg O_2/day)	PROJECTION VALUES: Projection UCBOD input conc. (mg O_2/L)	Projection UNBOD input conc. (mg O_2/L)	**Total MOS (kg O_2/day)**	**Total CBOD LA (kg O_2/day)**	**Total NBOD LA (kg O_2/day)**
NBB03a - Upstream Na Bonchasse Bayou from the Mansfield STP - Reach #1	0.0071	6.278	**6.278**	1.878	**1.878**	4.726	**4.726**	1.157	**1.157**	0%	100%	2.90	0.71	0.00	0.00	4.726	1.157	**0.00**	**2.90**	**0.71**
RB01 - Rambin Bayou - Begins Reach #3	0.0028	9.244	**9.244**	1.687	**1.687**	5.037	**5.037**	0.846	**0.846**	0%	100%	1.22	0.20	0.00	0.00	5.037	0.846	**0.00**	**1.22**	**0.20**
SUB-TOTAL TMDL LOADING												**4.12**	**0.91**	**0.00**	**0.00**			**0.00**	**4.12**	**0.91**

Appendix J4 – Summer No Load TMDL Summary

Lake Edwards/Smithport Lake Watershed TMDL
Subsegment 100605
Originated: June 13, 2007
Final: August 31, 2007

Summer No Load TMDL Summary:

LAKE EDWARDS SMITHPORT LAKE (Subsegment 100605)

Calculation of the TMDL - Kilograms per day

Load description	WLA (kg O_2/day)	CBOD1 LA (kg O_2/day)	CBOD2 LA (kg O_2/day)	Organic-N LA (kg/day)	Ammonia-N LA (kg/day)	NBOD LA (kg O_2/day)	SOD LA (kg O_2/day)	LA (kg O_2/day)	MOS Load (kg O_2/day)
Point Source loads	39								10
Headwater / Tributatary loads		4	0	0	0	1		5	0
Benthic loads		1,401	0	0	0	110	716	2,227	0
Incremental Loads		0	0	0	0	0		0	0
SUB-TOTAL	**39**	**1,405**	**0**	**0**	**0**	**111**	**716**	**2,232**	**10**
TMDL = WLA + LA + MOS								***2,281 kg/day***	

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

Calculation of the TMDL - Pounds per day

Load description	WLA (lbs O_2/day)	CBOD1 LA (lbs O_2/day)	CBOD2 LA (lbs O_2/day)	Organic-N LA (lbs/day)	Ammonia-N LA (lbs/day)	NBOD LA (lbs O_2/day)	SOD LA (lbs O_2/day)	LA (lbs O_2/day)	MOS Load (lbs O_2/day)
Point Source loads	86								22
Headwater / Tributatary loads		9	0	0	0	2		11	0
Benthic loads		3,089	0	0	0	243	1,579	4,911	0
Incremental Loads		0	0	0	0	0		0	0
SUB-TOTAL	**86**	**3,098**	**0**	**0**	**0**	**245**	**1,579**	**4,922**	**22**
TMDL = WLA + LA + MOS								***5,030 lb/day***	

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

Calculation of the TMDL - Kilograms per day

Load description	WLA (kg O_2/day)	CBOD1 LA (kg O_2/day)	CBOD2 LA (kg O_2/day)	Organic-N LA (kg/day)	Ammonia-N LA (kg/day)	NBOD LA (kg O_2/day)	SOD LA (kg O_2/day)	LA (kg O_2/day)	MOS Load (kg O_2/day)
Point Source loads	39								10
Natural Nonpoint Loads		1,405	0	0	0	111	716	2,232	
Manmade Nonpoint Loads		0	0	0	0	0	0	0	0
SUB-TOTAL	**39**	**1,405**	**0**	**0**	**0**	**111**	**716**	**2,232**	**10**
TMDL = WLA + LA + MOS								***2,281 kg/day***	

Calculation of the TMDL - Pounds per day

Load description	WLA (lbs O_2/day)	CBOD1 LA (lbs O_2/day)	CBOD2 LA (lbs O_2/day)	Organic-N LA (lbs/day)	Ammonia-N LA (lbs/day)	NBOD LA (lbs O_2/day)	SOD LA (lbs O_2/day)	LA (lbs O_2/day)	MOS Load (lbs O_2/day)
Point Source loads	86								22
Natural Nonpoint Loads		3,098	0	0	0	245	1,579	4,922	
Manmade Nonpoint Loads		0	0	0	0	0	0	0	0
SUB-TOTAL	**86**	**3,098**	**0**	**0**	**0**	**245**	**1,579**	**4,922**	**22**
TMDL = WLA + LA + MOS								***5,030 lb/day***	